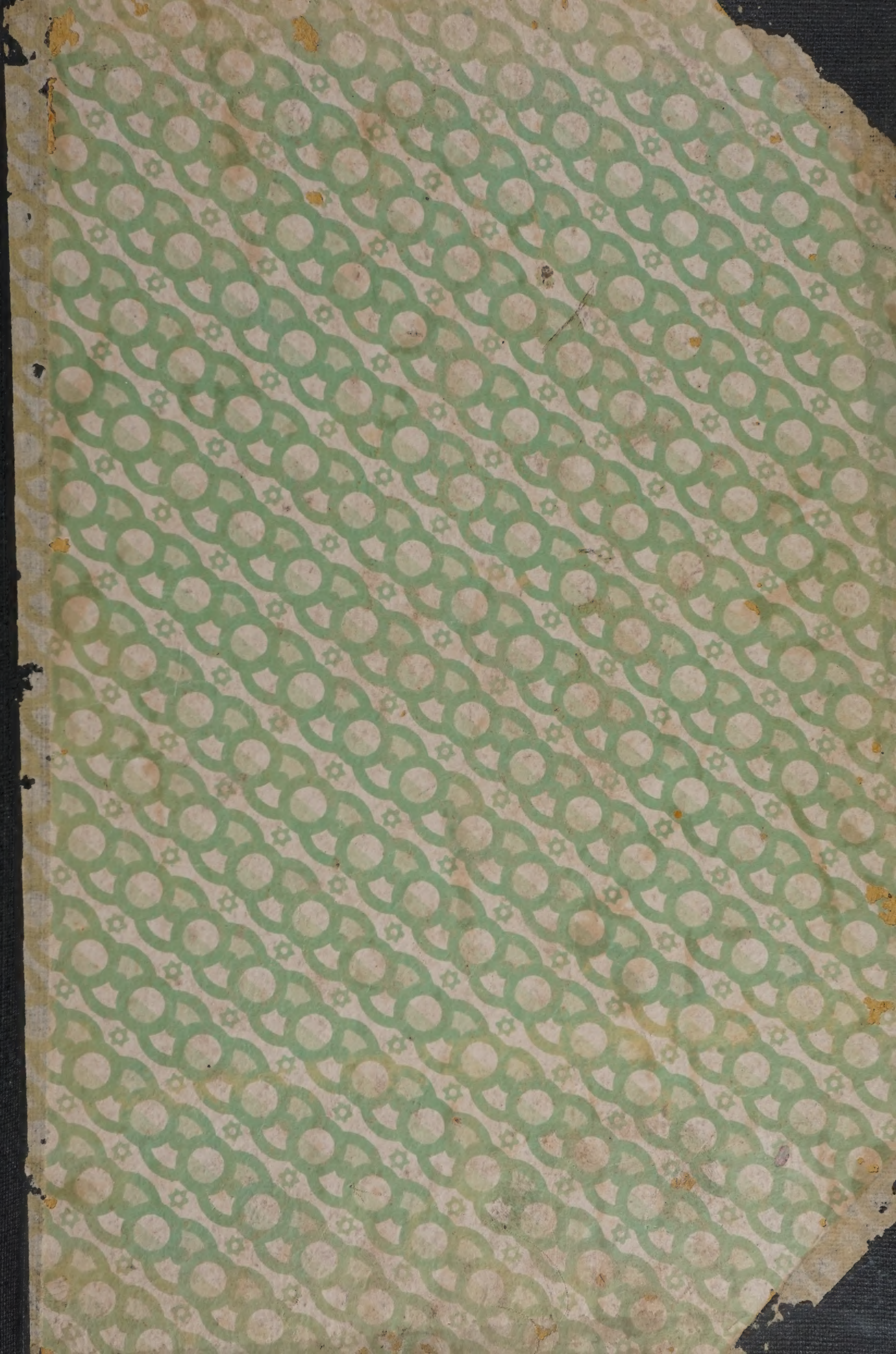




9



1

CENTRAL PATENTS INDEX CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

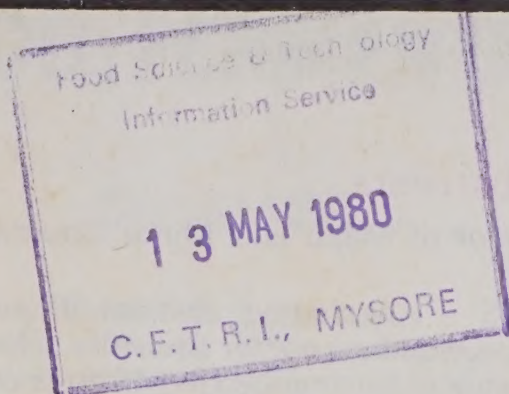
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WEEK B45

2 JANUARY 80

80816B - 82531B

ABSTRACTS

INDEXES

II - PATENTEE

V - BASIC NUMBER

VII - PATENT NUMBER

COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	30 OCT - 5 NOV 79	875,948 - 876,063
-Non Delayed	5 NOV 79	877,389 - 877,554
BRAZIL	23 OCT 79	7,805,551 - 7,902,449
CANADA	23 OCT 79	1,064,651 - 1,065,100
SWITZERLAND	15 OCT 79 + 31 OCT 79	608,934 - 610,711
		613,580 - 614,089
DENMARK	15 OCT 79	7,801,238 - 7,901,218
W. GERMANY		
-DAS	31 OCT 79	1,470,125 - 2,915,728
-OLS	31 OCT 79	2,553,201 - 2,917,291
FRANCE*	24 AUG 79	2,415,419 - 2,415,946
	(BOPI 28 SEP 79)	
UNITED KINGDOM	7 NOV 79	1,553,001 - 1,555,460
		2,019,701 - 2,020,140
HUNGARY	27 OCT 79	H002,469 - H002,480
		T017,101 - T017,261
JAPAN		
-Unexamined	—	47,009,436 - 53,138,112
	27 SEP - 3 OCT 79	54,124,201 - 54,127,800
-Examined	11 OCT - 17 OCT 79	79,031,881 - 79,033,000
NETHERLANDS	22 OCT - 28 OCT 79	7,804,087 - 7,903,236
NORWAY	15 OCT 79	7,702,615 - 7,902,908
SOVIET UNION	—	646,055 - 649,984
SWEDEN	22 OCT 79	7,800,938 - 7,907,635
UNITED STATES		
-Reissues	30 OCT 79	Re30,127 - Re30,134
-Patents	30 OCT 79	4,172,292 - 4,173,041
PCT	1 NOV 79	7,900,842 - 7,900,891

*Printed patents actually published late October - early November, 1979

Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Other Classes	Publication Date	Main CPI Class for Section	Latest Priority	Earliest Disclosure Basic Patent	Accession No	Earliest Priority	Patent No	IPC
MEDA-				A89			69369W/42		=US 3964-992	
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)										
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)										
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26										

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

WINK- D11 74294Y/42 =GB 1555-195
Automatic bakery machine giving crack-free prods. - having kneading plate which moves in circular motion above conveyor belt to produce uniform consistency

WINKLER FR KG 03.04.76-DT-614463
(07.11.79) *DT2614-463 +A23p-01

Automatic portioning, kneading and flat-pressing of dough or meat products by dividing the material into individual portions of predetermined size and transferring them to a continuous rotatable endless kneading belt. A flat rotating kneading plate positioned above the belt produces a rotary action which forms the material into a spherical shape in a manner which eliminates the formation of kneading joints.

Pref. the kneading plate is faced with synthetic polymeric foam e.g. PVC.

By eliminating the "kneaded end" effect, products having a uniform skin are produced. This is esp. desirable in the formation of dumpling-like products since entry of water and steam into the dough body is prevented. 31.3.77 as 013673 (5pp397).

KAOS * D11 81860B/45 ★J7 9032-059
Harusame prodn. from extruded cords of starch compsn. - in which the water used to cool the boiled starch cords contains an additive to prevent sticking of the cords

KAO SOAP KK 06.03.75-JA-027545
(11.10.79) A231-01/16

In a process for producing harusame (a starch-based good in the form of dry sticks), which involves mixing a starch compsn. extruding the compsn. into cords, boiling, cooling, freezing, thawing and drying, the improvement comprises adding to 100 pbw. of the cooling water 0.1-1 pbw. of a compsn. consisting of 5-20wt.% fatty acid ester of propylene glycol or glycerine, 10-35wt.% propylene glycol, 10-35wt.% sorbitol and 30-70wt.% water.

The compsn. prevents sticking of the starch cords.
6.3.75 as 027545. A231 1/16 (11.10.79) KAO SOAP KK (4pp83) (J51125769)

See Also

D16 J7 9032069

D12: MEAT; FISH PROCESSING

BODE/ * D12 80892B/45 ★CA 1064-850
Meat carcass carrier for overhead l/beam rail - with rectangular frame of round metal stock having top rollers and hook on underside

BODELL F W 27.06.75-CA-230393
Q21 (23.10.79) B61b-12/02

A carrier is of round metal stock forming the bottom and two sides of a rectangle withinward projections from the arms tops fitting in cylindrical rollers of e.g. nylon each longer than its associated projection. The inner surfaces of projections and sides are flattened and meet at a 90° angle, with the roller outer faces also being flat and flush with the sides.

A hook is fixed to the underside of the carrier bottom by a horizontal piece integral with a vertical section and a lower curved section ending in a straight sideways inclined lip. The inside surfaces of the hook horizontal and vertical sections are flattened and meet at 90°.

There is less likelihood of the carcass falling or of metal shavings dropping on the meat than prior art carriers. 27.6.75 as 230393 (11pp1358)

TAMM/ D12 47231Y/27 =DS 2558-726
Ripening and refrigerating layout for abattoirs - speeds up tenderising, ensuring uniform treatment, and reduces operating and labour costs

TAMM W 24.12.75-DT-558726
(31.10.79) *DT2558-726 A22c-18 A23b-04/06

A plant to cool animal carcasses is preceded by a chamber in which the meat is cured by circulating air of controlled moisture and temperature and is sterilized by ultraviolet radiators. The chamber is subdivided into many narrow tunnels which can be operated independent of each other. The tunnels are grouped to a block and can each accommodate a small proportion of the daily throughput. Each tunnel is separated by an insulated, automatically closed partition into a compartment with the UV radiator and the heating element, and another with the air cooler.

This speeds up the throughput of carcasses but does not result in tougher meat through lack of curing. 24.12.75 as 558726 (4pp39)

SCHI- * D12 80932B/45 ★DT 2816-744
Bacon rind peeling machine - with auxiliary slitting blades for processing long-storage bacon

MAJA-MASCH SCHILL H 18.04.78-DT-816744
(31.10.79) A22c-17/12

A machine to remove the rind from sides of bacon has a peeling blade downstream of the gap between a tension roll and a multi-ring back-up roll. An auxiliary device carries several slitting blades which enter between the rings of the back-up roll and produce slits in the bacon.

This enables the machine to process not only fresh bacon but also sides which have been stored for some time and have therefore acquired a round shape. The bacon material is thus easily flattened without excessive pressure.
18.4.78 as 816744 (15pp39)

HART/ * D12 81056B/45 ★DT 2844-003
Deep frozen food block slicing - by pressing sliced plates edgewise across grating of blades

HARTMANN K 22.03.78-FR-008289
P62 (31.10.79) A22c-25/18 B26d-03/18

The Parent Patent described the division of blocks of deep frozen food into single portions, e.g. fish fillets into fish fingers, by applying a pressure of >100 bar across a single row grating of blades to produce plates and by pressing the plates into separate chambers. The second stage has been replaced by applying a pressure to the plates in their longitudinal direction across another grating of blades.

This provides a further development of the sub-dividing process. 9.10.78 as 844003 Add. to 2715535 (13pp39)

MOBA- D12 54167Y/31 =GB 1555-414
Mould for arranging poultry - with one stationary and two swinging walls and a device ensuring enclosure of the wings

APPARATENBOUW MOBA 07.04.76-NL-003625
Q32 + Q31 (07.11.79) *BE-853-071 +B65b-39/02

Poultry modelling machine having a first shell to which two further shells are pivotally linked. The hinged shells with their free edges combine to form a tube structure into which the carcass is introduced. The hinged sections can then be moved into a closed position to urge the poul-

try into the required shape.

The design prevents wings from becoming jammed in the shell members causing damage to the carcass and/or the machine. 7.4.77 as 014786 (15pp397).

TAKE ★ D12 81726B/45 ★ J5 4126-758
Quality improving method for frozen ground fish meat - consists of propylene glycol fatty acid ester with sugar and/or protein material
TAKEDA CHEMICAL IND KK 23.03.78-JA-033912
E17 (02.10.79) A23I-01/32

Propylene-glycol fatty acid ester (a) 0.05-1 w/w% is combined with (b) sugar and/or protein material in ground fish meat when preparing frozen ground fish meat or pasty fish food. The quality-improving agent consists of the compsn. above where the weight proportion of (a) : (b) is 1 : 2-50.

Whiteness and elasticity of frozen ground fish meat and pasty fish food can be improved remarkably. Further the frozen ground fish meat combined with the quality-improving agent has good texture and suffers less from denaturation of proteins in meat during the preservation.

The propylene glycol fatty acid ester has a (un)saturated fatty acid group. The quality-improving effect is due to its emulsifying activity, and it can have a high monoester content. As sugar glucose, fructose, sucrose, lactose, sorbit, wheat starch, corn starch, soy bean polysaccharide, etc. can be used. As protein material soy bean protein, wheat protein, milk protein, etc. can be used. The propylene glycol fatty acid ester is liquid, paste, powder, solid or wax at normal temps. and the quality-improving agent is prepared by mixing the components and making the mixt. into powder or granules depending on the kind of fatty acid ester. 23.3.78 as 033912 (6pp5)

ASAM- D12 26436A/14 = J7 9032-058
Preservation and improving quality of food and drink - by adding melanoidin and fatty acid ester of glycerol e.g. glycerol mono:caprylate or mono:laurate

ASAMA KASEI KK 10.08.76-JA-095783

(11.10.79) *J53020-443 A23I-03/34 + A23b-04/14 A23b-07/14

The quality and keeping properties of food and drink are improved by adding melanoidin and an ester of glycerol and fatty acid.

Melanoidin shows synergistic bactericidal action when mixed with a glycerol-fatty acid ester such as glycerol monocaprylate and glycerol monolaurate. The melanoidin is added at 500-5000 ppm. and glycerol-fatty acid ester at 50-1000 ppm. during or after prodn. of food or drink prod. (e.g., sausages). 10.8.76 as 095783. A23I 3/34; A23b 4/14, 7/14 (11.10.79) ASAMA KASEI KK (8pp) (J53020443)

MOMD ★ D12 81979B/45 ★ SU -648-193
Prodn. of meat-bone flour and technical fat - by compressing comminuted fish or meat industry waste material while passing electric current through it

MOSCOW MEAT DAIRY INST 30.09.77-SU-540997

(D13) (28.02.79) A23k-01/10

Meat-bone flour and technical fat are obtd. by comminuting bones and a soft raw material; heating; sepg. the fat; comminuting the scum; classifying the resulting flour and packing.

The process is intensified and the quality of the product is improved by pressing the comminuted mass ($0.5-500 \times 10^5$) while passing through it electric current (frequency 8-16 KHz; potential 100-400 V, strength 0.5-100 A).

This method can be applied to the processing of slaughter-house offals, fish wastes and other food industry waste
Rogov, I.A., Volchkov, V.I., Pankratov, G.S. Bul. 7/25.2.79. 30.9.77. as 540997 (3pp70)

VLRO= ★ D12 82248B/45 ★ SU -649-389
Sawing appts. for front legs of sheep and goats - has superposed chain conveyors feeding circular saw, and adjustable height lift platform

VOLG ROSMYASOMOLREM 21.06.76-SU-376323
(28.02.79) A22b-05

Appts. claimed in Parent Certificate No. 189710 included a circular saw, and two chain conveyors mounted one above the other for locating and feeding the legs to the saw. The upper conveyor has projections and the lower is mounted on an arm which is pivotable about an axis co-

incident with that of its drive pinion and which is spring-loaded.

In order to ensure reliable operation when handling animals of different weight categories, there is a lifting platform secured by levers to a stand and with a screw pair for adjusting its height position, also a unit for tensioning the conveyors, with hubs for the spindles of the conveyor tensioning pinions. The arrangement permits full mechanisation of the process.

Starkov, V.N., Mineeva, G.F. Bul. 8/28.2.79. 21.6.76. as 376323 Add to 189710 (3pp1358)

MIME= ★ D12 82249B/45 ★ SU -649-390
Appts. for cleaning legs and head of a pig carcass - with height adjustable brushes on slide blocks, either side of overhead conveyor

MINSK MEAT DAIRY IN 27.12.76-SU-435035

(28.02.79) A22b-05/08

The installation comprises an overhead conveyor with pivotable brackets carrying upper brushes for the rear legs and lower brushes for the fore legs and heads, the brushes being adjustable vertically. To permit more thorough cleaning, the brackets have slide blocks for the brushes, and the brush height is adjusted by a lifting mechanism with flexible members connected via pulleys with the slide blocks for horizontal movement. The brushes are linked with the carcass by stays, secured to the brushes below the points at which they are secured to the carcasses.

Litovko, V.I., Dyagilev, N.I., Gabelev, V.M. et al. Bul. 8/28.2.79. 27.12.76. as 435035 (4pp1358)

KIME= ★ D12 82250B/45 ★ SU -649-391
Appts. for filling sausage casings - has carriage mounting vessels with lubricating liquid for extender on which carriage moves

KIEV MEAT COMBINE 07.07.77-SU-504675

(28.02.79) A22c-11/08

The appts. comprises a loading hopper with a driven screw feeder. A carriage is mounted on an extender encompassing the feeder and mounts vessel for liquid for lubricating the outer surface of the extender and for collecting the used liquid. A nut is located at the end of the feeder to prevent the screw being displaced.

Golovan, A.I., Goncharov, P.G., Permyakov, V.I. Bul. 8/28.2.79. 7.7.77. as 504675 (2pp1358)

POLA= ★ D12 82251B/45 ★ SU -649-392
Fish processing machine carrier cassette - with adjustable gap between tail stop plates, to hold fish tail end

POLAR SEA FISH OCEA 28.12.76-SU-437067

(28.02.79) A22c-25/08

A cassette for transporting fish in processing machines comprises end walls connected by guides, head and tail stops interconnected by levers for displacement along the guides, and support plates on the tail stop, which define a gap between themselves for passage of the tail part of the fish body.

In order to ensure correct orientation and reliable location of fish over the whole size range, one of the levers carries a cam cooperating with the tail stop and the support plates can be moved to adjust the gap. The head stop can be adjusted in its height and one of the end walls carries a pivotable device for centring the fish. The gap between the plates is pref. varied by wedges on the guides, each plate having a roller cooperating with the wedges.

Glushkov, A.I. Bul. 8/28.2.79. 28.12.76. as 437067 (4pp1358)

MARK/ D12 77267B/43 #US 4172-304
Filleting machine for fish of different sizes - removes bones completely without waste using spreader and tubular knives

MARKOV V F (TEKH=) 02.06.78-DL-205763 (30.05.78-US-910652)

(30.10.79) *DL-136-795 A22c-25/16

Fish filleting appts. comprises guide flaps feeding and orienting the fish, circular knives to cut out a strip of flesh on the belly and located behind the flaps in succession, and two filleting knives of ring form and mounted on carrying rollers one opposite the other with the cutting edges facing fish movement.

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2nd January 1980

CENTRAL PATENTS INDEX

ALERTING BULLETINS - COUNTRY ORDER

82532B - 84141B B46

EXAMINED JAPANESE APPLICATIONS

DESPATCHED SEPARATELY
The advanced version of the alerting abstracts which will appear as the current version in Week B51 Alerting Bulletin (Country Order) are included in this week's consignment.

ALERTING BULLETINS - CLASSIFIED

80816B - 82531B B45

WEEKLY ALERTING BULLETIN INDEX BOOKLET

82532B - 84141B B46

BASIC ABSTRACTS JOURNALS

79097B - 80815B B44

PROFILE BOOKLETS

77161B - 79096B B43

PROFILE MANUAL CODE CARDS

Profile 2A

Section A

A2 149398 - 149402 B41
A10 149524 - 149537 B41

Profile 21A

Section H

Nil

Section J

21559 - 21561 B41

Section N

03467 - 03484 B40

9: CS MICROFILM

A Reel 95	74836B - 75482B	B42
A Reel 96	75483B - 75730B	B42
A Reel 97	75733B - 77049B	B42
B Reel 46	75212B - 75755B	B42
C Reel 41	72271B - 75658B	B41
D Reel 34	73799B - 75623B	B42
E Reel 58	73766B - 75524B	B42
E Reel 59	75537B - 75865B	B42
F Reel 33	72270B - 75382B	B42

10: COMPLETE SPECIFICATION BOOKS

B No. 1178	79097B - 79407B	B44
B No. 1179	79408B - 80815B	B44
C No. 725	79097B - 79404B	B44
C No. 726	79405B - 80815B	B44

11: CUMULATIVE PATENT NUMBER INDEX

(XII) 1979 A-M/Ch B27-B39



pyrazine; 2-methyl-5-[thienyl-(2)]-pyrazine; 2-ethyl-
2-isopropyl-, 2-vinyl- or 2-isopropenyl-pyrazine; or 2-

to receive (1), the wt. of which is twice that of (11); and
then closing (III) with a chocolate base (IV).

13: COMPANY CODE CARDS

77161B - 79096B B43

17: MANUAL CODE CARDS

A 149393 - 149710	B41
B 77161B - 79096B	B43
C 77161B - 79096B	B43
D 24935 - 24981	B41
E 65078 - 65233	B41
F 32802 - 32850	B41
G 22262 - 22324	B41
H 15050 - 15084	B41
J 21526 - 21566	B41
K 06684 - 06690	B41
L 29890 - 29968	B41
M 36496 - 36593	B41

19: PUNCH CODE CARDS

C 73588B - 75286B (223 cards)	B41
E 71708B - 73583B	B40

NOTE: The following reissued*/reclassified are included in this week's consignment.

Section C - 70528B, 70564B(2)

Section E - Nil

23: WEEKLY SDI TAPE

Delayed

25: RIN SERVICE

Screen Cards

B Nos. 001 - 043	B41
C Nos. 001 - 026	B41
E Nos. 001 - 050	B40

Sheets and Cards

Delayed

CS MICROFILM

CA	1772 - 1775	OPI	27.11.79
DT DAS	610 - 611	OPI	6.12.79
DT OLS	3775 - 3780	OPI	6.12.79
PS	500 - 501	OPI	25.10.79
NL	1021 - 1022	OPI	4.12.79
SU	381 - 386		
UK NEW LAW	GB71 - GB72	OPI	12.12.79

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WORLD PATENTS ABSTRACTS PUBLICATIONS DESPATCHED THIS WEEK

Belgian Patents Abstracts	B47
British Patents Abstracts	B46
French Patents Abstracts	B46
German Patents Abstracts	B46
German Patents Gazette	B46
Japanese Patents Report	No. 47/Despatched 21.12.79
Japanese Patents Gazette	B46
Netherlands Patents Report	B46
Soviet Inventions Illustrated	B46
U.S. Patents Abstracts	B46
WPA Journals	B46
European Patents Reports (Patent Nos. 5427 - 5694) Issue No. 25	B48
PCT Patents Report	Nil

WORLD PATENTS INDEX

Gazettes Section P, Q, R and Ch	B47 Despatched
Priority Index	B47 Despatched





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Central Patents Index NEWSLETTER

2nd January 1980

1979 No. 24

* 1. 1980 SUBSCRIPTION RENEWALS

Subscribers who have not yet returned their 1980 Order Forms are urgently requested to send these to Derwent without delay by airmail or first class post to ensure uninterrupted receipt of materials.

Where any delay is envisaged resulting from internal processing by purchasing departments etc., it is essential that subscribers indicate their 1980 requirements by telex to Derwent. Our telex number is 267487.

* 2. 1980 SUBSCRIBER MEETINGS

Within the next two weeks registration forms for the 1980 CPI Subscriber Meetings will be sent to all CPI Subscribers. Details are as follows:

TOKYO, 11-12th March 1980

Hotel Okura, 10-4, Toranomom 2-chome Minato-ku, Tokyo 107
(tel.(03)582-0111) - Subscribers will hear directly from NGB.

NEW YORK 9-10th April 1980

The New York Hilton, 1335 Avenue of the Americas, New York NY 10019 (tel.(212)586-7000). Single Room Rates are \$77 and \$84 per night plus state and local taxes.

AMSTERDAM 14-16th April 1980

The Amsterdam Hilton, Apollolaan 138, 1077 BG Amsterdam
(tel.780780). Single Room Rate Dfl 170 (incl.Service and VAT)

Blocks of accommodation rooms are set aside for the New York and Amsterdam meetings and subscribers wishing to stay at these Hotels should indicate their requirements when returning Registration Forms to Derwent.

Papers by Subscribers will again form an important part of the programme and those wishing to present papers are asked to inform Derwent of their intentions as soon as possible.

* 3. SUBSCRIBER COMMITTEE MEETINGS

Subscriber Committee meetings will be held in London from 3rd to 5th March. To ensure full discussion of those areas with the highest priority at present e.g. chemical coding, invitations have been restricted to members of most currently active committees together with selected members only of others.

* 4. MAILING OF MATERIAL FOLLOWING CHRISTMAS HOLIDAY

Following closure of Derwent's offices over the Christmas period with no despatch on Wednesday 26th December, the despatch dated January 2nd will constitute the last of the 1979 subscription year. Subscribers should therefore note that the first consignment of material for the 1980 Subscription year will be dated Wednesday 9th January 1980.

In returning to the normal schedule slight delays in actual despatch date of a day or so will be inevitable for a short period and certain issues of Alerting Bulletins etc. published early in 1980 will contain the documents published in a two-week period by certain countries in a single weekly issue. Two British issues will be included in week C01.

* 5. BELGIAN PATENTS

Due to filming problems at the Belgian Patent Office, no Belgian aperture cards have been received since patents published 3rd December 1979. Therefore there will be no Belgian patents included in week C01.

* 6. PATENTS SUPPLY PRICES

Due to increased costs - in particular an increase in the price charged by the British Patent Office for British specifications - we have been forced to increase the prices of certain patents specifications as indicated in the attached leaflet.

* 7. INSTRUCTION MANUALS

The attached Appendix describes the new arrangements for Instruction Manuals. Subscribers are asked to note that Manuals 1A and 1B will now be amalgamated into one manual called 1A CPI/EPI USER'S MANUAL - GENERAL.

Instruction Manual No. 3 describes the chemical punch codes for CPI Sections B, C and E applicable from 1981. Existing codes are fully described in the current edition of manuals No. 5 - Chemical Punch Code Manual and No. 5A - Chemical Punch Code Instruction Manual, copies of which continue to be available from the Patents Supply Division.

* 8. INSTRUCTION CLASSES

Subscribers will be aware that we have recently held a round of instruction classes in North America and Europe. We now wish to plan itineraries for the next round of classes to be held in the Spring of 1980. Dates and venues will be agreed later, but classes will normally be in-house or at centralised locations as near as possible to subscribers' premises. In addition, subscribers may request in-house custom-made classes according to their specific requirements, and Derwent will send a suitable person according to these requirements. There is no objection to a small group of companies in an area jointly requesting an in-house class to be hosted by one of them.

We are hoping to hold centralised classes in at least one other location in North America other than Washington, and in at least one other location in Europe other than London, though this obviously depends on demand. The number of types of classes available has been reduced in order to reduce the confusion that arose during the planning of the present round of classes. Classes available were described in the questionnaire accompanying previous Newsletters.

Classes will be taken by personnel from our Technical Services Division or, when relevant, from our Coding Division; in all cases, tutors will be experienced in handling customer searches.

The cost of centralised location classes (including luncheon) will be £25 or \$60 per attendee per day other than the online class which will be £35 or \$85 per attendee per day. The in-house custom designed classes will cost £125 or \$300 per day.

In order to enable Derwent to assess demand and fix suitable itineraries, please indicate on the questionnaire your interest in in-house and/or centralised classes and return it to us immediately.

9. ONLINE ACCESS RESTRICTIONS

Changes in online access restrictions announced in Newsletter Number 22 will not now be implemented at least until mid-1980 after full discussion at the 1980 CPI Subscriber Meetings.

* 10. WPI ONLINE FILE POSITION

<u>Infoline</u>	<u>Loaded to</u>	<u>Awaiting Loading</u>
Basics/Equivalents	B44 (7910)	-
Manual Codes	B42 (7910)	-
Multipunch A and PKT	B31 (7907)	-
Multipunch BCE	B36 (7909)	-
<u>SDC</u>		
Basics/Equivalents	B44 (7910)	-
Manual Codes	B42 (7910)	-
Multipunch A	B31 (7907)	-
Plasdoc Key Terms	B26 (7906)	B27-B31
Multipunch BCE	B36 (7909)	-

APPENDIX

INSTRUCTION MANUALS

Instruction Manuals Nos. 1 and 4, listed below, have been issued in loose leaf form, to be followed by Instruction Manuals Nos. 2 and 3 early in 1980. All CPI/EPI and registered online subscribers have received a free copy of Instruction Manual No. 1. All CPI/EPI subscribers will receive a free copy of Instruction Manual No. 2. All full subscribers to CPI Sections B, C or E will receive a free copy of Instruction Manual No. 3 and Section A subscribers have received a free copy of Instruction Manual No. 4. Binders are being despatched separately.

Further copies of any one manual may be ordered from our Patents Supply Division at a cost of £5.00, \$12.00 or Y3.00.

Each free copy, or each copy ordered, of any manual will give entitlement to receive a binder and replacement pages automatically for at least the next two years.

I. M. No. 1: CPI/EPI GENERAL INSTRUCTION MANUAL

- 1A CPI/EPI User's Manual - General
- 1C Online Instruction Manual
- 1D Magnetic Tape Products
- 1E List of Standard Thesaurus Terms

I. M. No. 2: CPI/EPI COMPANY MANUAL CODES MANUAL

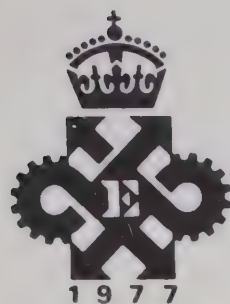
- 2A Company Code Manual
- 2B Manual Code Manual - CPI
- 2C Manual Code Manual - EPI

I. M. No. 3: CPI CHEMICAL RETRIEVAL MANUAL

- 3A Chemical Punch Code Manual
- 3B Chemical Coding - Aids to Retrieval
- 3C Manual Codes for CPI Sections B, C and E

I. M. No. 4: PLASDOC RETRIEVAL MANUAL

- 4A Plasdoc Punch Code Manual
- 4B Plasdoc Key Terms
- 4C Plasdoc Coding - Aids to Retrieval
- 4D Plasdoc Coding - Alphabetical Codes
- 4E Plasdoc Manual Codes



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BELGIUM EUROPE PCT	1 day	per page £0.11, \$0.29 or Y84	—	Photocopies
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SOUTH AFRICA	3 weeks	per page £0.27, \$0.60 or Y170	Minimum charge equivalent to 5 pages	Photocopies
UNITED STATES	4 days	per patent £1.45, \$2.75 or Y880	13p, 25c or 80Y per page if more than 15 pages	Photocopies
WEST GERMANY	2 weeks	per patent £1.70, \$4.00 or Y1,040	1p, 2c or 8Y per page if more than 20 pages	Printed copies. Delay reduced to 4 days for double the normal cost.
CANADA SWITZERLAND EAST GERMANY SOVIET UNION	4 days	per page £0.19, \$0.50 or Y120	Minimum charge equivalent to 5 pages	Photocopies
* Copies of specifications can now be supplied for Austria, Brazil, Denmark, Finland, Hungary, Israel, Italy, Norway, Rumania and Sweden. Prices comprise actual costs plus a nominal handling fee. *				

METHOD OF ORDERING

- (i) By books of standard order forms available upon request, or
- (ii) By letter, or
- (iii) By telex, to cut postal delay. French and West German patents ordered by telex are processed as rush orders at double normal cost (see NOTES above) unless normal service requested.

METHOD OF PAYMENT

- (i) On receipt of bi-monthly invoices, or
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A flattener for flattening out the belly flanks and guiding the fish is interposed between ring and circular knives, and has cylindrical sides in the zone of the cutting edges. The distance between the cylindrical surfaces and cutting edges corresponds to max. rib bone thickness. 30.5.78 as 910652 (5pp1358)

HENE/ ★ D12 82345B/45 ★US 4172-305
Bacon belly hanger for bacon mfr. - has prongs projecting laterally from cross bars with grips facilitating insertion and removal
HENE BRY J P 19.05.78-US-907716
(30.10.79) A22c-17/02

A hanger has spaced prongs projecting in a common plane at right angles to an elongate cross frame formed by a pair of spaced bars depending from a support hook with a grip to be held while the prongs are inserted into the meat.

A further grip extends in the direction opposite to the prongs and can be held while the prongs are removed from a bacon slab. One bar is turned over at the ends for welding to the other bar and its ends are turned out to form the end prongs. Pairs of prongs are pref. formed by U-shaped rods with ends bent out orthogonally of the frame. 19.5.78 as 907716 (5pp1358)

HOPK/ ★ D12 82346B/45 ★US 4172-306
Crab leg opening utensil - rigid flat blade slotted from end for use as lever when slid onto shell
HOPKINS C H 19.04.78-US-897733
(30.10.79) A22c-29/02

A utensil has a flat blade extending from a handle, an open-ended slot extending from the blade free end along its longitudinal axis for part of its length to divide the blade into two symmetrical sections. Blade material and size are such that all parts are rigid and inflexible.

The slot is pref. of constant width, and the slot end nearest the handle communicates with a circular opening of greater diameter than slot width. The combined length of slot and opening is pref. not more than half the blade length beyond the handle. The blade is slid onto the shell and used as a lever. 19.4.78 as 897733 (4pp1358)

BEAF ★ D12 82485B/45 ★US 4172-901
Denaturing comminuted food - by mixing carrier e.g. tallow and dye at elevated temps. and injecting into or onto food
BEATRICE FOODS CO 11.01.78-US-868538
C03 (30.10.79) A22c-13

Denaturing comminuted food which is unfit for human consumption comprises applying a dye to the food in streaks. A carrier which is normally immiscible with the food at room temp., is elevated to a temp such that the carrier is temporarily converted to a liquid state. A water soluble dye which has a colour distinguishable from the food is mixed with the carrier.

The food is directed and maintained in a continuous stream at a temp. no higher than ambient and the dye/carrier mixture is applied to the food to form discrete streaks which are converted to a state immiscible with the food by reduc. of the mixture temp. on contact with the food.

Method is useful for denaturing meat unfit for human consumption but suitable for consumption by animals. 11.1.78 as 868538 (7pp954)

See Also

D13 J5 4120795

D13: OTHER FOODSTUFFS

QUAK ★ D13 80889B/45 ★CA 1064-758
Semi-moist imitation sausage pet food - contg. antimycotic, sugar and polyhydric alcohol combination to effect stabilisation
QUAKER OATS CO 14.04.75-US-567600
C03 (23.10.79) A23k-01/18

Product comprises (a) 0-50wt. % meat or meat-by-prods. (b) 15-50 wt. % moisture, (c) 15-30 wt. % meat meals, (d) 5-30 wt. % vegetable protein, (e) 1-20 wt. % sugar, (f) 3-10 wt. % flavourants, colourings vitamins, minerals and salts, (g) 0-15 wt. % cereal, (h) 0-10 wt. % animal fat, (i) 1-10 wt. % of polyhydric alcohol, (j) 1-5% of edible acid sufficient to adjust the sausage to pH ≤ 5, and (i) ca. 0.5 wt. % of antimycotic.

The combination of antimycotic, sugar and polyhydric alcohol acts synergistically to stabilise the compsn., and it provides for a lower net total of stabilising ingredients than would otherwise be expected in a semi-moist pet food. The sausage food is physiologically acceptable to both dogs and cats. 8.3.76 as 247342 (22pp914)

LILD- ★ D13 B/45 ★DK 7801-317
Protein extraction system for bone
LILDAL J A/S 22.03.78-DK-001317
(15.10.79) A23j

FIRM D13 54472S/34 #DS 1793-844
Synthetic flavour - modifying agents for coffee and other beverages and foods
FIRMENICH SA 29.04.66-CA-959164 (30.04.65-US-452342)
E13 (31.10.79) *CA-878-421 A23l-01/22 + C07d-241/12 C07d-403/04 C07d-409/04

The following cpds. are used as flavourings in drinks, foods, and luxury goods, or as flavour components in flavour-modifying agents: (1) 2-methyl-3-ethyl-, 2-methyl-3-isobutyl-, 2-methyl-3-propyl-, 2-methyl-3-isopropyl-, 2-methyl-3-butyl-, 2-methyl-3-amyl-, or 2-methyl-3-hexyl-pyrazine; 2,3-dimethyl- or 2,3-diethyl-pyrazine; 2-ethyl-3-vinyl-pyrazine; 2-methyl-3-(5,6)-pyrrolyl-(1)-pyrazine; 2-methyl-3-(thienyl-(2))-pyrazine; 2-ethyl-2-isopropyl-, 2-vinyl- or 2-isopropenyl-pyrazine; or 2-

methyl-3-vinyl-pyrazine; (2) trimethyl pyrazine; 2,6-dimethyl-3-ethyl-, 2,5-dimethyl-3-ethyl-, 2,5-dimethyl-3-propyl-, 2,6-diethyl-3-methyl-, 2,5-diethyl-3-methyl-, 2,5-dimethyl-3-butyl-, 2,3-dimethyl-5-isoamyl-, 2,5-dimethyl-3-isoamyl-, or 2,3-diethyl-5-methyl-pyrazine; (3) 2-methyl-6-ethyl-, 2-methyl-6-propyl-, 2,6-diethyl-, or 2-methyl-6-vinyl pyrazine; (4) trimethyl-butyl-, trimethyl-isoamyl-, 2,5-dimethyl-3,6-dipropyl-, 2,5-dimethyl-3,6-dibutyl-, 2,5-dimethyl-3,6-diisobutyl-, 2,5-dimethyl-3,6-diamyl-, 2,5-dimethyl-3,6-diethyl-, 2,3,5-trimethyl-6-hexyl- or 2,5-dimethyl-3,6-diethyl-pyrazine; and (5) 2-ethyl-5-methyl-, 2-isopropyl-5-methyl-, 2,5-diethyl- or 2-methyl-5-vinyl-pyrazine. 29.4.66 as 793844 Div. ex 1695505 (10pp481)

FIRM D13 54472S/34 #DS 1793-845
Synthetic flavour - modifying agents for coffee and other beverages and foods

FIRMENICH SA 29.04.66-CA-959164 (30.04.65-US-452342)
E13 (31.10.79) *CA-878-421 C07d-241/42

Lower alkylquinoxalines are used as flavouring or flavouring components, esp. in drinks, nutrients and foods. In partic., 2-, 5- or 6-methylquinoxaline; 2,3-dimethyl- or -diethyl-, or 2-methyl-3-ethyl-, -propyl-, -isopropyl-, -butyl-, -isobutyl or -amylquinoxaline; or 2-ethylquinoxaline are used to provide an aromatised flavour in water-soluble coffee prods.

Cpds. 2-methyl-3-butyl- and -isobutylquinoxaline are new. 29.4.66 as 793845 C.i.p 1695505 (3pp047)

FISS/ D13 80810U/52 =DS 2329-172
Liq filled chocolate bonbon prodn - by differential chilling to form crust

FISSOLO M F (FIS /) 22.06.72-CH-009407
(31.10.79) *BE-800-845 A23g-03

Crusty chocolate are produced by pouring an aq. sugar soln. (I) into chocolate envelopes (II) having a wall thickness of < 1.5mm, the cavity (III) enclosed by (II) serving to receive (I), the wt. of which is > twice that of (II); and then closing (III) with a chocolate base (IV).

The novelty is that (a) an unsatd. (I) is produced, the saturation point of which is $\leq$ the m. pt. of (II), (b) (II) is cooled, with the aid of the mould (V) to a temp. $\geq 0^\circ\text{C}$., (c) the unsatd. (I) is poured into the cooled (II) and (d) (III) is closed with (IV). During stage (b), pref. (II) and (V) are cooled to $\leq -5^\circ\text{C}$.

The process is simple and cheaper than known processes. 7.6.73 as 329172 (6pp481)

TATL D13 84985X/46 =DS 2618-146
Powerful natural sweetener from fruit of *Thaumatococcus Daniellii* - by extraction with dilute aq. soln. of aluminium salt

TATE & LYLE LTD 13.02.76-GB-005719 (29.04.75-GB-017831)

(D17) (31.10.79) *BE-841-294 A231-01/23

Process for isolation of a sweet substance from *Thaumatococcus daniellii* fruit comprises extn. of the seeds, pref. with a dilute aq. Al salt, (pref. 0.7-1wt%), at $4-40^\circ$; the extract is filtered and opt. purified by ultrafiltration or dialysis. Further purificn. is achieved by adsorption on a cation exchange resin (as alkali or ammonium salt), elution of colouring matter with an aq. alkali or NH_4 lactate soln, followed by elution of the sweet component with aq. alkali or NH_4 citrate pref. at pH 3-4.5, and opt. freeze drying. The prods. are useful sweetening agents. 26.4.76 as 618146 (6pp047)

LEHF ★ D13 81017B/45 ★DT 2818-563
Melter for cocoa bean mass, cocoa butter, paraffin or fats - has inclined, heated, oscillating tubular bottom and tray to ensure easy run-off of melt

LEHMANN F B MASCH GMBH 27.04.78-DT-818563

J04 (31.10.79) A23g-01/04 B01j-06 B29b-03/02

Installation for melting blocks of cocoa bean mass, cocoa butter, fat, paraffins or the like has ≥ 1 heated tubular bottom to which the blocks are conveyed and beneath which there is a catch tray from which the molten mass is discharged via an outlet. The tubular bottom may slope from inlet to outlet sides. It is supported in such a way that it can be caused to vibrate.

The melt runs off at a rate that is greater than that achieved with prior art, non-vibratory, installations although no more heat is required. Little tendency for material to cling to the tubes of the bottom. 27.4.78 as 818563 (10pp267)

DURA/ ★ D13 81079B/45 ★DT 2915-038
Cooking liq.-absorbing food in protective sheath - of water-impermeable, unperforated material, sealed for cooking after opt. deep-freezing

DURAN V 05.06.78-OE-004071 (26.04.78-OE-003014)

(31.10.79) A231-01/*

In food prepn. using a protective sheath, the raw foods, which absorb liq. during cooking, are introduced into a non-toxic, unperforated, moisture-impermeable sheath, e.g. of plastics or metal, if necessary with additional liq. needed for cooking. The sheath is sealed and the enclosed foods are cooked, opt. after storage. The sheath is sealed by welding, bonding, pressing or glueing, to form a moisture-impermeable seal. Pref. sheathing material resists cooking and/or roasting and/or deep-freezing.

Meals can be prepd., cooked and stored safely and economically. Over-cooking is avoided, even on exceeding standard cooking time. 12.4.79 as 915038 (+3.5.78; 12.5.78-OE-003219; 003479) (12pp200)

MAIL/ ★ D13 81120B/45 ★FR 2415-432
Substitute or complementary food equiv. to mothers milk - contg. fruit or vegetable juice and lactic or beer yeast

MAILLOLS M 26.01.78-FR-002167

(28.09.79) A23c-11 A231-02/02

The food comprises at least one freshly prepd. liquor or juice from a vegetable or fruit together with dried lactic yeasts or beer yeasts. The foods are used as substitute or as complementary food. It has the principal constituents of material milk with the advantage that the protein is in a more digestible form than milk casein.

The proportions of juice and yeasts are pref. such that the protein, enzyme, vitamin and digo-element contents are substantially those of material milk. Specified juices are from carrot, wheat germ, barley germ and almond milk. Other pref. ingredients are sugar and/or emulsified

fats or cereal extracts macerated in water. The lactic yeasts are pref. prepd. by the Bel process. 26.1.78 as 002167 (5pp597)

PACI- D13 41616Y/23 =GB 1555-
Solid animal feed supplement contg. molasses - together with phosphoric acid and metal oxide or salt

PACIFIC KENYON CORP (SCHR/) 28.10.75-US-625938

C03 (07.11.79) *US4027-043 A23k-01

Animal feed supplement in solid block form comprises sugar in a solid matrix formed by the reaction which results from the addn. to the sugars of a phosphate and/or phosphoric acid and a metal hydroxide, oxide and/or salt. Pref. the sugar is provided by molasses, whey or a light sulphonate and is present in an amt. of 45-93 (55-80)wt. %

The compsns. solidify into solid, water-resistant blocks without using pressure, etc. The prod. is palatable and contains proper amt. of fat-contg. components to prevent over consumption. 28.10.76 as 044829 (15pp982)

SEFC- D13 12267Y/07 =GB 1555-2
Anthocyanin recovery and fractionation by treating aq. extracts using ultrafiltration and reverse osmosis techniques

SEFCAL SOC ETUD FAB COMM 22.07.75-FR-022854

E23 (07.11.79) *NL7607-896 C09b-61

An anthocyanic extract is treated in a first ultrafiltration stage to separate off a liq. filtrate which passes through an ultrafilter membrane from a first concentrate contg. anthocyanine of high mol. wt.

The liq. filtrate is then subjected to reverse osmosis to obtain a diffusate which passes through a reverse osmosis membrane, yielding a second concentrate contg. a low mol. wt. anthocyanin. Pref. the anthocyanin extract is produced from grape (prods.) dissolved in a water alcohol medium.

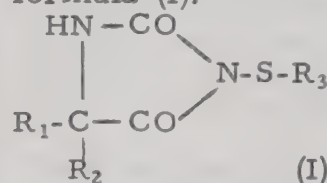
The treatment enables both the concn. and purification of anthocyanins, without recourse to excessive heat build up or the use of chemical agents foreign to the prod. 21.7.76 as 030366 (5pp931).

CALI D13 72263A/40 =GB 1555-28
Increasing microbial cellulose fermentation rate - by using a haloalkyl:thio:hydantoin

CHEVRON RESEARCH CO 31.05.77-US-801933

C02 E13 (E16) (07.11.79) *US4101-679 A23k-01 +C12b-01/2 C12d-13/06

A cellulosic material is fermented using a cellulose-digesting microorganism, in the presence of a cpd. of formula (I).



In (I) R_1 and R_2 are each H or 1-6C alkyl; and R_3 is a haloalkyl gp. contg. 1-2C atoms and 1-5 Cl or Br atoms.

Pref. the cellulosic material is a cellulosic animal feed, but may also be paper, municipal waste, wood, cotton, straw, bagasse, rice hulls, etc. Fermentation is pref. effected in vitro. 4.5.78 as 017846 (3pp997).

SWIF D13 76171A/42 =GB 1555-42
Rapid prodn. of ripened flavour cheese - using *Lactobacillus plantarum* and *Streptococcus durans* bacteria and pre-gastric lipase(s)

SWIFT & CO 21.06.76-US-697712

(07.11.79) *US4119-732 A23c-19/02 +C12k-03

Cheese is produced by treating milk with an acid-forming bacteria, coagulating the milk by the addn. of an enzyme, expelling the whey, and curing the resultant curd at $>45^\circ\text{C}$. >1 Selected strain of *Lactobacillus plantarum* and >1 selected strain of *Streptococcus durans* is added to the milk or curd before curing. *L. plantarum* is present in amt. 2-5 times w.r.t. *S. durans*. Pref. pre-gastric lipases obtd. from the throat tissue of kids, calves or lambs are added in soln. with the milk coagulating enzyme before curing.

The process is esp. used for making mature cheese, such as American cheese and other cheeses with similar curds characteristics, texture and flavour. 1.6.77 as 023286 (6pp931).

★ D13 81185B/45 ★GB 2019-813
 n. of beverages in vending machines - by adding a small vol. of
 surised cold water to dissolve powder
WITTENBORG P E 26.04.78-DK-001820
039 (07.11.79) B01f-05/20 B67d-05/37
 erages are prepd. in portions by adding a premeasur-
 mt. of a flavoured powder to a container such as a
 tic cup. The cup is partially filled with water under
 ht overpressure and during this process or immediate-
 afterwards pressure water is added to the cup for eff-
 ve mixing of the liquid. Pref. the pressurised water
 ntroduced in a direction which causes the liq. to cir-
 ate. The pref. pressure of the water is 3-4kp/cm² and
 pressurised water makes up 5-25% of the total amt. of
 er.
 The method is used to make a beverage, such as tea,
 fee or cocoa, to be dispensed from a vending machine.
 e powder is successfully dissolved using the water at
 reased pressure. As this water only forms a fraction
 the total vol. it can be at a lower temp. than the bulk of
 liq. and thus the problems of calcareous deposits pro-
 eed by using very hot pressurised water are obviated.
 4.79 as 014385 (5pp295).

RA-★ D13 B/45 ★HU T017-110
 on. of feedstuffs from by-products and wastes - by reacting the
 sture-contg. materials with anionic and/or cationic anhydrides
AGRARTUDOMANYIEGYE 28.04.78-HU-AA0895
C03 (27.10.79) A23k-01 C02c-03

DK ★ D13 81591B/45 ★J5 4126-188
 carbonated drink container - comprising organic polymer contg.
 factant at inside to prevent spouting out of the drink when the
 tainer is opened
NIPPON CROWN CORK 20.03.78-JA-031122
A92 Q34 (01.10.79) B65d-65 B65d-75 B65d-77
 packaging material for carbonated drinks has at least
 rt of its inside consisting of an organic polymer which
 ntg. a surfactant in a concn. ≥ 0.01 ppm, pref. 0.1-
 000 ppm, based on the amt. of (B).
 Pref. the surfactant is a nonionic or anionic surfactant
 ose 0.1% soln. has a foaming power of ≥ 5 mm at 25°C
 d specific surface tension of below 0.95. It may be a
 ycerol aliphatic acid ester, sorbitan aliphatic acid ester,
 pyleneglycol aliphatic acid ester, sodium alkylbenzene-
 lphonate, polyoxyethylene glycerin aliphatic acid ester,
 polyoxyethylene sorbitan aliphatic acid ester, or polygly-
 rin aliphatic acid ester. The packaging may consist of
 ttle and cap or crown and the cap or crown contains pack-
 ging agent consisting of olefin series of resin and surfac-
 ant.

Spouting phenomena (i. e. the tendency of a carbonated
 ink in a package to vigorously spouts with bubbles when
 e package is opened just after being subjected to extern-
 forces, e. g. falling down, rolling, vibration, etc.) is
 ntrolled. 20.3.78 as 031122 (7pp90)

PPP ★ D13 81724B/45 ★J5 4126-749
 eating potatoes to increase preservative properties - by
 phalising with heat and adding poly:phosphate
Q.P. CORP 20.03.78-JA-032036
(02.10.79) A23l-01/21

The method is characterised by heating potato for alpha-
 ising and combining polyphosphate with alphasised potato.
 he alphasised potato can be preserved for 5-7 days with-
 eeping the good quality directly after the alphasising with-
 out formation of nasty odour and discolouration.

Specifically cut or mashed potato is heat-treated in hot
 ater of 75°C for 10-50 mins. or with steam of 100°C for
 10-60 mins. The polyphosphate is e. g. Na polyphosphate,
 polyphosphate, Na metaphosphate, K metaphosphate, Na
 yrophosphate. Polyphosphate is used in amt. of 0.03-2.0
 on potato. 20.3.78 as 032036 (3pp5)

AKA-★ D13 81725B/45 ★J5 4126-751
 konjak compsn. - contains food, such as dried bonito flakes, and
 ot. seasoning such as sugar
TAKAHASHI SEITAI KK 23.03.78-JA-033824
A97 (02.10.79) A23l-01/21
 the konjak compsn. is obtd. by combining konjak with other
 ingredients and opt. seasonings. As the ingredients, food-

(s) selected from wakame seaweed, sea tangle, ginger and
 flakes of dried bonito, can be used and as seasoning, sugar,
 sodium succinate, sodium arginate and/or sodium gluta-
 mate, can be used.

The obtd. konjak is delicious and is preserved and can
 be served not only as the material for Japanese hotchpotch
 and cooked dishes, but also esp. as sashimi konjak.

In the case of bagged konjak, konjak powder, water,
 ingredients and seasonings are mixed at 25°C and the mixt.
 is stood for an hour to form a paste. Then, the paste is
 bagged and the bag is moulded in a frame. The moulded
 bag is immersed in hot water (90°C) for 20 mins. to solid-
 ify and sterilise the konjak. In the case of unbagged kon-
 jak, the materials are treated as above except the bagging
 process. Thus prepd. konjak is delicious and can be pre-
 served for > 3 months at 20°C. 23.3.78 as 033824 (3pp5)

NIOF ★ D13 81727B/45 ★J5 4126-759
 Conc. cream - contg. sucrose fatty acid ester, glycerine fatty acid
 ester and opt. other cpds. as emulsifiers
NIPPON OILS & FATS KK 17.03.78-JA-029848
E17 (02.10.79) A23l-01/19

The conc. cream is composed mainly of oil and fat, emuls-
 ifier, sugar, fat-free milk solid and water, and is chara-
 cterised by using sucrose fatty acid ester (SE) 0.2-1.5
 w/w%, glycerine fatty acid ester (GE) 0.2-2.5 w/w% and
 opt. other emulsifiers, as the emulsifier ingredients.

Prod. is a stable solid cream and whipped cream hav-
 ing desirable properties and taste and flavour can be pre-
 pd. by whipping it with water, milk or fruit juice. It is
 superior to liq. creams and conventional concn. creams
 in that (1) it is highly stable and can be preserved for a
 long time at room temp.; (2) it shows good whipping prop-
 erty and can be whipped at room temp. to give whipped
 cream of excellent form-holding property; (3) it is free of
 viscosity-increasing agent it has excellent texture and
 taste; (4) it is highly stable to acid and sour whipped cream
 can be prepd. by combining with fruit juice, citric acid,
 etc. and (5) it has excellent freezing resistance and thaw-
 ing resistance and confectioneries prepd. with it can be
 preserved in a refrigerator for a long time.

As SE, that of HLB > 2 can be used and it is used in an
 amt. of 0.2-1.5 (0.4-1.5) w/w% on whole concn. cream.
 As GE, that mainly of monoester of 16-18C fatty acid can
 be used and it is used in an amt. of 0.2-2.5 w/w% on
 whole conc. cream. 17.3.78 as 029848 (8pp5)

NISO ★ D13 81728B/45 ★J5 4126-760
 Rice cake prepn. - by combining 3-oxy-2-methyl-(4)-pyrone flavour
 precursor, bread flavour, reducing oligosaccharide and crude rice
 protein in waxy corn starch
NIPPON SHOKUJIN KAK KK (TOYO-) 24.03.78-JA-033653
(02.10.79) A23g-03

The method comprises (a) combining a flavour precursor
 composed of 3-oxy-1-methyl-(4)-pyrone, Saint Jones-type
 bread flavour, reducing oligosaccharide and crude rice
 protein in waxy corn starch (b) preparing mochi (rice
 cake) with the mixture, standing the mochi for cooling,
 cutting it in proper pieces and roasting or frying the piec-
 es.

The sulphite odour and sweetness specific to waxy corn
 starch, can be removed and the rice cakes which are equal
 in taste and flavour to those prepared from glutinous rice
 only, can be prepared in a short time.

Crude rice protein of protein content 45-60% is pref.
 used in an amt. of 0.05 (0.1-1.0) wt. % as protein on the
 dough. Pref. Saint Jones-type bread flavour, 3-oxy-2-
 methyl-(4)-pyrone and reducing oligosaccharide are used
 in amts. of 20-300 pts. wt., 0.5-8 pt. wt. and 0.25-4 pt.
 wt. on 100 pt. wt. of the protein in crude rice protein
 respectively. 24.3.78 as 033653 (8pp5)

MACH-★ D13 81729B/45 ★J5 4126-767
 Frozen custard pudding prepn. - from a milk obtd. from soybean
 powder, water carrageenan or pharcelelan, mono-glyceride locust
 bean gum and sodium ascorbate
MACHIDA SHIGYO KK 17.03.78-JA-029817
(02.10.79) A23l-01/18

The method comprises (1) preparing very fine soy bean
 milk from 7-11 pts. refined fine soy bean powder and

93-89 pts. water; (2) adding 0.4-0.7% carrageenan or pharcellelan, 0.1-0.3% monoglyceride, 0.1-0.3% locust bean gum and 0.05-0.1% sodium ascorbate, (3) adjusting its pH to 6 and (4) using the obtd. processed soy bean milk as starting material for the custard pudding instead of cow's milk.

The undesirable taste and flavour specific to soy bean milk can be removed. By adding sugar and whole eggs to the bean milk, heating, adding perfume, filling the mixt. into vessels and freezing, a frozen custard pudding with excellent texture and preservability property, and which does not drip after thawing, can be prepd.

Carrageenan or pharcellelan is used as coagulation stabiliser. The monoglyceride has a HLB of 8-12 and is used together with locust bean gum to improve the water-holding property and texture of the custard pudding. Sodium ascorbate is used as antioxidant, prevents oxidn. of fat and suppresses the increase in viscosity when heating. 17.3.78 as 029817 (2pp5)

FUKU/★ D13 81735B/45 ★J5 4126-794
White seasoning liquor prodn. - includes adding enzyme liquor to crude aq. protein soln., heating, adding saccharified liquor and lactic acid bacteria

FUKUSHIMA H 23.03.78-JA-032420

(D16) (02.10.79) A231-01/23

White seasoning liquor contains a total nitrogen of 0.6-1.7 W/V %, 0.3-1.0 W/V % formole frm of nitrogen, 3-5 W/V % alcohol, 4-6 W/V % sugar (reduced sugar), 15-18 W/V % sodium chloride has a pH²⁵ 4.5-5.5, buffering power of 0.5-1.0 and degree of colour No. above 46.

The liquor is produced by adding enzyme liquor extracted from koji cake aq. crude protein soln. separated from corn to predecompose starch and protein; adding sodium chloride to the mixt.; heating to ppte. coagulated solids, adding saccharified liquor obtd. by enzyme hydrolysis of starch such as corn starch and cultured lactic acid bacteria to carry out lactic acid fermentation; adjusting pH of the treated liquor to 4.0-5.2% heat-treating the mixt. to sterilise it; filtering to give protein-digested liquor; inoculating solid koji mould producing protease and amylase in the substrate of pulverised and boiled corn and cultured yeast to decompose protein and cultured yeast to decompose protein and starch and carrying out alcohol fermentation. 23.3.78 as 032420 (9pp69)

SHIR-★ D13 81736B/45 ★J5 4126-795
Prodn. of deodorant for fish shell - by inoculating ethyl acetate-producing yeast strain of Hansenula or Candida in dilute sake or sake distn. waste, adding sugar, etc.

SHIROBANA SHUZO KK 20.03.78-JA-030996

(D12 D16) (02.10.79) A231-01/23

The method is effected by (a) inoculating ethylacetate-producing yeast strain belonging to Hansenula or Candida either in the sake diluted with water or the distn. waste of sake, in which sugar is complemented, (b) culturing, (c) filtering the fermented liquid to remove yeasty body, etc. and (d) adding alcohol, sorbite and salt to the filtrate.

The flavour can deodorise fish smell effectively in an amt. as little as 0.1-0.5% on preparing marine processed foods and being free of sugar, the flavour does not cause scorching smell and scorching colour. Its deodorising activity is superior to 'kasutori shochu', 'honmirin', 'mirin', etc.

The culture is practiced at 25-30°C for 7-10 days and the fermented liquid contains ethylacetate 50-100 mg/100 ml. Alcohol, sorbite and salt are added 14.0-15.0%, 14.0-15.0% and 2.3-2.5% respectively to the filtrate. 20.3.78 as 030996 (4pp5)

WATA/ D13 73621Y/41 = J7 9032-057
Synergistic food preservative with low toxicity - contains hexametaphosphate or ultraphosphate and capr(yl)ic acid monoglyceride

WATABET 27.02.76-JA-020152

E34(E17) (11.10.79) *J52105-211 A231-03/34

The compsn. is effective against bacteria, mould and yeast but has less toxicity, no bad smells and no unpleasant taste. It is used in preservation of food and drink, e.g. noodles, bread, ham, boiled fish paste, sausage, cheese, yoghurt, pickle, juice, soy bean paste, etc. The phos-

phate acts as a bactericide, and the monoglyceride as surfactant.

The combined use of the two synergistically increases the bactericidal action, esp. against Gram-negative bacterium E. Coli. 27.2.76 as 020152. A231 3/34 (11.10.79) WATAABE, T. (6pp) (J52105211)

MILE D13 38035Y/21 = J7 9032-06
Fortification of deficient protein foodstuffs - with C-terminal amino acid-substd. methionine dipeptides

MILES LABORATORIES INC 17.05.76-US-687378

E16 (11.10.79) *US4024-286 A23j-03 A231-01/30

Methionine deficient protein foods are fortified with a bland, water-soluble C-terminal amino acid (alanine, valine or glutamic acid)-substd. methionine dipeptide e.g. L-methionyl-L-alanine, -valine or -glutamic acid. The protein is pref. a vegetable e.g., soy protein.

The substd. dipeptides are bland in taste and odour, stable to oxidn. and degradation, water-soluble, and nutritionally available on ingestion. They may be added e.g. to textured vegetable meat and cheese analogues, and vegetable protein, e.g. soy milk substitutes.

In an example, a soln. of DL-methionine-N-carboxyanhydride in acetone (prepd. from COCl₂ and DL-methionine) was reacted with a glycine/Na borate buffer soln. (pH 10.2). The prod. was desalted and then eluted from a cation-exchange resin with NH₄ acetate buffer to yield DL-methionylglycine. 16.11.76 as 136979 (clg. 17.5.76-US-687378) A23j 3/00; A231 1/30 (11.10.79) MILES LABORATORIES INC. (7pp) (J52139735)

MORI-★ D13 81861B/45 ★J7 9032-061
Preservation of fresh vegetables in poorly ventilated conditions - in presence of active charcoal, alkali hydroxide and silicate cpd.

MORIROKU SHOJI KK 28.03.72-JA-030373

(11.10.79) A23b-07

Method comprises storing vegetables in a poorly ventilated condition in the presence of active charcoal (I), alkali hydroxide (II) and silicate cpd. (III). (II) is e.g. Ca(OH)₂, NaOH or Mg(OH)₂. (III) is e.g. silica gel or zeolite. 28.3.72 as 030373. A23b 7/00 (11.10.79) MORIROKU SHOJI KK (3pp83) (J48098057)

MATS/★ D13 81862B/45 ★J7 9032-062
Refrigerating milk without risk of viscosity increase on thawing - involves adding salt of malonic, malic, tartaric, lactic, glycolic or gluconic acid and sugar

MATSUMOTO S 17.03.71-JA-014373

(11.10.79) A23c-03/04

Method comprises adding salt of malonic acid, malic acid, tartaric acid, lactic acid, glycolic acid or gluconic acid and sugar to milk and freezing the milk. The additive prevents viscosity increase and protein coagulation on thawing. 17.3.71 as 014373. A23c 3/04 (11.10.79) MATSUMOTO, S. (2pp83) (J47029551)

KYOW D13 60740X/32 = J7 9032-070
L-Isoleucine fermentation prodn. - by culturing Corynebacterium glutamicum which requires methionine and or lysine for growth

KYOWA HAKKO KOGYO K 18.12.74-JA-144552

B05 E16 (D16) (11.10.79) *J51073-188 C12d-13/06

An L-isoleucine-producing strain of Genus Corynebacterium, resistant against isoleucine analogues and requiring ≥ 1 of methionine and lysine for its growth, is cultured in a nutrient medium contg. the required substance. Yield of L-isoleucine is remarkably enhanced by the use of the isoleucine analogue-resistant auxotroph induced from Corynebacterium glutamicum. The process is inexpensive. L-Isoleucine is useful as an essential amino acid in the pharmaceutical and food industries. 18.12.74 as 144552. C12d 13/06 (11.10.79) KYOWA HAKKO KOGYO KK (3pp) (J51073188)

NISW★ D13 81863B/45 ★J7 9032-078
Lactic acid beverage prodn. - by saccharifying boiled rice, adding to soybean milk, sterilising and effecting lactic and alcoholic fermentation

NISSHIN OIL MILLS KK 03.12.71-JA-097184

(D16) (11.10.79) A23c-09/12 A231-02/38 C12g-03/02

The method comprises saccharifying boiled rice with rice leaven, adding the soln. to soybean milk, sterilising with heat, and culturing lactic acid bacteria and yeast in the

1. at 35°C to effect lactic and alcoholic fermentation.
2. 71 as 097184. C12g 3/02; A23c 9/12; A231 2/38
10.79) NISSHIN OIL MILLS KK (2pp83) (J48061660)

OK-★ D13 81864B/45 ★J7 9032-079
on. of leaven for brewing miso - by immersing unpolished rice in
ing water, steaming under pressure then culturing *Aspergillus*
ae in obtd. rice

CHOKAI MISO KK 07.04.72-JA-034434
(D16) (11.10.79) A231-01/20

method comprises treating unpolished rice in boiling
er for a short time, steaming the rice under pressure
culturing *Aspergillus Orizae* in the rice. The boiling
er treating time is usually 5-10 mins. 7.4.72 as
434. A231 1/205 (11.10.79) CHOKAI MISO KK
p83) (J48099395)

L D13 80715S/51 =J7 9032-754
fluidised bed flow control - providing different residence - times in
erent layers esp for extracted nuts
UNILEVER NV 11.06.70-NL-008485
Q76 +P43 Q77 Q78 (16.10.79) *DT2128-460 B01j-08/36 F26b-
03/08

fluidised bed treatment method for solid particles of
riable size, e.g. heating and cooling esp. combined
ing and cooling of extracted oil-bearing grain and nuts,
ere the material is continuously moved across a perfor-
ed floor as a fluidised bed through an upward gas flow,
erates with different residence times for the separate
ers of the bed.

1. Pref. the lower layers, contg. the heavier larger part-
ies, have longer residence times than the upper layers.
e prefd. appts. has independently adjustable outlet valv-
es at different levels. 11.6.71 as 041152 (clg. 11.6.70-
-008485) B01j 8/36; F26b 3/08 (16.10.79) UNILEVER
V. (5pp) (J47000763)

DFO=★ D13 81962B/45 ★SU-646-957
liquid e.g. milk homogeniser - has linked suction chambers and
ankshafts connected via pulley and belt to drive
ODESS FOOD MACH CON 02.08.77-SU-514387
P13 (18.02.79) A01j-11/16

liquid homogeniser, especially for milk products, con-
ists of an electric motor and coupled homogenising ele-
ents, each linked to a plunger unit, crankshaft and suc-
on and compression chambers.

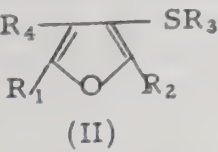
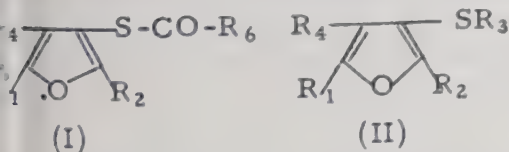
The homogeniser is designed for simplicity and improved
operating conditions by having the plunger unit suction
chambers linked by a bush, and the crankshafts linked in
series with one another by means of a coupling and
connected via a pulley and belt to the drive motor.
antonyants, A.G., Berenshtein, B.M., Abinya, F.A. et
al. Bul. 6/15.2.79. 2.8.77. as 514387 (2pp119)

FL D13 14727W/09 =SU-648-100
thiafuran and furanthiol flavouring agents for food - prepd. from 2-
e-1,4-diones and thiols and cyclisation of product
INT FLAVORS & FRAGR INC (INTF) 07.08.73-US-386453
(07.08.73-US-386450)

E13 (15.02.79) *DT2437-890 C07d-307/64

rganoleptic properties of food are changed by adding
ew esters of 3-furanthiol having formula (I) (where R₆ is
1-7C alkyl or alkenyl,
or furyl, thienyl, toluyl
phenyl-ethenyl, or Ph
and each of R₁, R₂ and
R₄ is H or lower alkyl),
or other 3-thiafurans

aving formula (II), where R₃ is H, alkyl, acyl or aroyl),
nd opt. flavouring auxiliaries. The cpds. are suitable
or use in meat, sauces, soups, snacks, malt- and other
everages, dairy products, peanut butter, sea-food,
weets, breakfast foods, pastry, vegetables, cereals,
at- and dog-food. Conc'n. of added (I) or (II) is 10 ppm.
o 0.1%. Ivers, W.J., Meiers, B.J., Heinson, H.H. et
al. Bul. 6/15.2.79. 6.8.74. as 055103 (4pp)



AMFE=★ D13 81977B/45 ★SU-648-190
Lactose-free milk based food for lactose allergic subjects - contg.
caseinate, milk fat, vegetable oil, vitamin(s) and saccharose or
glucose, fructose, xylitol or sorbitol
A MEDICINE FEEDSTUF (DAIR=) 18.08.76-SU-382751
(28.02.79) A23c-09/10

Dry, lactose-free milk product is prepd. by mixing a pro-
tein component with molten milk fat, a vegetable oil and
vitamins soluble in fats; homogenising the mixt; spray-
drying and mixing with water-soluble vitamin and dry
sugar.

The quality of the product is improved and prod. simp-
lified by using as a protein source dried caseinate.

At first, a mixt. of fats and water is prepd. at 50-70°C
then the caseinate is introduced, and the mixt. is stirred
for 10-15 min. Before the homogenisation, a sugar soln.
(e.g. saccharose) is introduced into the emulsion in an
amt. of 35-65% w.r.t. the total. The mixt. is stirred.
Pokrovskii, A.A., Korobkina, G.S., Danilova, E.M. et
al. Bul. 7/25.2.79. 10.8.76. as 382751 (6pp70)

BEER=★ D13 81978B/45 ★SU-648-192
Cultivation of fodder yeasts on brewery wastes - subjected to
thermal hydrolysis followed by enzymic hydrolysis to improve
utilisation of solids by yeast cells

BEER NON-ALCOHOL IN 17.06.74-SU-035420

C03 (D16) (28.02.79) A23k-01/06

Brewery wastes are subjected to thermal and fermentative
hydrolysis, and fodder yeasts are cultivated on the hy-
drolysate.

The food prods. utilisation degree is increased by sub-
jecting to the thermal hydrolysis malt and hop particles
mixed with solid brewery wastes (grain and malt cleaning
wastes, grain-soaking liquor, germs, etc.).

The mixt. is ground, mixed with sterilised after-soak-
ing water, and extracted. About 70-80% of the super-
natant liquid is withdrawn by decantation and used for
cultivation of fodder pentosan yeasts. The remaining
liquid is mixed with thermally hydrolysed wastes (as
defined above), and a fermentative hydrolysis is perform-
ed. The resulting hydrolysate is divided into two phases.
The liquid phase is mixed with a protein sediment to form
a nutrient medium for the cultivation of fodder pentosan
yeasts. The solid phase is granulated and used as a fodd-
er.

Lerner, I.G., and Fremel, V.B. Bul. 7/25.2.79.
17.6.74. as 035420 (4pp70)

UPOU=★ D13 81980B/45 ★SU-648-194
Mineral additive for fowl feed prodn. - by processing soda prodn.
waste contg. calcium carbonate, hydroxide, sulphate etc.
UKR POULTRY RES INS 09.11.77-SU-544915
C03 E34 (28.02.79) A23k-01/17

Mud obtained during the soda prodn. is used as a mineral
additive for fowl feed. The mud is sepd. by filtration
from a suspension contg. various calcium and sodium
salts.

The mud contains (in wt. %) CaCO₃ 28-43, Ca(OH)₂ 10-
22, CaSO₄ 3-10, NaCl 10-15.3, CaCl₂ 8-20, MgO 1.1-7,
SiO₂ 5-10, and R₂O₃ 2-4.

Batyuzhevskii, Yu.N., Nasonov, Yu.M., Gorobets, A.I.
et al. Bul. 7/25.2.79. 9.11.77. as 544915 (4pp70)

KUPO=★ D13 81982B/45 ★SU-648-196
Dietetic salt substitute for use in meat prods. - based on potassium
chloride and lactose with addn. of glutamic acid, potassium
formate, calcium formate, magnesium citrate and basil

KAUN POLY 03.11.77-SU-540150

E19 (E34) (28.02.79) A231-01/22

Dietetic salt substitute based on KCl and lactose is modi-
fied by addition of substances improving the biological
value and the taste of the meat product and imparting a
pleasant aroma.

The compsn. contains (in wt. %) KCl 57-70, lactose
11-12, glutamic acid 1.0-2.0, potassium formate 1.4-2.0
calcium formate 0.8-1.0, magnesium citrate 0.8-1.0,
and basil 15-25.

Rakauskas, A.A., Sudzhene, S.K. Bul. 7/25.2.79.
3.11.77. as 540150 (2pp70)

KZZA = ★ D13 82252B/45 ★ SU-649-395
Confectionery compsn. evaporator - has Laval nozzle within cylindrical chamber, connected to compressed air source
KAZAN ZARYA CONFECT 01.08.76-SU-391671
(28.02.79) A23g-03

The appts. includes a cylindrical chamber with a coaxial hollow working member connected to a compressed air source and a feed for compsn. holding excess moisture. To reduce process time and improve product quality, the member comprises a Laval nozzle and the cylindrical housing is connected to the compressed air source at the nozzle inlet end.

Bukin, E.N., Oleinikova, A.Ya., Khubulava, Z.I. Bul. 8/28.2.79. 1.8.76. as 391671 (3pp1358)

ANCL ★ D13 82437B/45 ★ US 4172-828
Protein isolation from defatted soybean flakes - to obtain four fractions with different properties

ANDERSON CLAYTON LTD 30.09.77-GB-040831
(30.10.79) A23j-01/14

Defatted soybean flakes are (a) mixed with water and held at elevated temp. to solubilise protein; (b) insolubles are removed; (c) the liquor is cooled over 1-3 hrs. to 5-10°C, forming curds and whey; (d) the curds ('Fraction C') are separated and (e) preserved, pref. by freeze- or spray drying.

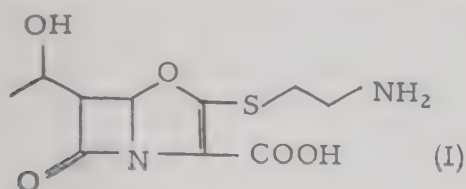
The whey may be further treated to yield more protein fractions by (i) adjusting the pH to 4.5; (ii) separating the curd formed, and (iii) preserving the curd ('Fraction 9-C'). Alternatively, the whey from step (a) is heated to 32-38°C, the pH is adjusted to 5.3 to form a curd ('Fraction M') which is separated and preserved. The second whey soln. thus obtained is then cooled to 10-16°C, the pH is adjusted to 4.5, and the curd formed is separated and preserved ('Fraction W').

The four fractions have useful different physical and functional props. Fraction C resembles Na caseinate in soln. Fractions 9-C and M resemble conventional soybean protein isolate, but are stronger gelling agents. Fraction 9-C has a very light colour and bland taste. Fraction W may form viscous smooth rubbery solns. or custard-like gels. It could be a substitute for albumen. 27.4.78 as 900556 (8pp955)

MERI ★ D13 82483B/45 ★ US 4172-895
Oxapenem carboxylic acid - useful as antibiotic against Gram positive and negative microorganisms

MERCK & CO INC 28.12.77-US-865166
B02 C03 (30.10.79) A61k-31/42 C07d-498/04

Oxapenem carboxylic acid of formula (I) and its pharmaceutically acceptable salts are new.



(I) are antibiotics useful against e.g. Staphylococcus aureus, Bacillus subtilis and Salmonella typhosa. They may be used for treating injections in man

and animals and also as additives to feedstuffs for preserving and disinfecting the feedstuff. 28.12.77 as 865166 (7pp954)

UENO D13 36607A/21 #US 4172-897
Powder or granular sorbic acid food preservative compsn. - prepd. from sorbic acid and readily water soluble substance

UENO SEIYAKU OYO 14.11.77-BE-860794 (04.11.77-US-848667)
E17 (30.10.79) *BE-860-794 +A23l-03/34 A61k-31/19 A61k-33/42

A readily water-soluble food preservation additive powder or granule compsn. consists of 5-90 (20-80) wt. % of finely

divided sorbic acid of particle dia. $\leq 50 \mu$, and 10-95 (80) wt. % of a normally solid water-soluble material (I). The powder or granules have a particle dia. of $\geq 300 \mu$.
(I) is Na or K prim. phosphate, Na or K sec. phosphate, Na or K tert. phosphate, Na or K pyrophosphate, acid Na or K pyrophosphate, Na or K metaphosphate or Na or K polyphosphate. Pref. compsn. contains 0-2 wt. % of a hydrophilic surfactant. 4.11.77 as 848667 (6pp982)

MICR- D13 21807A/12 = US 4172-8
Using Streptococcus diacetylactis mutant - used to inhibit cheese spoiling bacteria and give diacetyl taste and aroma with less acid

MICROLIFE TECHNICS 09.08.76-US-712692 (09.12.75-US-63905)
(D16) (30.10.79) *DT2735-689 A23c-19/02 +C12k-01/02 C1203

Creamed cottage cheese is prepd. by providing Streptococcus diacetylactis mixed with the curd and cream. Cottage cheese is inoculated with an amt. of S. diacetylactis NRRL B-8177 which is a mutant of S. diacetylactis 18-16 WT, sufficient impart flavour after a period of time at cold storage temps. Pref. the inoculation is at $< 10^\circ\text{C}$ in amt. of 10^4 - 10^8 cells per gm. of Cottage cheese.

Improved flavour and prophylaxis against spoilage bacteria of the dressed Cottage cheese is pref. provided by blending a concentrate of NRRL-B-8177 cells with a creaming mixt. of $< 10^\circ\text{C}$, then mixing the cold cream mixt. with dry Cottage cheese curd cooled to $< 10^\circ\text{C}$, and maintaining that temp. 9.8.76 as 712692 (4pp931)

KRFT ★ D13 82484B/45 ★ US 4172-900
American type cheese having intense flavour - prepd. by adding protease and lipase to curd before curing

KRAFT INC 21.03.77-US-779336 (06.01.72-US-215880)
(D16) (30.10.79) A23c-19/02

Natural American-type cheese having a very intense flavour is prepd. by making cheese curd by an American cheese method, separating the curd, salting it, and adding a source of proteolytic enzyme, and a lipolytic enzyme, esp. a self-limiting lipase derived from calf, lamb, or kid thymus tissue, and curing the curd at temps. $> 50^\circ\text{F}$ until the total content of free 2-10C fatty acids is ≥ 0.46 wt. % and the 4C fatty acid content is ≥ 0.32 wt. %.

The prod. takes only a short time to cure. The prod. is esp. useful in making process cheese. It is easily converted to a powder for flavouring purposes. 21.3.77 as 779336 (+ 17.12.73; 17.7.75 - US - 425300; 596910) (12pp955)

USDA ★ D13 82486B/45 ★ US 4172-902
Stable coloured food and beverage compsn. - contg. anthocyanin derived from morning glory

US SEC OF AGRICULTURE 26.05.78-US-910152
E23 (30.10.79) A23l-01/27

Compsn. comprises a food or beverage and, as colorant, peonidin 3-(dicaffeoylsophoroside)-5-glucose (I). The compsn. has pH 2-8 and has a stable colour from purplish-red to blue. (I) is added to the food etc. then the pH adjusted to give the required colour.

(I) is a natural prod. obtd. from the blue morning glory (Ipomoea tricolor, cultivar 'Heavenly Blue').

(I) gives a wide range of stable colours over a considerable pH range. It is suitable for colouring e.g. beverages, gelatin desserts, toppings, icings and dairy prods. 26.5.78 as 910152 (4pp1251)

See Also

D12 SU 648193 D16 SU 648603 D17 DS 2545111
D17 DT 2817884 D17 DT 2915872 D22 US 4172837
D23 J5 4127408 D23 US 4172850

D14: FOODSTUFF MACHINERY

META- ★ D14 81038B/45 ★ DT 2818-895
Non-contaminating fodder transfer - through tubular wall lock filled with circulating sterilising medium

METALL & PLASTIC GM 28.04.78-DT-818895
(31.10.79) B01l-01

When articles, for example bags of fodder for experimental animals, are to be transferred from one room to another with no risk of contamination, a flooded tubular contain-

is inserted in the wall between the two rooms. The two doors are closed by doors or blind flanges. A circulating pump can pump a sterilising medium in a closed circuit from a storage tank into the container after the bag of fodder has been inserted. A vent is arranged at the highest point of the circulating system.

This ensures that even contaminated air bubbles adhering to the bag are washed off and that the fodder is transferred without risk of infection. 28.4.78 as 818895 (18pp39)

DUW **D14** 30471A/17 =GB 1555-357
Apparator for crystalliser mother liquor - having column with vertical screw, feed inlet at base and solids outlet at top (NL 18.4.78)

DOUWE EGBERTS KON 15.10.76-GB-042824

J01 + P41 (07.11.79) *DT2744-480 + B01j-17/04

Appn. of materials esp. foodstuffs comprises continuous countercurrent leaching of the particulate crystalline solids which gradually move through the appts. in suspension. Upstream detectors monitor the amt. of undesirable material adhering to the crystals and control means are actuated to keep the amts. within predetermined limits.

The process parameters which are adjusted include > 1 (i) the quantity of material fed into the leaching liq. inlet, (ii) the quantity of crystals and mother liquor supplied, (iii) the quantity of mother liquor withdrawn at the outlet, and (iv) the transportation velocity through the appts. The process is esp. suitable for treating extracts of fruit, coffee and sugar.

The sepn. is obtd. with low energy consumption and the appts. required is of relatively low cost and simple construction. 13.10.77 (7pp397).

PURD ★ **D14** 81173B/45 ★GB 2019-731
Appts. for macerating cut forage crops e.g. hay - and forming into mat to enhance drying

PURDUE RESEARCH FOUNDATI 28.04.78-US-901067

P12 (07.11.79) A01d-43/10 B01f-07

Appts. comprises two adjacent rotating cylinders for receiving the products between them and rotating at different relative speeds. This differential speed macerates the products during passage between the rollers.

Pref. > 1 of the rollers has an irregular surface and the rollers are spaced apart by about 0.005 inches. Pref. the macerated products are moved to a matting device to enhance drying of the products.

The resulting mat dries very much more quickly than the freshly cut, untreated product. Thus a farmer is not so dependent upon good weather conditions. 27.4.79 as 814808 (18pp295).

APUK/ ★ **D14** 81981B/45 ★SU -648-195
Increased throughput feedstuffs extruder - with multi-thread divider screw and breaker in discharge passage of pressing screw

APUKHTIN BA 04.11.75-SU-187847

(28.02.79) A231-01/20

The proposed extruder includes a feeder with a drive, an internally ribbed casing holding a pressing screw, and a bevel washer on the end of the screw-shaft to form a passage with a conical insert in the casing end, and a breaker.

To increase throughput, there is a divider in the outlet part of the passage.

The divider is formed by a multiple-thread screw, with the breaker on its output end. The breaker pref. has a semicircumferential cross-section and has three sections, two of which are at different angles to the divider axis. The extruder produces several small threads which are then broken into short sections.

Apukhtin, B.A., Zinin, A.I., Korotov, M.V. et al. Bul. 7/25.2.79. 4.11.75. as 187847 (5pp1358)

KIPL = ★ **D14** 82158B/45 ★SU -648-608
Root vegetable test-sample pulper - has disc saw and guides for plate nesting vegetable part in cut/out, used in laboratory analysis

KIEV PLAN DES TECHN 06.07.77-SU-509027

P11 R16 (D17) (25.02.79) A01c-01 C13c-01/06 G01n-33/02

The mashing of individual root vegetables in the laboratory research is ensured by orienting them with respect to the disc saw. The frame of the saw carries guides on both sides for shiftable plate which features a cutout. The plate carries articulated gripping levers with serrations for holding the root vegetable.

The frame is mounted above the vertically adjustable table using wing screws, and the drive of the disc saw has a variable speed. The table is set with respect to the top edge of the disc saw, and the root vegetable is placed in the cutout of the plate for orienting in relation to the saw for cutting when pressed by hand.

Bogdanov, S.A., Norenko, A.N., Ilnitskii, I.I. et al. Bul. 7/25.2.79. 6.7.77. as 509027 (3pp89)

AIRG = ★ **D14** 82209B/45 ★SU -648-800
Food products freezing unit - has rapid freezing appts. with pressure drop regulation at inlet and outlet

AIR GAS TURBO COOL 27.09.77-SU-529844

Q75 (25.02.79) F25b-09 F25d-17/06

The food products freezing unit, contains a rapid freezing apparatus having inlet and outlet openings and connected to turbo-cooling machine through air ducts. A fan is placed at the turbo-cooling machine inlet. In order to increase the efficiency, the unit is provided with an additional fan connected to rapid freezing appts. inlet opening, and an arrangement for pressure drop regulation in the openings with thermocouples. The thermocouples are placed in each opening.

Nekhoroshev, V.M., Stavisskii, A.Ya., Fedoruk, A.V. et al. Bul. 7/25.2.79. 27.9.77. as 529844 (2pp110)

TEKH = ★ **D14** 82253B/45 ★SU -649-402
Chain conveyor for heat treating cans - has load and unload end pivot shafts interlinked by gear system and Geneva wheel

TEKHRYBPROM COMBINE 06.06.75-SU-142184

(28.02.79) A231-03/04

Transporter for installation for heat-treatment of canned products, as in Parent Certificate No. 261897 comprised an endless chain conveyor with can carriers pivotable through 180°, and loading and unloading systems each with a spring-loaded pusher and secondary conveyor.

Now, to improve operational reliability, the loading and unloading region pivot shafts are kinematically linked by a gear system between shafts and a geneva wheel, and the intermediate shaft is spring-loaded.

Korzhov, V.N., Subbotin, A.A., Shakirzyanov, L.Z. et al. Bul. 8/28.2.79. 6.6.75. as 142184 Add to 261897 (4pp1358)

SISE = ★ **D14** 82316B/45 ★SU -649-600
Plant juice extraction press - has housing with perforated chamber around part of auger upstream of charge zone

SIMF SEVASTOPOL APP 19.11.76-SU-421053

P71 (D16) (28.02.79) B30b-09/12 C12g-03/02

Lower amount of suspensions in the juice expressed from raw vegetable material is ensured by the perforated walls of the chamber held in the housing. It wraps the part of auger in upstream of the raw material charging zone, and is connected to the perforated cylinder.

One of the turns of the flight in the auger within the chamber has a slot for the partition dividing the chamber from the charging zone.

Korokhov, V.G., Kryuchkov, I.V., Sergeev, A.S. et al. Bul. 8/28.2.79. 19.11.76. as 421053 (3pp89)

CIST ★ **D14** 82379B/45 ★US 4172-669
Mixing and dispensing machine for food concentrates - has impeller shaft rotatably connected to mixer drive shaft through elastomeric coupling

CORNELIUS CO 27.07.78-US-928760

A88 (30.10.79) B01f-07/04

Mixing and dispensing machine for combining concentrate and liq. diluent to form an edible liq. comprises a concentrate dispenser, a diluent line and a mixer for mixing the concentrate and diluent. The mixer has a rotatable mixing impeller and a co-rotatable impeller shaft upon which the impeller is mounted.

An electric motor for driving the mixing impeller has a mixer drive shaft co-axial with and spaced axially from the impeller shaft. An elastomeric coupling rotatably connects the mixer drive shaft to the impeller shaft and has an elastomeric mass rotatable by the motor and connecting the shafts which is greater than the combined mass of the impeller and impeller shaft.

Used for food concentrates, e.g. powdered chocolate, mashed potato and soup with hot or cold water. The elastomeric

meric coupling has a greater moment of rotational inertia than both the impeller and shaft and serves as a flywheel and damper for the impeller during rotation. 27. 7. 78 as 928760 (5pp67)

See Also

D16 SU 648606

D15: WATER TREATMENT

RHON ★ D15 80832B/45 ★BE -875-998
Semipermeable membrane partic. for ultrafiltration - prepd. from a mixt. of two aromatic polyether(s), one being sulphonated
RHONE-POULENC INDUSTRIES 03.05.78-FR-013777
A88 J01 (A25) (05.11.79) B01d C08l

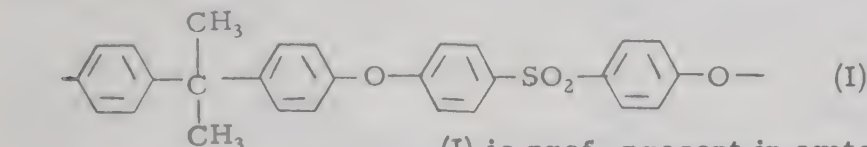
Semipermeable membrane, partic. for ultrafiltration comprises a mixt. of a polyether with recurring units of formula $-O-Ar-O-CH_2-CHOH-CH_2-$ (I); and a polyether with recurring units of formula $-O-E-\overline{R-E'}-m-O-G-SO_2-G'-$ (II).

In the formulae, Ar is a divalent aromatic gp. whose free valencies are carried by C atoms belonging to aromatic rings; m is an integer; E, E', G and G' are divalent aromatic gps.; E and E' being opt. sulphonated; R is a valence bond or $-CO-$, $-O-$, $-SO_2$ or divalent hydrocarbon gps.

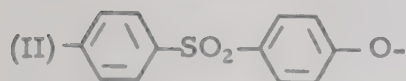
The membrane can be prepd. from relatively conc. collodion of the mixt. of polyethers (i.e. >25% concn.) and is partic. useful for the ultrafiltration of aq. or organic solns. and/or suspensions. 2.5.79 as 875998 (17pp950)

RHON ★ D15 80833B/45 ★BE -875-999
Poly(aryl:ether:sulphone(s) mixt. compsns. - for prepn. of reverse osmosis and ultrafiltration semipermeable membranes
RHONE-POULENC INDUSTRIES 03.05.78-FR-013776
A88 J01 (A25) (05.11.79) B01d C08l

Polymeric compsns. for the prodn. of semi-permeable membranes, comprise a mixt. of 2 polyarylethersulphones, one comprising units of formula (I) and the other units of formula (II):



(I) is pref. present in amts. of 15-90, esp. 30-80 wt.%. Mol. wt. of the polymers is pref. 10,000-60,000, esp. 20,000-50,000.



The membranes can be prepd. from conc. olsns. of the polymers and are resistant to heat and chemical agents. The compsns. may be solid or in soln. in pref. N-methylpyrrolidone at a concn. of >20, esp. 22-30 wt.%. 2.5.79 as 875999 (15pp950)

OMNI ★ D15 80868B/45 ★BE -877-495
Biological denitrification of surface or effluent water - using support bed of baked clay contg. molybdenum
OMNIUM DASSAINISSE (ARGI-) 02.08.78-FR-022779
(05.11.79) C02c

The process for denitrification of water in anaerobic medium by passing the water through a submerged bed of granular material in the presence of denitrifying bacteria heterotrophes, comprises using as granular material a baked clay contg. 1-5 pts. per thousand of molybdenum.

The process is used for treating water to make it drinkable or for treating waste industrial or drain water. The support enables elimination of over 90% of the nitrogen in 4-5 hrs. 5.7.79 as 877495 (9pp597)

SCSO- ★ D15 80900B/45 ★CH -613-917
Purifying waste water by flocculation - with synergistic mixt. of inorganic iron salts and oxidising agents
SCHWEIZERISCHE SODA 10.06.75-CH-007484
E37 (31.10.79) C02b-01/20 C02c-05/02

Method for purifying waste water or treating water uses in -organic Fe^{2+} and/or Fe^{3+} salts (A) plus inorganic oxidising agents (B) as flocculating agents. Pref. (B) is H_2O_2 ,

percarbonate, persulphate, Cl_2 or Cl -releasing cpd. Opt. (a) $Ca(OH)_2$ or $AR_2(SO_4)_5$, (b) active charcoal and (c) organic flocculating agents may also be added.

Used for producing drinking, industrial or bath water. Purification is synergistically enhanced by use of (B). The treatment increases the dry matter content of the sludge, improves the quality of the sewer gas and increases throughput of the clarifier plant. 10.6.75 as 007484 (2pp)

HENK D15 25409T/16 =DS 2048-912
Prepn of 1-amino alkane-1,1-diphosphonic acids - used as water softeners and dye fixers

HENKEL KG AUF AKTIEN 06.10.70-DT-048912

E11 (31.10.79) *BE-773-507 C07f-09/38

Prepn. of 1-aminoalkane-1,1-diphosphonic acids of formula $RR'C[PO(OH)_2]_2$ comprises reaction of corresp. carboxam -dodichlorides or -dibromides with H_3PO_4 . In the formula, R is H, 1-12C alkyl or Ph; and R' is NH_2 , piperidino, morpholino or NR_1R_2 , in which R_1 and R_2 are each 1-4C alkyl.

The prods. are used as complexing agents, esp. for softening hard water, purificn. processes and coating operations, partic. for textiles. 6.10.70 as 048912 (3pp047)

NOGU/ D15 61260Y/35 =DS 2718-457
Treating aq. effluent to remove mercury - by oxidising to divalent state and extracting with an organic soln.

DIAZ NOGUEIRA E 28.04.76-ES-447417

E36 J03 (31.10.79) *BE-854-061 C02c-05 C02c-05/08

Process for removal of Hg and/or its ions from industrial waste water comprises opt. oxidn. and extn. with a water-immiscible organic solvent system contg. a reagent which combines selectively with Hg ions, the organic phase is sepd. and regenerated by washing with acidic chloride soln.

The extn. mixt. comprises a hydrocarbon diluent (esp. kerosene type); a solvent aid, esp. alkyl phosphate and/or phosphine oxide and/or higher alkanol, ($M_r > 100$, 0-15%); and a thiol or thiolalkanol and/or thiophene, ($M_r > 80$, 0.01-1%). The pref. regenerating agent comprises HCl , (1-9M pref. 3M), in aq. $NaCl$, (1.5M to satd., pref. 2.5M). Pref. oxidants are $HOCl$ and Cl_2 , in aq. soln at pH 3-4; and excess oxidant is removed with a suitable reducing agent, partic. a (bi)sulphite. 26.4.77 as 718457 (7pp047)

DAGM- ★ D15 80907B/45 ★DS 2818-283
Water impregnation with carbon di:oxide - using flow generator driven by circulating component flow to impregnation zone under pressure

DAGMA DEUT AUTOMATE 26.04.78-DT-818283

(31.10.79) C02d-01/02

Water is impregnated with CO_2 by introducing CO_2 and water into an impregnation zone held under increased pressure. The CO_2 is passed through the pores of a porous body into an impregnation zone range below the water level. The water is set into a light motion, at least in CO_2 outlet zone into water by means of an activatable flow generator, e.g. a screw, blade or turbine-like wheel. Novelty consists in driving the flow generator with CO_2 and/or water, while making use of the flow stream to the impregnation zone.

The process can be used for the home-prodn. of carbonated water, opt. with the addn. of ice-pieces.

Fine bubble reunion to larger bubbles is prevented. The energy of the fluid supplied under pressure is made use of to drive the flow generator.

The CO_2 gas is pref. passed first through the flow generator activation zone and then to the porous body. In a specific embodiment, where water is sprayed as a mist under pressure in the impregnation zone area above the water level, at least some water is by-passed under pressure through the flow generator activation zone and then

f. sprayed as a mist into the head room of the impregnation zone. The CO₂ gas and/or water are allowed to flow out of the flow generator impeller zones. 26.04.78 as 283 (3pp200)

A-★ D15 80918B/45 ★DS 2844-934
pts. for aeration of liq. sewage - having domed insert on bed of tank with air injection and riser pipe with liquor overflow into distributor tray

HECKART J & SOHNE 16.10.78-DT-844934
P11 (31.10.79) A01c-03/02 B01f-05/12

q. sewage or similar liquids are held in a tank with flat base and having a dome shaped insert above the base. A riser pipe rises from this to above the surface of the liq. and discharges against a deflector baffle which deflects the liq. into a distributor dish from which it runs back via pipes to the bulk of the liq. Air is injected below the insert to induce the circulation. The system causes aeration of the liq. The distributor can move up or down with the liquid level.

Used for aerating liq. manure and similar liquids. Provides efficient aeration in equipment of simple construction and low energy input in which the liq surface is compensated for. 16.10.78 as 844934 (5pp1053)

EBD/★ D15 80926B/45 ★DT 2812-042
separator to break oil-water emulsions - using cylindrical support with semipermeable membrane and rotating agitator to stir concentrate on membrane surface

HEBDING H 20.03.78-DT-812042
J01 (31.10.79) B01d-13 B01d-17/02

Emulsion separator consists of a semi-permeable membrane which is permeable to the continuous phase but impermeable to the dispersed phase which is being recovered. The membrane is supported on the reverse side from the emulsion.

The separator consists of a cylindrical vessel, the lower part of the wall of which forms the support for the membrane. The vessel has an outer collection vessel for permeate. The inner surface of the membrane is agitated by a rotating stirrer.

For separating emulsions esp. oil/water emulsions. Is of simple construction, requires low installation space, needs low energy input and low losses, and can operate continuously. 20.3.78 as 812042 (34pp1053)

MOLT/★ D15 80940B/45 ★DT 2816-979
deodorisation of waste gas e.g. from sewage treatment plants - involves scrubbing with ferrous sulphate and potassium permanganate soln.

HOLTER H 19.04.78-DT-816979
J01 (31.10.79) B01d-53/14

Elimination of odorous substances (I), e.g. H₂S, NH₃, amines, nitrous and other organic substances, from waste gas is effected by scrubbing with water contg. FeSO₄ (e.g. as pickling liquor salt, FeSO₄·7H₂O) and KMnO₄. Scrubbing can be carried out in 2 stages, one using FeSO₄ soln. and the other KMnO₄ soln.

The process is useful for scrubbing waste gas from sewage treatment plants. 19.4.78 as 816979 (6pp16)

PASE★ D15 80947B/45 ★DT 2817-060
Sewage aeration tank supply pipe - with quick acting fixture of pipe bottom to tank wall
PASSAVANTW MICHELbacher 19.04.78-DT-817060
(31.10.79) C02c-01/26

A tank for the treatment of sewage is equipped with a vertical tube near one of its walls, with a flange connection to a supply of oxygen or air at the top and perforations in a cross-piece at the bottom. Near the bottom, the tube carries a retainer element which can be engaged and disengaged with a mounting bracket on the wall in the longitudinal direction of the tube.

This facilitates the extn. of the tube for the purpose of inspecting and servicing the perforations or air exit nozzles. The tube is securely located against vibrations and displacement forces on all sides. 19.4.78 as 817060 (14pp39)

WIMM/★ D15 80964B/45 ★DT 2817-392
Sludge thickening tubular cone centrifuge - varies drum volume by axial sliding movement of one drum part against other
WIMMER O 20.04.78-DT-817392
J01 P41 (31.10.79) B04b-01/08

The centrifuge, for clarifying liquids and for thickening sludge, also aims to increase the final concentration of the solid fraction. Two separate drum parts rotate together with the displacement body. The two drum parts are connected with each other by a tube which is closed at one end. It can slide axially, and is moved by a hydraulic cylinder. By the operation of the tube the separated solid fraction is discharged.

One part of the drum can be axially moved by a hydraulic cylinder from a basic position during the charging towards the other part of the drum, decreasing the volume of the drum. Charging the centrifuge with the fluid suspension is carried out through the central tube and after completed sepn., the solid fraction is discharged through the outlet. The displacement body can be fitted with a filter. 20.4.78 as 817392 (8pp554)

IHLE-★ D15 81000B/45 ★DT 2818-412
Disinfecting and/or removing algae from water - by mixing with UV-activated oxygen and/or halogen, esp. chlorine
IHLE ING GMBH 27.04.78-DT-818412
(31.10.79) C02b-03/08

Before intensely mixing with the water to be treated, the halogen and/or O₂ is/are brought to a zone which is directly near to the source of radiation, and is/are dissociated there by radiation. After flowing through this zone, the halogen and/or O₂ reach zones further away from the source of radiation, where it/they are intensely mixed with the water.

Less halogen is needed to achieve the same high degree of disinfection. Proximity to source of radiation, increases halogen temp. and reinforces dissociation. 27.4.78 as 818412 (19pp200)

FARB★ D15 81028B/45 ★DT 2818-680
Purifying waste waters contg. nitro-hydroxy aromatic cpds. - by heating under pressure without oxygen or air
BAYER AG 27.04.78-DT-818680
E14 (31.10.79) C02c-05

Waste waters contg. nitro-hydroxy-aromatic cpds. (I) esp. as the water-soluble salts, are heated to 150-500°C. under pressure, pref. to 50-150 bar, in the absence of O₂ or air. The waste waters are pref. heated under an inert gas, esp. N₂ and/or A.

Waste waters, obtd. in the nitration of aromatic cpds. or in prepn. of (I), can be treated inexpensively, without adding extractants, to reduce (I)-content to <20 (<10) ppm. The treated waste waters can be charged directly, without dilution, to a biological purifying plant, without risk of destroying microorganisms. Deposition of dirt or cracking prods. on reactor walls is prevented. 27.4.78 as 818680 (12pp200)

SCHM/★ D15 81032B/45 ★DT 2818-699
Cylindrical liquid filter - with easily exchanged filter insert defining two chambers
SCHMITT G 28.04.78-DT-818699
J01 (31.10.79) B01d-35/02

A filter for water or other liquids consists of a casing which is divided by an exchangeable element into two chambers. This element is either a filter cartridge or a partition into which several tubular filter cartridges have been screwed.

This filter is simple to mfr. and is easily accessible for an exchange of the element. It can be readily modified to suit various filtering problems. 28.4.78 as 818699 (19pp39)

SULZ★ D15 81033B/45 ★DT 2818-729
Fixed bed filter for water purificn. - having filter beds in parallel with overflow weir for clean water and provision for backflushing using clean water
GEBRUDER SULZER AG 26.04.78-CH-004490
J01 (31.10.79) B01d-23/24

Rapid filter plant has filter beds which are cleaned by

backflushing. It consists of several filter beds connected in parallel formed from particulate material on a support in a vessel. Clean water runs off via a common collection system to a weir which creates a back pressure above the bed.

A sludge run off branch is provided on each bed below the liquor level and to purge the bed, the sludge valve is opened and air injected below the bed, the feed being shut off. Clean water flows back through the bed. The number of parallel beds should be ≥ 1 unit greater than the ratio of purge velocity to filtration velocity.

For filtering and preparing water. Provides a simplified scheme of operating the backflushing on such beds. 28.4.78 as 818729 (14pp1053)

HOLZ- ★ D15 81057B/45 ★DT 2844-379
Liquid manure agitator - with aerated revolving impeller reciprocated in vertical direction with adjustable stroke

MASCH HOLZ GMBH 12.10.78-DT-844379

P11 (31.10.79) A01c-03/02 B01f-03/04 B01f-07/18 C02c-01/06

A paddle stirring mechanism for liquid manure in animal farms includes a hollow vertical shaft through which air is admitted to the impeller as it revolves. An up-and-down motion is superimposed to the rotary motion by a sprocket wheel which engages holes in the shaft wall and which is reversed by stops on the shaft.

This removes the bad smell nuisance and facilitates the emptying of the manure pit. The stroke can be easily adjusted to suit the manure level or pit depth. 12.10.78 as 844379 (12pp39)

MARM ★ D15 81115B/45 ★DT 2916-975
Chalk or lime based compsn. for desulphurisation of gas - contains (bi)sulphite ions and graham's salt or poly:phosphate, increasing sedimentation rate

MARTIN MARIETTA CORP 28.04.78-US-901164

E36 J01 L02 Q42 (31.10.79) B01d-53/34 C02c-05/02 C04b-29/02 E02d-03/14

Removal of SO_x from gases by contact with components contg. water, Ca ions, (bi)sulphite ions and opt. sulphate ions at 2-100 (2-60)°C. takes place in the presence of Graham's salt (I) or a dissolved polymer (II) of the formula $\text{M}_x\text{P}_n\text{O}_{(3n+1)}$ (in which M is a y-valent cation, $n > 1$, $x = (n+2)/y$), giving a sludge with improved properties. The wt. ratio of Ca to (I) or the $\text{P}_n\text{O}_{(3n+1)}$ -pt. of (II) is 1:0.0015-0.2 (1:0.001-0.04).

The claims also cover a new material contg. chalk or limestone and (I) or (II), opt. in conjunction with water.

The sludge has a faster initial sedimentation rate than one obtd. without addn. of (I) or (II). It can be used as land-fill, for liming land or as raw material to be oxidised and converted to plasterboard. Since more water than usual can be removed from the sludge, fewer and smaller lagoons are needed, so that land is saved, whilst the cost of the process is relatively low, wince it uses cheap chemicals in small amts.

A suitable compsn. contg. 1 pt. Ca and 0.01 pt. (I) was prepd. by mixing 50 g. CaO with 0.355 g. (I). 26.4.79 as 916975 (23pp16)

CAMP/ ★ D15 81125B/45 ★FR 2415-477
Condenser for distn. plant partic. for aromatic plants - has more efficient cooling circuit cheaper than conventional pipe coil

CAMPOLO A 27.01.78-FR-002828

J01 (28.09.79) B01d-03/04 C11b-09/02

Heat exchanger is a condenser of the type in which the vapour is cooled as it passes through a heat transfer circuit, frequently a pipe coil, immersed in a cooling liq. usually water. Improvement is that instead of a pipe coil, the circuit now comprises a number of shallow, vertical cylindrical tanks, or compartments, spaced one above another on a common vertical axis. The compartments are connected in series by sections of pipe coil.

Each compartment pref. has a float top cylindrical wall and a coned base funneling to drain liq. into the compartment below or to discharge. The top compartment pref. has an inlet pipe supplying vapour directly from the evaporator. The complete heat transfer circuit is pref. immersed in a tank of cooling liq.

Used as a condenser in a distn. plant, partic. for the

disn. of aromatic plants and herbs for perfumes, food flavouring essences, pharmaceuticals etc. condensing circuit is cheaper to make than a pipe coil of similar cooling capacity. Improved heat transfer efficiency reduces the requirement of cooling liq. 27.1.78 as 002828 (5pp44)

JAEG- ★ D15 81145B/45 ★FR 2415-8
Detector and electronic circuit to control redox reaction - partic. purify chromic and acid effluents from industrial process

JAEGER 30.01.78-FR-002512

J01 M11 R16 R26 (28.09.79) C02c-05/12 G01n-27/56 G05 11/08

The detector is fitted inside the reactor and comprises an electrode sensitive to the redox reaction and an associated reference electrode. Difference in potential between the sensing and reference electrodes provides a signal which actuates the circuit to regulate the rate of admission into the reactor of at least one reagent.

The reactor now also contains a second detector assembly combining a pH-sensitive electrode with associated reference electrode. The electronic circuit correlates input signals from the two detector assemblies to produce a combined output signal which regulates the rate of admission of reagent(s). The output signal is developed to represent the degree to which the redox reaction has advanced. The output signal is corrected to be independent of the pH value in the reactor, provided that the pH value lies within an acceptable range.

Used for purificn. of waste water esp. effluent from metal finishing and electro-plating factories, e.g. sodium bisulphite used to reduce hexavalent to trivalent chromium and sodium hypochlorite used to oxidise cyanide to cyanate. The redox detector does not suffer from variations in potential arising from changes in pH value of liq. to be treated 30.1.78 as 002512 (21pp448)

UNTC D15 67159Y/38 =GB 1555-067
Removal of solid impurities from ion-exchange resin bed - by water elution and air agitation of a short upper section of the bed

ECODYNE CORP 03.03.76-US-663369

J01 (07.11.79) *DT2708-315 B01j-01/04

Particulate impurities are cleaned from a bed of ion exchange resins contained in a filtration vessel by (i) adjusting the liquid level in the vessel to a point between the vessel top and the bed upper surface to provide a freeboard area within the vessel, (ii) introducing a gas into the vessel at a level reasonably high up the resin bed to scrub the impurities from the resin above the gas introduction level and suspend the impurities in the liquid, (iii) collecting at least a portion of the gas in the freeboard area of the vessel and terminating the gas introduction on reaching a predetermined pressure within the vessel, and (iv) using the pressure of the collected gas to force the impurity-contg. liquid from the vessel at the same level as the gas introduction level.

By scrubbing only the upper portion of the resin bed (where the concn. of impurities is highest) acceptable pressure drops may be maintained and leakage of impurities may be avoided. Lesser quantities of backwashing liquids are required, and the time required for undissolved solids removal is shortened. 2.3.77 as 008906 (4pp990).

FARB D15 19659A/11 =GB 1555-176
Treating waste water contg. organic matter by oxidn. - to carbon dioxide and water at high temp. and pressure

BAYER AG 09.09.76-DT-640603

(07.11.79) *BE-858-542 C02c-05/04

Organic substances dissolved or dispersed in an aq. system are oxidised with a gas contg. O_2 at elevated temp. and pressure to CO_2 and water. Oxidation causes phase sepn. of the reaction mixt. into a gaseous and a liq. phase.

The gaseous phase comprises inert gas, CO_2 , steam and organic constituents. The liq. phase comprises mainly water. The pressure is adjusted at the given temp. such that water is evaporated from liq. to the gaseous phase as steam > exothermicity of the reaction. The gaseous phase is fed to a heat exchanger, in which the amt. of heat needed to maintain the oxidation temp. is > partially transferred to a mixt. of water and gas contg. O_2 . The given mixt. flows on the other side of the heat exchanger.

and is subsequently fed with the aq. soln. or dispersion of organic substances, to the reactor.

The wet oxidation process can be carried out in an economical manner at lower pressure, esp. using high concns. of organic substances. 5.9.77 as 036948 (9pp931).

TECN- D15 12649A/07 = GB 1555-395
Asymmetric modified fluorocarbon polymer membrane prodn. - by dissolving, spreading on a sheet; evaporating solvent and pptn. in non-solvent

TECNECO SPA 27.10.76-IT-012862 (05.08.76-IT-012746)
A88 J01 (07.11.79) *DT2735-443 +B29d-07/08

A membrane having a higher porosity at one surface than at the other is made by dissolving a fluorine-contg. polymer in solvent, spreading the resulting soln. on a substrate, evaporating some solvent, and pptg. the polymer by immersing in a nonsolvent to produce the membrane.

The polymer is e.g. PVF, PVdF, polytrifluoroethylene, poly-1,1,2-trifluorobutadiene, polyvinylsulphofluoride, ethylene-TFE copolymer, or TFE-vinylidene fluoride copolymer. The solvent may be DMF, DMSO, THF, formamide, acetone, ethyl acetate, dioxan, a pyridine etc.

The asymmetric membranes are useful in osmosis, ultrafiltration and similar processes. They have high stability to chemicals, heat and bacteria and high mechanical resistance. 3.8.77 as 032647 (5pp945).

GIAM/ ★ D15 81176B/45 ★ GB 2019-737
Steam desorption of gases from liq. - using purificn. column having two terminal zones operating at different pressures

GIAMMARCO G 27.04.78-IT-067953
J01 (07.11.79) B01d-19 B01d-53/14

Liqs. are purified by treatment with steam in a purificn. column to remove gaseous impurities. The purificn. is carried out in an initial zone of the column and then completed in two terminal zones, one of which operates at a higher pressure than the other. Heat supplied from outside is delivered to the higher pressure zone and used to purify liq. delivered to that zone.

The steam produced by this heat is extracted from the top of the zone and delivered to the bottom of the lower pressure zone to purify liq. in that zone. Liq. purified in the higher pressure zone is expanded to the pressure of the lower pressure zone to yield further steam which is delivered to the bottom of the lower pressure zone.

Efficient steam utilisation maintains the heat consumption at a relatively low level. 26.4.79 as 014600 (10pp67).

HITG ★ D15 81254B/45 ★ J5 4124-553
Incineration of e.g. urban sewage sludge - by vacuum dehydrating after adding fine coal and a coagulant, adding substance contg. calcium oxide and incinerating

BABCOCK-HITACHI KK 22.03.78-JA-031639
J09 (27.09.79) C02c-03

In incinerating sludge, urban sewage sludge, etc. is dehydrated to approx. a 65% moisture content by vacuum hydration, etc. after addn. of fine coal powder and a coagulant and a substance contg. calcium oxide, e.g., Portland cement, cement clinker, etc., is added to the dehydrated sludge in an amt. of 5-15% on the basis of the wt. of ash to be formed when the sludge is burned and incinerated.

The incineration ash formed can be solidified by wetting so that the sludge is easy to transport, can be used in land fill, and used as an aggregate. The desulphurisation efficiency is favorably c.f. other wet desulphurisation methods and thus obviates the needs for the installation of specific desulphurisation appts., etc. 22.3.78 as 031639 (2pp117)

HITG ★ D15 81255B/45 ★ J5 4124-554
Dehydration of sludge - using fine coal powder in place of slaked lime and a high polymer coagulant in place of chloride

BABCOCK-HITACHI KK 22.03.78-JA-031641
J01 (27.09.79) B01d-21/* C02c-03

In a method of dehydrating sludge using inorganic coagulants e.g. slaked lime, ferric chloride, etc., in a vacuum dehydration system, fine coal powder is used in the place of the slaked lime and also a high polymer coagulant is used in the place of the ferric chloride.

In this method, the cost of treating the sludge including dehydration and incineration, is approx. 30% cheaper than the cost of conventional methods, and also administration

costs including costs for chemicals and fuels is approx. half that of conventional methods because the method obviates the need for the installation of denitrification appts. for waste gas and hexavalent chromium reduction appts. as in the case of the conventional methods.

A high calorific, self-combustible hydrated cake can be obtained and also the amount of ash formed when the cake is burned is approx. half of that of conventional methods. In addition, the formation of harmful hexavalent chromium and the emission of offensive odors can be completely avoided. 22.3.78 as 031641 (5pp)

IIDA/ ★ D15 81256B/45 ★ J5 4124-558
Reducing COD and BOD of water - using zeolite granules with an oxidant, e.g. hydrogen peroxide, allowing the appts. to be simplified, thus reducing cost

IIDA K 20.03.78-JA-031910
(27.09.79) C02c-05/04

Water to be treated is brought into contact with natural zeolite granules having oxidn. catalytic activity while injecting an oxidant, e.g. H₂O₂, etc., into the water or after injecting the oxidant into the water in a fluidised bed tank.

This method is capable of removing all types of COD and BOD components, including PVA, etc. with high efficiency, and eliminates the need for facilities to recover or remove oxidn. catalyst, e.g. iron hydroxide, etc., from the treated water. This permits simplification of the appts and redn. of operation and maintenance costs as well as installation costs. 20.3.78 as 031910 (5pp117)

MATU ★ D15 81257B/45 ★ J5 4124-559
Treating waste water contg. emulsified oil - by adding a powder of metal oxide, hydroxide, phosphate or sulphate, esp. ferric oxide, and stirring

MATSUSHITA ELEC IND KK 20.03.78-JA-031979
E37 (27.09.79) B01d-15 C02c-05/02

At least one cpd. powder selected from metal oxides, e.g. ferric oxide, CaO, MgO, manganese oxide, SiO₂, stannic oxide, zinc oxide, TiO₂, ZrO₂, dinickel trioxide, lead monoxide, etc., hydroxides, e.g. aluminium hydroxide, magnesium hydroxide, barium hydroxide, ferric hydroxide, calcium hydroxide, etc., aluminium phosphate, barium sulphate, calcium sulphate, ferric sulphate, and ferric phosphate, is added to oil-contg. waste water and stirred.

This method is capable of removing oil present in waste water, rapidly, cheaply, and effectively, without causing any secondary environmental pollution, and also the treating agent used can be recovered for reuse. The most effective treating agent is ferric oxide and the amount used is > 0.6 g per 30 ml of emulsion. 20.3.78 as 031979 (4pp117)

KURK ★ D15 81314B/45 ★ J5 4124-870
Treatment of waste neutralising and rust preventing soln. - by adding sulphamic acid (salt), acid, peroxide to reduce COD and alkali to neutralise soln.

KURITA KASEN KK 22.03.78-JA-032769
E37 (E17) (28.09.79) C02c-05/02

Method comprises adding sulphamic acid or its salt to a waste neutralising and rust preventing soln. contg. citric acid and Na nitrite to decompose nitrite ions in the soln. adding an acid to the soln. to adjust its pH to acidic, adding peroxide to the soln. to reduce COD of soln. and adding alkali to the resulting soln. to neutralise it.

In an example, 1 l of a soln. of 0.1% of citric acid is heated at 60°C. An iron piece is added to the heated soln. to dissolve iron ions in it. Ammonia and Na nitrite are added to the resulting soln. to obtain a waste neutralising and rust preventing soln. contg. 1,640 ppm COD, 170 ppm iron ions, and having pH of 10. The waste soln. is adjusted with caustic soda to pH 13 to ppt iron hydroxide. Then 15 ml of water contg. 30% H₂O₂ is added to the adjusted soln. After 3 hours, a supernatant soln. contg. 1560 ppm COD and 10 ppm iron ions is obtd. 22.3.78 as 032769 (3pp51)

HITK ★ D15 81315B/45 ★ J5 4124-871
Treating calcined ash by/produced in calcining waste sludge - in a reducing atmos., to convert hexavalent chromium in ash to trivalent chromium

HITACHI METAL KK 22.03.78-JA-032580
E31 (28.09.79) B01j-01

Method comprises treating the calcined ash contg. Cr at $> 720^{\circ}\text{C}$ in a reducing atmosphere consisting of > 0.5 vol. % CO and < 0.1 vol. % of O_2 .

Typically, waste sludge is introduced from an upper inlet into a multiple stage type calcining furnace equipped with a drying region (A), a burning region (B), a reducing region (C), and a cooling region (D). The sludge is dried in A, calcined with a burner in B, reduced with a burner in C, and cooled in D to convert hexavalent Cr of the sludge to trivalent Cr. Air is introduced from a lower inlet into the furnace to maintain the reducing atmosphere at desired compsn. 22.3.78 as 032580 (4pp51)

SASN ★ D15 81317B/45 ★ J5 4124-873
Filtering and purifying soln. contg. oil and suspended solids - by passing through fibrous oil adsorbent to remove oil component, and filter to remove suspended solids

SANSHIN SEISAKUSHO 23.03.78-JA-032419
J01 (28.09.79) B01d-15

The method comprises packing a fibre type oil adsorbing agent as a packed bed of $> 0.05 \text{ g/cm}^3$ packed density and $> 10 \text{ cm}$ packed thickness in an oil adsorbing region, passing the soln. through the packed bed at a linear velocity of $< 60 \text{ m/hr.}$ to convert the oily substances of the soln. to aggregated particles, adsorbing the aggregated particles with the packed bed to obtain the soln. contg. no oily substances and filtering the resulting soln. through a filter in a filtering region to remove the suspended solids from the soln. 23.3.78 as 032419 (5pp51)

ISHI/ ★ D15 81318B/45 ★ J5 4124-874
Sepn. of solute from solvent - by passing through sepn. medium consisting of spherical particles made of fibre or porous type substance

ISHIZUKA H 23.03.78-JA-032399
A88 J01 (28.09.79) B01d-13

A soln. contg. a solute and a solvent is passed through a separation medium consisting of spherical particles, to separate the solute from the solvent of the soln. The spherical particles are made of a fibre or porous type substance consisting of animal, plant, or mineral materials, and the dia. of the particles is $> 25 \text{ }\mu\text{m}$. The fibre made spherical particles are positioned on a glass fibre filter and the filter is supported with a porous porcelain. A dilute soln. of NaCl is passed through the sepn. medium strengthened with the filter and the porcelain with a high pressure of 30 Kg/cm^2 to obtain a concentrated soln. contg. 15% of NaCl and a diluted soln. contg. 0.05% of NaCl. The fibre of the spherical particles is made from an acetone soln. contg. 20% of acetic cellulose. 23.3.78 as 032399 (4pp51)

MITK ★ D15 81319B/45 ★ J5 4124-875
Concentrating solns. by reverse osmosis - using two membranes the first being of high concn. rate and the second of low concn. rate

MITSUI TOATSU CHEM INC 23.03.78-JA-032402
(28.09.79) B01d-13 C02b-01/82

The improvement comprises first concentrating a soln. with a reverse osmosis membrane of high concn. rate, and then concentrating the obtd. concn. soln. with a reverse osmosis membrane of low concn. rate. Permeated soln. by-produced in the second process is recycled with the material soln. to the first process, and the concn. of permeated soln. is adjusted so as to be equal to that of the material soln. 23.3.78 as 032402 (3pp51)

KINZ- ★ D15 81326B/45 ★ J5 4124-883
Regeneration of uranium adsorbing agent - by treatment with hydrochloric acid and then with ammonia or aq. soln. of hydroxide, bi:carbonate or carbonate of an alkali metal

KINZOKU KOGYO JIGYO 22.03.78-JA-031663
E31 K05 M25 (28.09.79) B01d-15 C22b-60/22

The method comprises treating a waste uranium adsorbing agent used for recovery of uranium from sea water, and mainly consisting of titanitic acid with hydrochloric acid, the agent being reduced in its adsorbing property, and

then treating the resulting treated agent with ammonia or an aq. soln. of hydroxide, carbonate, or bicarbonate of an alkali metal to regenerate it.

In one example, a waste uranium adsorbing agent consisting of titanitic acid and ferric hydroxide was washed with hydrochloric acid of pH 1-4.5 in a vessel, and then with water. The washed agent was immersed in an aq. soln. of 1% sodium carbonate for 2 hours, and washed with water to regenerate it. The regenerated agent was packed in a column and then, sea water was passed through the packed column to absorb uranium from the sea water. 22.3.78 as 031663 (3pp)

SANK- ★ D15 81337B/45 ★ J5 4124-899
Solid waste, e.g. sludge, treatment - by carbonisation followed by use in thermite process

SANKYO YUKI KK 22.03.78-JA-031665
(28.09.79) B01j-01 C01b-31/32

Process for treating solid waste is characterised by carbonising the waste solid contg. organic components, opt. after adding calcium oxide, and then using it for the thermite process.

Waste solid may be easily treated for a short time, and the treated prod. may be effectively utilised, i.e. CO produced from the fusing reaction may be used for fuel. Fe, Al and Ca contained in the waste solid may also be recovered.

In an example, vacuum-dehydrated raw sludge (water content: 74.5%, calcium to organic component contained in raw sludge: 2%) was heated at 400 to 500°C for 3 hrs. in an electric oven to carbonise the organic materials in the waste solid. Then, 250 g of thermite agent (of which the weight ratio of metallic aluminium and ferric oxide is 1:3) was added to 1 kg of the carbonised material, and the mixt. was placed in a container made of iron which was equipped with a harvesting nozzle at the bottom and CO discharging opening at the top. When it was heated with a gas burner under normal pressure, after a few minutes, thermite process occurred and the temp. rose. After the process was completed, 800 g of slag contg. 2.1 g of carbide was obtd. from the harvesting nozzle at the bottom. After cooling to ordinary temp. 80 g of water was added and about 0.7 l of acetylene gas was obtd. 22.3.78 as 031665 (3pp96)

JAOR ★ D15 81367B/45 ★ J5 4125-170
Deodorising gas contg. e.g. ammonia, hydrogen sulphide, mercaptan etc. - by first scrubbing gas with basic hypochlorite soln., and then with acidic soln. to remove chlorine

JAPAN ORGANO KK 24.03.78-JA-032853
E37 (28.09.79) B01d-53/34

A gas (I) is deodorised by scrubbing (I) with basic hypochlorite soln. (III) to oxidise and absorb the malodorous gases; and scrubbing (I) contg. oxidative chlorine, generated from (III) and (II), with acidic soln. (IV).

The method can be used to remove (II) from treatment of sewage, human waste, etc. The amt. of hypochlorite consumed is less as it is used in a basic soln. The amt. of chlorine converted from hypochlorite is low.

(III) is prepd. by dissolving hypochlorous acid and a basic cpd. such as NaOH or KOH in water, and adjusting pH to > 8 . (IV) is an aq. soln. of hydrochloric acid, sulphuric acid, nitric acid, etc. In the first step, NH_3 and H_2S are converted to non-odorous cpds. and methyl mercaptan is converted to malodorous methyl disulphide. This is absorbed by into (IV) in the second step. 24.3.78 as 032853 (4pp42)

ASAG ★ D15 81368B/45 ★ J5 4125-171
Deodorisation of gas or liq. contg. oxidisable odorous cpds. - by treating with soln. contg. available bromine cpd. and water-soluble chlorine cpd.

ASAHI GLASS KK 24.03.78-JA-032855
E37 J03 (28.09.79) B01d-53/34 C02c-05/02

Deodorisation of gas (I) or liq. (II) contg. oxidisable odorous cpds. (III) and carbonate (IV), comprises (1) scrubbing (I) or mixing (II), with aq. soln. (V) contg. available bromine (VI) and water-soluble Cl-cpd. (VII), for decomposition of (III); (2) lowering the content of (IV) in (V) by addn. of HCl after the step (1) and (3) recirculating (V) after regen-

and is subsequently fed with the aq. soln. or dispersion of organic substances, to the reactor.

The wet oxidation process can be carried out in an economical manner at lower pressure, esp. using high concns. of organic substances. 5.9.77 as 036948 (9pp931).

ICN- D15 12649A/07 = GB 1555-395
Asymmetric modified fluorocarbon polymer membrane prodn. - by dissolving, spreading on a sheet; evaporating solvent and pptn. in non-solvent

TECNECO SPA 27.10.76-IT-012862 (05.08.76-IT-012746)
A88 J01 (07.11.79) *DT2735-443 + B29d-07/08

membrane having a higher porosity at one surface than the other is made by dissolving a fluorine-contg. polymer in solvent, spreading the resulting soln. on a substrate, evaporating some solvent, and pptg. the polymer by immersing in a nonsolvent to produce the membrane.

The polymer is e.g. PVF, PVdF, polytrifluoroethylene, poly-1,1,2-trifluorobutadiene, polyvinylsulphofluoride, ethylene-TFE copolymer, or TFE-vinylidene fluoride copolymer. The solvent may be DMF, DMSO, THF, formamide, acetone, ethyl acetate, dioxan, a pyridine etc.

The asymmetric membranes are useful in osmosis, ultrafiltration and similar processes. They have high stability to chemicals, heat and bacteria and high mechanical resistance. 3.8.77 as 032647 (5pp945).

GIAM/ ★ D15 81176B/45 ★ GB 2019-737
Steam desorption of gases from liq. - using purificn. column having two terminal zones operating at different pressures

GIAMMARCO G 27.04.78-IT-067953
J01 (07.11.79) B01d-19 B01d-53/14

Liqs. are purified by treatment with steam in a purificn. column to remove gaseous impurities. The purificn. is carried out in an initial zone of the column and then completed in two terminal zones, one of which operates at a higher pressure than the other. Heat supplied from outside is delivered to the higher pressure zone and used to purify liq. delivered to that zone.

The steam produced by this heat is extracted from the top of the zone and delivered to the bottom of the lower pressure zone to purify liq. in that zone. Liq. purified in the higher pressure zone is expanded to the pressure of the lower pressure zone to yield further steam which is delivered to the bottom of the lower pressure zone.

Efficient steam utilisation maintains the heat consumption at a relatively low level. 26.4.79 as 014600 (10pp67).

HITG ★ D15 81254B/45 ★ J5 4124-553
Incineration of e.g. urban sewage sludge - by vacuum dehydrating after adding fine coal and a coagulant, adding substance contg. calcium oxide and incinerating

BABCOCK-HITACHI KK 22.03.78-JA-031639
J09 (27.09.79) C02c-03

In incinerating sludge, urban sewage sludge, etc. is dehydrated to approx. a 65% moisture content by vacuum hydration, etc. after addn. of fine coal powder and a coagulant and a substance contg. calcium oxide, e.g., Portland cement, cement clinker, etc., is added to the dehydrated sludge in an amt. of 5-15% on the basis of the wt. of ash to be formed when the sludge is burned and incinerated.

The incineration ash formed can be solidified by wetting so that the sludge is easy to transport, can be used in land fill, and used as an aggregate. The desulphurisation efficiency is favorably c.f. other wet desulphurisation methods and thus obviates the needs for the installation of specific desulphurisation appts., etc. 22.3.78 as 031639 (2pp117)

HITG ★ D15 81255B/45 ★ J5 4124-554
Dehydration of sludge - using fine coal powder in place of slaked lime and a high polymer coagulant in place of chloride

BABCOCK-HITACHI KK 22.03.78-JA-031641
J01 (27.09.79) B01d-21/* C02c-03

In a method of dehydrating sludge using inorganic coagulants e.g. slaked lime, ferric chloride, etc., in a vacuum dehydration system, fine coal powder is used in the place of the slaked lime and also a high polymer coagulant is used in the place of the ferric chloride.

In this method, the cost of treating the sludge including dehydration and incineration, is approx. 30% cheaper than the cost of conventional methods, and also administration

costs including costs for chemicals and fuels is approx. half that of conventional methods because the method obviates the need for the installation of denitrification appts. for waste gas and hexavalent chromium reduction appts. as in the case of the conventional methods.

A high calorific, self-combustible hydrated cake can be obtained and also the amount of ash formed when the cake is burned is approx. half of that of conventional methods. In addition, the formation of harmful hexavalent chromium and the emission of offensive odors can be completely avoided. 22.3.78 as 031641 (5pp)

IIDA/ ★ D15 81256B/45 ★ J5 4124-558
Reducing COD and BOD of water - using zeolite granules with an oxidant, e.g. hydrogen peroxide, allowing the appts. to be simplified, thus reducing cost

IIDA K 20.03.78-JA-031910
(27.09.79) C02c-05/04

Water to be treated is brought into contact with natural zeolite granules having oxidn. catalytic activity while injecting an oxidant, e.g. H₂O₂, etc., into the water or after injecting the oxidant into the water in a fluidised bed tank.

This method is capable of removing all types of COD and BOD components, including PVA, etc. with high efficiency, and eliminates the need for facilities to recover or remove oxidn. catalyst, e.g. iron hydroxide, etc., from the treated water. This permits simplification of the appts. and redn. of operation and maintenance costs as well as installation costs. 20.3.78 as 031910 (5pp117)

MATU ★ D15 81257B/45 ★ J5 4124-559
Treating waste water contg. emulsified oil - by adding a powder of metal oxide, hydroxide, phosphate or sulphate, esp. ferric oxide, and stirring

MATSUSHITA ELEC IND KK 20.03.78-JA-031979
E37 (27.09.79) B01d-15 C02c-05/02

At least one cpd. powder selected from metal oxides, e.g. ferric oxide, CaO, MgO, manganese oxide, SiO₂, stannic oxide, zinc oxide, TiO₂, ZrO₂, dinickel trioxide, lead monoxide, etc., hydroxides, e.g. aluminium hydroxide, magnesium hydroxide, barium hydroxide, ferric hydroxide, calcium hydroxide, etc., aluminium phosphate, barium sulphate, calcium sulphate, ferric sulphate, and ferric phosphate, is added to oil-contg. waste water and stirred.

This method is capable of removing oil present in waste water, rapidly, cheaply, and effectively, without causing any secondary environmental pollution, and also the treating agent used can be recovered for reuse. The most effective treating agent is ferric oxide and the amount used is > 0.6 g per 30 ml of emulsion. 20.3.78 as 031979 (4pp117)

KURK ★ D15 81314B/45 ★ J5 4124-870
Treatment of waste neutralising and rust preventing soln. - by adding sulphamic acid (salt), acid, peroxide to reduce COD and alkali to neutralise soln.

KURITA KASEN KK 22.03.78-JA-032769
E37 (E17) (28.09.79) C02c-05/02

Method comprises adding sulphamic acid or its salt to a waste neutralising and rust preventing soln. contg. citric acid and Na nitrite to decompose nitrite ions in the soln. adding an acid to the soln. to adjust its pH to acidic, adding peroxide to the soln. to reduce COD of soln. and adding alkali to the resulting soln. to neutralise it.

In an example, 1 l of a soln. of 0.1% of citric acid is heated at 60°C. An iron piece is added to the heated soln. to dissolve iron ions in it. Ammonia and Na nitrite are added to the resulting soln. to obtain a waste neutralising and rust preventing soln. contg. 1,640 ppm COD, 170 ppm iron ions, and having pH of 10. The waste soln. is adjusted with caustic soda to pH 13 to ppt iron hydroxide. Then 15 ml of water contg. 30% H₂O₂ is added to the adjusted soln. After 3 hours, a supernatant soln. contg. 1560 ppm COD and 10 ppm iron ions is obtd. 22.3.78 as 032769 (3pp51)

HITK ★ D15 81315B/45 ★ J5 4124-871
Treating calcined ash by/produced in calcining waste sludge - in a reducing atmos., to convert hexavalent chromium in ash to trivalent chromium

HITACHI METAL KK 22.03.78-JA-032580

E31 (28.09.79) B01j-01

Method comprises treating the calcined ash contg. Cr at $> 720^{\circ}\text{C}$ in a reducing atmosphere consisting of > 0.5 vol. % CO and < 0.1 vol. % of O_2 .

Typically, waste sludge is introduced from an upper inlet into a multiple stage type calcining furnace equipped with a drying region (A), a burning region (B), a reducing region (C), and a cooling region (D). The sludge is dried in A, calcined with a burner in B, reduced with a burner in C, and cooled in D to convert hexavalent Cr of the sludge to trivalent Cr. Air is introduced from a lower inlet into the furnace to maintain the reducing atmosphere at desired compsn. 22.3.78 as 032580 (4pp51)

SASN ★ D15 81317B/45 ★ J5 4124-873
Filtering and purifying soln. contg. oil and suspended solids - by passing through fibrous oil adsorbent to remove oil component, and filter to remove suspended solids

SANSHIN SEISAKUSHO 23.03.78-JA-032419

J01 (28.09.79) B01d-15

The method comprises packing a fibre type oil adsorbing agent as a packed bed of $> 0.05 \text{ g/cm}^3$ packed density and $> 10 \text{ cm}$ packed thickness in an oil adsorbing region, passing the soln. through the packed bed at a linear velocity of $< 60 \text{ m/hr.}$ to convert the oily substances of the soln. to aggregated particles, adsorbing the aggregated particles with the packed bed to obtain the soln. contg. no oily substances and filtering the resulting soln. through a filter in a filtering region to remove the suspended solids from the soln. 23.3.78 as 032419 (5pp51)

ISHI/ ★ D15 81318B/45 ★ J5 4124-874
Sepn. of solute from solvent - by passing through sepn. medium consisting of spherical particles made of fibre or porous type substance

ISHIZUKA H 23.03.78-JA-032399

A88 J01 (28.09.79) B01d-13

A soln. contg. a solute and a solvent is passed through a separation medium consisting of spherical particles, to separate the solute from the solvent of the soln. The spherical particles are made of a fibre or porous type substance consisting of animal, plant, or mineral materials, and the dia. of the particles is $> 25 \text{ }\mu\text{m}$. The fibre made spherical particles are positioned on a glass fibre filter and the filter is supported with a porous porcelain. A dilute soln. of NaCl is passed through the sepn. medium strengthened with the filter and the porcelain with a high pressure of 30 Kg/cm^2 to obtain a concentrated soln. contg. 15% of NaCl and a diluted soln. contg. 0.05% of NaCl. The fibre of the spherical particles is made from an acetone soln. contg. 20% of acetic cellulose. 23.3.78 as 032399 (4pp51)

MITK ★ D15 81319B/45 ★ J5 4124-875
Concentrating solns. by reverse osmosis - using two membranes the first being of high concn. rate and the second of low concn. rate

MITSUI TOATSU CHEM INC 23.03.78-JA-032402

(28.09.79) B01d-13 C02b-01/82

The improvement comprises first concentrating a soln. with a reverse osmosis membrane of high concn. rate, and then concentrating the obtd. concn. soln. with a reverse osmosis membrane of low concn. rate. Permeated soln. by-produced in the second process is recycled with the material soln. to the first process, and the concn. of permeated soln. is adjusted so as to be equal to that of the material soln. 23.3.78 as 032402 (3pp51)

KINZ- ★ D15 81326B/45 ★ J5 4124-883
Regeneration of uranium adsorbing agent - by treatment with hydrochloric acid and then with ammonia or aq. soln. of hydroxide, bi:carbonate or carbonate of an alkali metal

KINZOKU KOGYO JIGYO 22.03.78-JA-031663

E31 K05 M25 (28.09.79) B01d-15 C22b-60/22

The method comprises treating a waste uranium adsorbing agent used for recovery of uranium from sea water, and mainly consisting of titanitic acid with hydrochloric acid, the agent being reduced in its adsorbing property, and

then treating the resulting treated agent with ammonia or an aq. soln. of hydroxide, carbonate, or bicarbonate of an alkali metal to regenerate it.

In one example, a waste uranium adsorbing agent consisting of titanitic acid and ferric hydroxide was washed with hydrochloric acid of pH 1-4.5 in a vessel, and then with water. The washed agent was immersed in an aq. soln. of 1% sodium carbonate for 2 hours, and washed with water to regenerate it. The regenerated agent was packed in a column and then, sea water was passed through the packed column to absorb uranium from the sea water. 22.3.78 as 031663 (3pp)

SANK- ★ D15 81337B/45 ★ J5 4124-899
Solid waste, e.g. sludge, treatment - by carbonisation followed by use in thermite process

SANKYO YUKI KK 22.03.78-JA-031665

(28.09.79) B01j-01 C01b-31/32

Process for treating solid waste is characterised by carbonising the waste solid contg. organic components, opt. after adding calcium oxide, and then using it for the thermite process.

Waste solid may be easily treated for a short time, and the treated prod. may be effectively utilised, i.e. CO produced from the fusing reaction may be used for fuel. Fe, Al and Ca contained in the waste solid may also be recovered.

In an example, vacuum-dehydrated raw sludge (water content: 74.5%, calcium to organic component contained in raw sludge : 2%) was heated at 400 to 500°C for 3 hrs. in an electric oven to carbonise the organic materials in the waste solid. Then, 250 g of thermite agent (of which the weight ratio of metallic aluminium and ferric oxide is 1 : 3) was added to 1 kg of the carbonised material, and the mixt. was placed in a container made of iron which was equipped with a harvesting nozzle at the bottom and CO discharging opening at the top. When it was heated with a gas burner under normal pressure, after a few minutes, thermite process occurred and the temp. rose. After the process was completed, 800 g of slag contg. 2.1 g of carbide was obtd. from the harvesting nozzle at the bottom. After cooling to ordinary temp. 80 g of water was added and about 0.7 l of acetylene gas was obtd. 22.3.78 as 031665 (3pp96)

JAOR ★ D15 81367B/45 ★ J5 4125-170
Deodorising gas contg. e.g. ammonia, hydrogen sulphide, mercaptan etc. - by first scrubbing gas with basic hypochlorite soln., and then with acidic soln. to remove chlorine

JAPAN ORGANO KK 24.03.78-JA-032853

E37 (28.09.79) B01d-53/34

A gas (I) is deodorised by scrubbing (I) with basic hypochlorite soln. (III) to oxidise and absorb the malodorous gases; and scrubbing (I) contg. oxidative chlorine, generated from (III) and (II), with acidic soln. (IV).

The method can be used to remove (II) from treatment of sewage, human waste, etc. The amt. of hypochlorite consumed is less as it is used in a basic soln. The amt. of chlorine converted from hypochlorite is low.

(III) is prepd. by dissolving hypochlorous acid and a basic cpd. such as NaOH or KOH in water, and adjusting pH to > 8 . (IV) is an aq. soln. of hydrochloric acid, sulphuric acid, nitric acid, etc. In the first step, NH_3 and H_2S are converted to non-odorous cpds. and methyl mercaptan is converted to malodorous methyl disulphide. This is absorbed by into (IV) in the second step. 24.3.78 as 032853 (4pp42)

ASAG ★ D15 81368B/45 ★ J5 4125-171
Deodorisation of gas or liq. contg. oxidisable odorous cpds. - by treating with soln. contg. available bromine cpd. and water-soluble chlorine cpd.

ASAHI GLASS KK 24.03.78-JA-032855

E37 J03 (28.09.79) B01d-53/34 C02c-05/02

Deodorisation of gas (I) or liq. (II) contg. oxidisable odorous cpds. (III) and carbonate (IV), comprises (1) scrubbing (I) or mixing (II), with aq. soln. (V) contg. available bromine (VI) and water-soluble Cl-cpd. (VII), for decomposition of (III); (2) lowering the content of (IV) in (V) by addn. of HCl after the step (1) and (3) recirculating (V) after regen-

ation of (VI) and (VII) by electrolysis of (V).

The inventors had developed a method for deodorisation (I) or (II), comprising the steps (1) and (3). However, electric current efficiency in the step (3) lowers, when (V) absorbs considerable quantity of carbonate from (I) or (II). In the present method, this disadvantage is improved by adopting the step (2).

(III) is e.g. sulphur cpd., nitrogen cpd., hydrocarbon aldehyde. (VIII) is added to adjust pH of (V) to 1-6. Step (1) should be done at pH > 10. (VI) is prepd. by addn. of bromine, bromine chloride or oxyacids of bromine to water. Examples of (VII) are chlorine, chlorides or oxyacids of chlorine. The electrolysis shall be done with current density 10-30 A/dm² under voltage 3-7 V. 24. 3. 78 as 032855 (4pp42)

HOX ★ D15 81371B/45 ★ J5 4125-174
Evapn. appts. for thickening waste liq. - includes reservoir, pumping device, preheating tower, and shallow evapn. plate
SHOWA ELEC WIRE KK 23.03.78-JA-033424
(28.09.79) B01d-03 C02b-01/04 C02c-05

The appts. for thickening a waste liq. by evapn. of water, for ease of transportation and subsequent treatment, comprises a reservoir, a pumping device connected to the outlet of the reservoir, a vertically extending, preheating tower into which the liq. is pumped through a bottom inlet port, and a scalloped evapn. plate connected at its top end to the top of the preheating tower for receiving the overflow.

As the liq. rises towards the top of the tower, it is heated by solar energy and then overflows onto the scalloped plate. The plate is disposed at a variable inclined angle w.r.t. a vertical plane, so that the overflowing liq. flows at a slow rate in the form of a developing liq. film over the evapn. plate, so it is subjected to sufficient solar energy for evapn. 23. 3. 78 as 033424 (2pp47)

HOX ★ D15 81372B/45 ★ J5 4125-175
Evapn. appts. for concentrating waste liq. - comprises tank fed from reservoir and equipped with agitator and blower
SHOWA ELEC WIRE KK 23.03.78-JA-033425
(28.09.79) B01d-03 C02b-01/04 C02c-05

An evapn. appts. for concentrating waste liquid by evapn. of water, for ease of transportation and subsequent treatment comprises a reservoir, a means for continuously feeding waste liquid to the reservoir, an outlet conduit connected near the bottom of the reservoir, an elongated evaporation tank having a wide open top, an agitation means dipping into the liquid bath in the evaporation tank, and a blower disposed above the top of the liquid bath.

The liquid is discharged from the reservoir through the outlet conduit and into the evapn. tank. The agitator and the blower are located near the remote end of the tank from the conduit and are rotated in the counter directions to promote evaporation of water from the waste liquid bath. 23. 3. 78 as 033425 (2pp47)

CSIR ★ D15 81382B/45 ★ J5 4125-185
Purificn. of brine water using amphoteric ion exchange resin - contg. acrylic-methacrylic acid (deriv.) polymer and polymer of styrene amine deriv., triallylamine or propyl-di-allylamine
COMMONWEALTH SCIENT ORG (ICIL) 16.03.78-JA-029329
A91 (28.09.79) C02b-01/40

A process for purifying brine using a deionising step is claimed in which the brine water contg. bicarbonate ion and bisulphite ion and having a pH of 0.5-1.5 is treated with an amphoteric ion exchange resin contg. a weak acidic, higher mol material and a weak basic, higher mol material and thereby, the purified brine water is obtd. The weak acidic, higher mol material is chosen from a polymer of ethylenic unsatd. carboxylic acid or its polymer deriv. comprising a polymer of (meth)acrylic acid. The weak basic, higher mol material is chosen from a polymer of aromatic amine or aliphatic amine, comprising a polymer of amine deriv. of styrene, a polymer of triallylamine and a polymer of propyl-diallylamine.

The process is used for producing a purified water contg. NaCl for industrial use. 16. 3. 78 as 029329 (9pp15)

ASAH ★ D15 81384B/45 ★ J5 4125-187
Sepn. of oil-free liq. from emulsion - by filtering using polymeric membrane of specified critical surface tension
ASAHI CHEMICAL IND KK 24.03.78-JA-032949
A88 J01 (28.09.79) B01d-13 C02c-05/02

Sepn. of an oil-free liq. from an emulsion (I) of oil (II), surfactant (III) and oil-immiscible liq., comprises (1) adjusting the compsn. of (I) to conditions described below and (2) filtering at 35-90 (40-70)°C, with a membrane (IV) of a resin or resin mixt. having a critical surface tension > 35 dyn/cm.

When $0.02 \leq a < 0.5$, $z > 0$ and when $0.5 \leq a \leq 0.8$, $z > 1.78 \times 10^{-3} (a - (0.5 + T/2T_b))$, where $a = x/(x+y)$, x is the volume fraction of (II) in (I), y is the volume fraction of oil-free liq. to be sep'd. from (I), z is the concn. of (III) in (I) (mole/l), T_b is the b.pt. at 1 atm. of oil-free liq. to be sep'd. and T is the temp. of (I) treated.

Oil-immiscible liq. can be sep'd. with high efficiency. The pore-size of (IV) should be 0.005-5 μ and > 50% of the (II)-droplet size in (I). The ratio of the largest pore dia. to the smallest pore dia. should be < 1.5. The surface tension of the liq. is > 35 dyn/cm. 24. 3. 78 as 032949 (6pp42)

TOKU ★ D15 81385B/45 ★ J5 4125-188
Concn. or desalting of electrolyte soln. by electrodialysis - using appts. having cathode which has been nickel galvanised to prevent deposition of insoluble salts

TOKUYAMA SODA KK 24.03.78-JA-032978
J01 M11 (J03) (28.09.79) B01d-13/02

The concn. or desalting of an electrolyte-soln. (I) was an ion-exchange membrane diaphragm-electrodialysis device equipped with a cathode, which has been nickel-galvanised at a current density > 9 A/dm².

Deposition of insoluble salts on the surface of the cathode is prevented (without the addition of acid) by use of the nickel-galvanised cathode. Therefore, electrodialysis can be carried out stably for a long period.

The nickel-galvanised cathode is prep'd. by nickel-galvanising the surface of a base material, such as iron, steel, stainless steel, copper or nickel, using nickel or nickel-alloy as anode and the base material as cathode. 24. 3. 78 as 032978 (3pp42)

YAWH ★ D15 81390B/45 ★ J5 4125-196
Basic aluminium chloride soln. prodn. - by reacting aluminium chloride soln. of specific concn. with alkaline earth metal cpd.
NIPPON STEEL CHEM KK 24.03.78-JA-032852
E33 (28.09.79) C01f-07/56

Basic Al chloride (I)-soln. is produced in the reaction of AlCl₃ soln. of the conc. calculated as Al₂O₃ < 7.5 wt.%, with basic alkali earth metal cpd., until the alkalinity of AlCl₃ reaches 75-95%.

Uniformly OH-cross-linked prod. having high alkalinity can be produced. When the prod. is used as flocculant in waste water-treatment, pH of the waste water does not change in wide range and effective flocculation can be caused even in acidic waste water.

The base cpd. is e.g. CaCO₃ or Ca(OH)₂. The temp. of the reaction is adjusted to < 50°C. 24. 3. 78 as 032852 (5pp42)

HITA ★ D15 81464B/45 ★ J5 4125-400
Treatment of drained laundry liq., esp. from nuclear plants - by aggregating and sepg. pptes., subjecting impurities to reverse osmosis and directly concentrating pptes.

HITACHI KK 22.03.78-JA-033333
K07 (28.09.79) G21f-09/08

Process comprises (1) subjecting laundry drain to aggregation and pptn to obtain supernatant liq. and pptes; (2) subjecting the impurities in the supernatant liquid obtd. in (1) to reverse osmosis and concn. and (3) subjecting the pptes obtd. in (1) to direct concn.

It is possible to minimise a decrease in an amt. of purifying water in treating laundry drain from an atomic power plant. 22. 3. 78 as 033333 (5pp86)

KUBI ★ D15 81566B/45 ★ J5 4125-860
Treatment of waste water contg. COD and colouring material - by oxidn. using ozone, then aerobic microbiological decomposition, then further oxidn. under UV irradiation
KUBOTA KK 10.03.78-JA-028054
(29.09.79) C02c-05/04

A method of treating waste water contg. high concns. of COD and coloring matters, e.g. the secondary treated water of night soil, dyeing waste water, etc. is described. The waste water is supplied to an ozonisation tank to decompose by oxidation high molecular substances by ozone supplied from ozoniser, then the waste water so treated is subjected to biological treatment under aerobic condition by addition of air from an air compressor to decompose organic matters by means of micro-organisms, and lastly the waste water so treated is further treated with the waste ozone coming out of the ozonisation tank and an oxidising agent, e.g., chlorine gas, sodium hypochlorite, etc., while irradiating UV rays of approx. 2500 Å wave length.

This method is capable of almost completely decomposing and removing high concentrations of COD components and coloring matters in waste water at lower running cost. 10.3.78 as 028054 (2pp117)

KURK ★ D15 81567B/45 ★ J5 4125-864
Treating waste water contg. ammonia nitrogen - using combination of denitrification and digestion processes with introduction of methanol

KURITA WATER IND KK 23.03.78-JA-033227
E35 (29.09.79) C02c-01/02

In the treatment of water contg. ammonia nitrogen, e.g. waste water from ammonia and urea synthesis factories, night soil treatment plants, etc., the waste water is repeatedly treated (with return activated sludge from the final sedimentation process) in a combined system consisting of denitrification process, digestion process, and denitrification process, which are arranged in order, or in a number of alternately arranged processes consisting of digestion-denitrification processes and denitrification-digestion processes.

Part of the return activated sludge from the final sedimentation process and methanol are introduced into the final denitrification process, part of the mixed liquor coming out of the aforesaid digestion process is sent back to the first denitrification process, and the original water to be treated is intermittently charged into the denitrification processes other than at least the final denitrification process.

Method can completely remove ammonia nitrogen present in water using a greatly reduced amt. of methanol because organic material in the water are effectively utilised. 23.3.78 as 033227 (4pp117)

INOZ ★ D15 81568B/45 ★ J5 4125-865
Sepn. of metal powder, cuttings, etc. from metal working waste water - by adding tri:basic carboxylic acid (deriv.) as surfactant, then floating particles using air bubbles
INOUE JAPAX RES INC 23.03.78-JA-033872
E17 (29.09.79) C02c-05

A method of treating the waste water discharged from machining and electric processing work including cutting, grinding, etc. comprises adding 0.1-10% of ≥ 1 surfactant of an acid or its lactones, salts, or esters, having more than 10C, 3 COOH groups, and one OH group, then passing bubbles through the water to separate and remove cuttings, etc. by flotation. Cuttings and partic. fine metal powders can be almost completely sep'd. and removed by the combined use of surfactant and bubbles, thus permitting the efficient regeneration of waste water. The pref. acid has formula:



23.3.78 as 033872 (3pp117)

TEIJ- ★ D15 81569B/45 ★ J5 4125-868
Activated sludge treatment of waste water - by treating with nitric acid or nitrate, removing solids etc., and introducing into stirred tank contg. nitric acid respiration bacteria

TEIJIN ENG KK (TOKA-) 07.03.78-JA-024931
E36 (29.09.79) C02c-01/06

An activated sludge treatment for waste water contg. BOD components is new where waste water, prior to aerobic activated sludge treatment, is treated with nitric acid or nitrate, in the case where no nitric acid or nitrate is present, to regulate its pH to 6-9, then subjected to pretreatments, e.g. the removal of solids by sedimentation, etc. and finally introduced into a stirred decomposition tank with stationary filter bed where nitric acid respiration bacteria are generated and decompose and remove pollutants present in waste water.

In this method, no aeration appts. is required, BOD high load operation is possible, and treating appts. can also be made compact. And, noise problems arising from aeration appts. can be completely eliminated, bulking phenomenon resulting from BOD high load operation can be avoided so completely that stable solid-liq. sepn. can be attained. In addn. the generation of offensive odours due to the lack of oxygen can be avoided. 7.3.78 as 024931 (5pp117)

EBAI ★ D15 81750B/45 ★ J5 4127-148
Treatment of night soil-polluted water - by adding a magnesium cpd. and a phosphoric acid cpd. before or after anaerobic digestion, recovering supernatant liquor and denitrifying
EBARA INFILCO KK 24.03.78-JA-033694
(02.10.79) C02c-01/14

Advanced treatment for night soil-polluted water contg. high BOD, ammonia nitrogen ($\text{NH}_4\text{-N}$), and phosphoric acid (PO_4), comprises adding a Mg cpd., e.g., Mg hydroxide, Mg oxide, or Mg salts, and a phosphoric acid cpd., e.g., phosphoric acid or phosphates to night soil-polluted water prior to or during anaerobic digestion to complete the anaerobic digestion; sepg. digested sludge from supernatant liquor, and introducing the supernatant liquor into a biological denitrification process.

$\text{NH}_4\text{-N}$ and PO_4 present in polluted water are efficiently recovered as highly valuable fertiliser with digested sludge. The aeration power of digester is reduced because the concn. of $\text{NH}_4\text{-N}$ of liquor coming into digester in biological denitrification process following anaerobic digestion is reduced. $\text{NO}_3\text{-N}$ digest at digester in biological denitrification process is reduced. 24.3.78 as 033694 (4pp117)

NISO- ★ D15 81751B/45 ★ J5 4127-149
Treatment of waste water contg. lignin, tannin, foamable material etc. - by flotation treatment, then activated sludge etc., sepn. of foam and treatment with inorganic calcium salt
NIPPON SOLID KK 27.03.78-JA-034111
E19 (02.10.79) C02c-05

In a method of treating waste water contg. lignin, tannin, foamable substances, e.g. sewage, pulp mill waste water, paper making waste water, and other waste waters contg. inorganic and organic matters, the waste-water is first subjected to a flotation treatment using an air blowing method, a vacuum method, etc., by the addition of a foaming agent, e.g. an alkyl alcohol, an allylalkylalcohol, an allyl-alkylamine, etc., as needed, the waste water is then treated by activated sludge and/or coagulating sedimentation method, and the foams produced during the flotation treatment are separated and then treated with an inorganic calcium salt, e.g. lime milk, etc.

The method is capable not only of effectively removing lignin, tannin, and foamable substances which resist the conventional treating methods but also of BOD and COD components in a short time and by the use of smaller amts. of coagulants. 27.3.78 as 034111 (2pp117)

DAIZ ★ D15 81752B/45 ★ J5 4127-150
Treating soln. contg. organic reductive substances - e.g. hydrazine, hydrazide, formic acid, oxalic acid etc., by adding oxygen and passing through cylinder packed with metal catalyst
DAIDO TOKUSHOKO KK 27.03.78-JA-035093
E19 (02.10.79) C02c-05/04

Oxygen is first dissolved in soln. contg. the organic reductive substances. The soln. with oxygen is then passed through a cylinder filled with a metal catalyst, prep'd. by depositing, adhering, or coating a powdered metal, e.g., Fe, Co, Ni, Pt, Rh, Pd, Mo, W, etc., onto a medium, e.g., sand, glass, activated carbon, alumina, plastic, etc., from its lower side. The soln. deprived of organic reduc-

the substances is exhausted through an exhaust pipe at the top part of the cylinder.

Damage to metal catalyst by mechanical impact such as injection of oxygen or oxygen-contg. gas can be prevented because of the sepn. of oxygen dissolution process from metal catalyst contact process. An equilibrium is formed between the feed speed of soln. and the specific density of metal catalyst and thus automatic sepn. of soln. treated from metal catalyst is attained. 27. 3. 78 as 035093 (5pp117)

KE ★ D15 81890B/45 ★ J7 9032-433
Treatment appts. for waste liq. contg. heavy metals - includes dewatering machines connected to treatment tank and reservoir to avoid clogging of filters
TOKYO SHIBAURA ELEC LTD 02.07.73-JA-074604
J01 (15.10.79) C02c-05/02

device for treating an industrial waste liq. contg. heavy metals comprises a heavy metal treating tank connected to a raw liq. tank so as to circulate the liq. through them, and dewatering machines connected to both tanks to avoid clogging of heavy metal filters connected to the treating tank. 2.7.73 as 074604. C02c 5/02 (15.10.79) TOKYO SHIBAURA ELEC. LTD. (5pp26) (J5 0022466)

MITK D15 54720X/29 = J7 9032-552
Waste water scum treatment with peat prods - to increase efficiency of dewatering process and reduce odour
MITSUI TOATSU CHEM INC 13.06.73-JA-065821
(15.10.79) *J50015-348 + C02c-03

grass peat, humin-contg. substances isolated from grass peat, and grass peat fibrous materials are added to the scum formed by the treatment of organic matter-contg. waste water. This treatment increases the efficiency of dewatering process and reduces disagreeable odour of the scum.

In an example, 44 tons of scum isolated from a fish processing waste water contg. water 97 and total N 0.252% was mixed with 1.5 tons of a grass peat fibrous material (water content 50%). The mixt. was dewatered and dried to obtain 10 tons of a mixt. contg. water 20 and total N 0.37%. 13.6.73 as 065821. C02c 3/00 (15.10.79)
MITSUI TOATSU CHEM. INC. (12pp) (J50015348)

LSAG D15 02810Y/02 = J7 9032-634
Acid and metal recovery from waste liquor contg. acid (salt) - by electrolysis to produce metal hydroxide catholyte and free acid anolyte

ASAHI GLASS KK 22.05.75-JA-060175
M14 (16.10.79) *J51136-594 C02c-05/12
Method comprises contacting the waste liquor with water in a dispersion type dialysing tank equipped with an anion-exchanging resin to reduce the acid concn., introducing the resulting liquor into a cathode chamber of a diaphragm type electrolysis cell; and introducing the liquor from the cathode chamber to an anode chamber or a space between a cation exchanging film and the anode chamber to electrolyse it, and to produce metal hydroxide in the cathode chamber and to recover acid from the anode chamber or the space chamber.

Sulphuric acid can be used as the acid. Aluminium can be used as the metal. 22.5.75 as 060175. C02c 5/12 (16.10.79) ASAHI GLASS KK (6pp) (J51136594)

SEIS D15 91377X/49 = J7 9032-639
Glycoside contg. material mfr. for use as cohesion precipitating agent - from sludge by produced in waste water treatment
RES INST PRODN DEV 14.04.75-JA-045602
(16.10.79) *J51119-687 B01d-21/* C02c-05/02
To an excess amt. of the sludge by-produced in the treatment of waste water is added HCl or Ca(OH)₂ followed by hydrolytic decompn. to give a glycoside-lower molecular matter which is used as the cohesion-pptg. agent. The agent is produced for a low cost and is non-toxic. 14.4.75 as 045602. B01d 21/01; C02c 5/02 (16.10.79) RES. INST. FOR PRODN. (3pp) (J51119687)

AGEN D15 41441A/23 = J7 9032-680
Heavy metal ion absorbing agent prodn. - by treating a polycondensate of cyanuric chloride, poly:amine and thioamide, with a base

AGENCY OF IND SCI TECH 12.10.76-JA-121982
A97 J01 (A26) (16.10.79) *J53047-498 B01d-15 C08g-73/06
The process comprises (1) polycondensing cyanuric chloride with polyamine and thioamide, and (2) treating the resulting polycondensate with a base (esp. alkali or excess amine).

The agent is used for removing harmful heavy metal ion from waste water (esp. highly acidic waste water discharged from heavy metal mines). The agent can immobilise the heavy metal ions, even from highly acidic solns. and in the presence of alkali metal ions. 12.10.76 as 121982. C08g 73/06; B01d 15/00 (16.10.79) AGENCY OF IND. SCI. TECH. (2pp) (J53047498)

NIZH= D15 38749A/22 = J7 9032-836
Phenol-formaldehyde resin waste water purification - by sorption of phenol with wood chips, methanol removal and sorption of formaldehyde

NIZHNETAGILSK URAL 07.01.77-SU-441480 (18.10.76-SU-412322)

A21 (17.10.79) *DT2746-358 + C08g-08 C08j-11
Waste water from phenol-HCHO resin mfr. is purified of phenol (I) and HCHO by (a) removing (I) and partially (II) in a mol. ratio of 1:1.4-1:3.5 in the presence of a vegetable sorption agent (III) at a pH of 0.65-0.8 and at b.pt. for sufficient time to allow bonding of (I) and to form a prod. of (I), (II) and components of (III) and sepg. the prod. from the liq. phase, (b) removing MeOH from the liq. and (c) removing residual (II) by sorption and polycondensation in the presence of (III) with addn. of a phenolic component in an amt. to bond (II) at 60-100°C and a pH of 0.65-10 to form a prod. of (II), the phenolic component and components of (III).

The degree of purificn. is 98-99%. The prods. formed from (I), (II) and (III) are suitable for industrial use.

(III) is esp. wood chips and is used in an amt. of 8-10-wt.% in steps (a) and (b). The phenolic component is pref. phenol or urea. When it is phenol the process is carried out at a pH of 0.65-0.8 and the b.pt. and when it is urea the pH is 8-10 and the temp. is 60-100°C. 18.10.77 as 124168. (clg. 18.10.76; 7.1.77-SU-412322; 441480)
C08g 8/00; C08j 11/00 (17.10.79) NIZHNETAGILSK URAL (5pp) (J53066995)

MONS D15 09413T/06 = J7 9032-850
Hollow cellulose ester filaments - with asymmetrical wall structure for use in reverse osmosis membranes e.g. for water purificn.

MONSANTO CO 27.07.70-US-058509
A32 F01 (A11 A88) (17.10.79) *BE-770-502 + D01d-05/24 D01f-02/28

Hollow cellulose ester filaments for use in reverse osmosis membranes are produced by (a) dissolving a cellulose ester in a solvent to give a soln. contg. 25-35wt.% solids, (b) extruding the soln. through a shaping orifice to give a hollow filament, (c) passing the hollow filament into an evapn. zone rich in the cellulose ester solvent, for an exposure time of 0.01-1.0 sec., (d) directly immersing the hollow filament in an aq. coagulation bath held at ca. 0°C, (e) passing the hollow filament into an aq. washing bath, and (f) reheating the hollow filament in a hot water bath at 65-95°C.

The flow rate of the water through membranes made from the hollow filaments is 5-100 times the flow rate obtd. with membranes made from known hollow cellulose ester filaments, as a result of the asymmetrical wall structure of the present filaments. A high degree of solute rejection is also obtd. 26.7.71 as 055296 (clg. 27.7.70-US-058509) D01f 2/28; D01d 5/24 (17.10.79) MONSANTO CO. (5pp) (J47004010)

EROK/ ★ D15 82078B/45 ★ SU-648-524
Portable solar still for desalination of sea water etc. - contains partition separating salty from sweet water and consisting of support plate for wick evaporator

EROKHIN PN 27.01.76-SU-315826
Q74 (25.02.79) C02b-01/06 F24j-03/02

The efficiency of the portable solar still is ensured by

preventing penetration of the sea water etc. into the stream of distilled water.

The inner surface of the elastic envelope contains annular ridges under which are mounted collectors of the condensate. Sea or other salt water, filled through top nozzle, flows over the evaporator made from soft hygroscopic material, e.g. wick cloth, and fills the container in which the end of the wick is immersed. After the container is filled, the transparent envelope of the still is inflated with air and the inlet nozzle closed with stopper. Erokhin, P.N., Shafranskii, V.A. Bul. 7/25.2.79. 27.11.77. as 315826 (2pp135)

KIEN = ★ D15 82079B/45 ★SU -648-525
Regeneration of water purificn. coagulant from hydroxide based slime - by acid treatment with addn. of asbestos to improve sepn. of organic impurities and reduce settling time
KIEV ENG CON INST (AUCO = UPLA =) 10.03.77-SU-459826
(25.02.79) C02b-01/18

The regeneration of coagulation agent from water purificn. hydroxide based sludge based on Parent Patent 357808, includes treatment with mineral acid to give soln. contg. coagulant which is sepd. from residue and decolourised with an oxidising reagent.

The amt. of organic impurities in the soln. can be reduced and the settling time shortened if an asbestos mineral e.g. polygorskite is added to the slurry before the acid, in the form of a powder with a dispersion of 5-60 μm. The reduced organic content in the soln. results in a lower consumption of the oxidising agent used in the second stage of the treatment.

Medvedev, M.I., Tarasevich, Yu.I., Dontsova, M.I. et al. Bul. 7/25.2.79. 10.3.77. as 459826 Add to 357808 (2pp815)

KIGE = ★ D15 82080B/45 ★SU -648-526
Destroying blue-green algal metabolites in water detoxication - by oxidn. with peroxide with simultaneous deodorisation, useful in drinking water supply systems
KIEV GEN COMM HYGIE (AUHY =) 23.03.77-SU-464275
(25.02.79) C02b-01/18

The water is treated with a 30-35% soln. of peroxide in an amt. of 0.5-1.0 ml./l. with stirring. Complete oxidn. of toxins takes place in 30-60 min. and the water is also deodourised. The previous method of chlorination, coagulation, and ozonation of the solid gave water contg. 0.01-0.2 mg./l. toxin with an unpleasant odour.

Drinking water contg 0.01 mg./l. toxins of blue-green algae was treated with 1 ml. of 30% soln. of peroxide with mixing. Complete degradation of toxin occurred in 20 min. and the water had no odour.

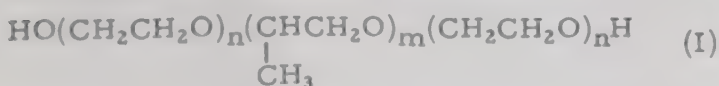
Orlovskii, V.M., Bokov, A.V., Kirpenko, Yu.A. et al. Bul. 7/25.2.79. 23.3.77. as 464275 (3pp815)

GOLD/ ★ D15 82081B/45 ★SU -648-527
Removal of petroleum prods. or vegetable oil from waste water - using as de-emulsifiers block copolymers of ethylene and propylene oxide at low addn. rates

GOLDENFON A K 07.08.74-SU-050960

A97 (A25) (25.02.79) C02b-09/02

The reagent for removing emulsified petroleum prod. vegetable oils from industrial water is a block copolymer of propylene oxide and ethylene oxide, of formula (I):



(where m is 15-150 and n is 10-100).

The copolymers are mainly white solids or colourless liquids soluble in water. Conventional deemulsifiers such as disolven do not remove oils to a level required by regulations, but the alkylene oxide polymers remove the oils to a level of ≤ 10 mg./l., at a consumption of only 0.005% of reagent.

The method is useful e.g. in petroleum processing or transporting industry.

Goldenfon, A.K., Stepanov, A.V., Shcherbakova, L.V. et al. Bul. 7/25.2.79. 7.8.74. as 050960 (3pp815)

COMM = ★ D15 82082B/45 ★SU -648-528
Purification of domestic or industrial aq. effluent - using active sludge and splitting centrifuge effluent to both aerator and flotation appts.

COMMUN WATER SUPPLY 25.03.77-SU-465869

(25.02.79) C02c-01/02

Aq. effluent is purified with active sludge as claimed in Parent Patent 170418.

Active sludge conc. is raised and the ash content of the centrifuge effluent returned to the aerator, is reduced, by operating as follows: before centrifuging, the active sludge is floated to 15-50 g/l conc, after which the centrifuge effluent is divided into 2 streams, one of which serves the flotator as working liquid. 70-80% of the centrifuge effluent returns to the aerator and 20-30% is fed to the flotator.

Turovskii, I.S., Agranonik, R.Ya., Terent'eva, N.A. et al. Bul. 7/25.2.79. 25.3.77. as 465869 Add to 170418 (3pp835)

COMM = ★ D15 82083B/45 ★SU -648-529
Treatment of hydroxide residue from water purificn. plants - by condensation, recirculated hot gas treatment, dehydration calcination and acid treatment for coagulant regeneration

COMMUN WATER SUPPLY 10.03.77-SU-460845

E33 (25.02.79) C02c-03

Hydroxides obtd. on purifying water are treated by condensation, mechanical dehydration, calcination of the residue, and conversion of the solid to $\text{Al}(\text{SO}_4)_3 \cdot 18\text{H}_2\text{O}$ with acid.

The process can be simplified and the cost of coagulant regeneration is reduced by 30-35%, by elimination of the processes of condensation in a separator followed by freezing and thawing of the residue prior to dehydration.

The hydroxides are condensed by stirring, heated to 40-100°C by waste heat from the gases from the calcining stage, and then dehydrated mechanically.

The indirect use of the waste gases eliminates the need to clean them. The process requires less apparatus and less energy input, and consequently costs less to operate, than the previous method.

Lyubarskii, V.M., Rybnikov, I.N. Bul. 7/25.2.79. 10.3.77. as 460845 (2pp815)

EMEL/ ★ D15 82084B/45 ★SU -648-530
Industrial waste water purificn. - includes using peroxide and ozone for removing oxidisable organic and inorganic cpds.

EMEL'YANOV B V 21.04.75-SU-126159

(25.02.79) C02c-05/02

The degree of purificn. of waste water from oxidisable impurities can be improved, the rate of reaction increased and the consumption of reagents decreased, by treatment of the waste with a combination of peroxide and ozone, in amts. of 0.01-1.0 and 0.15-1.5 g./l. respectively.

Use of the combined reagents increases the degree of oxidation to almost 100%, a rise of 0.5-29.5% compared to use of ozone, or 2.8-45.2% compared to use of peroxide alone. The time of reaction is reduced to 21 min. compared to 55 min. for either reagent alone.

Emelyanov, B.V., Sukharev, Yu.G., Tregubov, B.A. et al. Bul. 7/25.2.79. 21.4.75. as 126159 (2pp815)

MOST ★ D15 82085B/45 ★SU -648-531
Organic impurities removal from effluents - by ozone-air treatment over silica-gel packing

MOSCOW STEEL ALLOYS INST 12.07.76-SU-384778

H09 M24 (25.02.79) C02c-05/02

Effluent from coking and metallurgical inds. is purified by ozonisation over high specific surface urea packing. Now the degree of purification is increased by using gas contg. 0.0015-0.0150% vol. O_3 , and silica-gel packing.

Typically, water contg. 42.0 mg/l. phenol (from coking plant) is fed into a column contg. SiO_2 -gel packing of sp. surface $22\text{m}^2/\text{g}$. and mean pore radius $\sim 2500\text{\AA}$. An O_3 -air mixture contg. 0.0078% vol. O_3 is passed through in a counter-current. At a linear water rate $0.5-10^{-3}$ cm/sec., the degree of phenol removal is 99.998 wt.%. Purification is increased by 5% using this procedure.

abarov, O.S., Sokratova, N.B., Starodubtsev, D.S. et al. Bul. 7/25.2.79. 12.7.76. as 384778 (2pp835)

MM/★ D15 82086B/45 ★SU-648-532
Purification of acidic mine water - using alpha-branched higher monocarboxylic acid fractions as flotation agent to remove iron and aluminium impurities

KIM MP 12.10.76-SU-411076
E17 P41 (25.02.79) B03d-01 C02c-05/02

acid mine water contg. Fe and Al is purified by neutralisation and flotation.

The water purity is improved by employing as flotation agent, α -branched 5-50C monocarboxylic acid fractions, added in discrete quantities.

The acids are of formula: $H(CH_2CH_2)_nCR_1R_2COOH$, where $n = 1-50$; $R_1 = H$, alkyl; $R_2 = alkyl$. Opt. quantities for use are 5-9C 320 mg/l. 11-19C 140 mg/l. >19C 30 mg/l.

Kim, M.P., Molodchik, G.L., Barysheva, K.F. et al. Bul. 7/25.2.79. 12.10.76. as 411076 (4pp835)

POL=★ D15 82087B/45 ★SU-648-533
Clarification of fine mineral particle-loaded aq. effluent - using aluminium chloride and acrylamide-based radiation polymerised polyelectrolyte

UKR POLY 27.12.76-SU-434395
A97 J01 (A14) (25.02.79) C02c-05/02

Building, ceramics or ore processing industry effluent is clarified, firstly by use of an inorganic Cl-contg. coagulant and then an organic polyelectrolyte.

The process becomes more efficient by using 75-150 mg $AlCl_3$ /l and 1-5 mg. acrylamide-based radiation polymerised product at a concn. of 1-5 mg/L effluent.

Typical effluent contains 25000-30000 mg/l. solid phase, 90% of particle size $<100\mu m$. and 10% $<5\mu m$, at pH 9-12, total alkalinity 0.6-0.8 mg/equiv/l.

Poliivets, Yu.G., Nikulina, T.I., Lysunkina, V.N. Bul. 7/25.2.79. 27.12.76. as 434395 (2pp835)

NCPO=★ D15 82088B/45 ★SU-648-534
Removal of dissolved aluminium from effluent - by precipitation with sodium silicate, using sodium tetra-borate as coagulant
NOVCH POLY (ROHE= ROHE=) 11.01.77-SU-443074
M14 (25.02.79) C02c-05/02

Effluent from inds. in which Al-alloys are etched chemically, is rendered free of dissolved Al by chem. reaction and removal of the precipitated Al-complex. The process is made more efficient by employing as the purification reagent, an aq. soln. contg. 60-65 g/l Na_2SiO_3 and 4-5 mg/l. $Na_2B_4O_7$.

Gritsun, S.I., Demchuk, L.A., Smirnov, V.A. et al. Bull 7/25.2.79. 11.1.77. as 443074 (2pp835)

VOSY=★ D15 82089B/45 ★SU-648-535
Removal of non-coagulated polymers from latex industry effluent - using acrylate latexes anti-agglomerant and aluminium sulphate coagulant

VORON BR SYN RUBBER 23.02.77-SU-455033
A35 (A12 A14) (25.02.79) C02c-05/02

Non-coagulated polymers are removed from latex industry effluent to a greater degree by using 3.0-16 mg. of acrylate latexes per l of effluent. In an example, to 1l, effluent contg. 3g/l SKI-3 latex are added 49 mg. divinyl-methacrylate latex. The whole is mixed for 5 min. after which 100 mg $Al_2(SO_4)_3$ are added. The non-agglomerated rubber crumb is filtered off. The amount of suspended polymers remaining in water amounts to 28 mg/l. corresponding to 99.07% purification.

$Al_2(SO_4)_3$ acts as coagulant, while the acrylate latexes prevent agglomeration of rubber coagulate.
Strukov, F.I., Svatikov, V.P., Filinova, T.P. Bul. 7/25.2.79. 23.2.77. as 455033 (3pp835)

URFO★ D15 82090B/45 ★SU-648-536
Phenol-formaldehyde resin aq. effluent treatment - using adsorbent, with catalyst polycondensation and sepn. for improved monomers removal

URALS FORESTRY INST 01.03.77-SU-457381
A21 E14 (A35 E17) (25.02.79) C02c-05/02

PhOH and HCHO are removed from phenol-formaldehyde resin industry aq. effluent by adding an adsorbent, a

catalyst and subsequently polycondensing the sepn.

A rapid, simple one-stage process is conducted as follows: condensation is conducted using an efiluent: adsorbent: catalyst ratio= 33.3: 100:0.2 - 195:100:9.5.

The liquid is stirred with staggered energy rise: 40-120 kw for 8-20 min. then 100-300 kw. until the procedure is complete.

Babina, M.D., Pereskokova, I.I., Popova, G.I. Bul. 7/25.2.79. 1.3.77. as 457381 (2pp835)

URFO★ D15 82091B/45 ★SU-648-537
Resin industry aq. effluent purificn. - using adsorbent, polycondensation and sepn. for removal of phenol and formaldehyde

URALS FORESTRY INST 03.02.77-SU-461616
A21 E14 (A35 E17) (25.02.79) C02c-05/02

Phenol and HCHO are removed from phenol-formaldehyde resin industry effluent by acidification, adding an adsorbent, polycondensing and removing the deposit.

Better results are secured by condensing when the phenol: HCHO ratio = 1:1.4-1:1.7.

Babina, M.D., Gabets, A.P. Bul. 7/25.2.79. 3.2.77. as 461616 (2pp835)

RARE=★ D15 82092B/45 ★SU-648-538
Removal of fluoride from industrial aq. effluent - by electrolysis with aluminium anodes at specified current density and acidity
RARE METALS IND RES 16.05.75-SU-135811
E36 M28 (25.02.79) C02c-05/12

Fluoride is removed from aq. industrial effluent by electrolysis with Al-anodes.

Purificn. is intensified under the following conditions. pH 5-10, current density 0.35-1.5 a/dm² and effluent feed rate 1-8 ml/min.

Typically effluent contg. 19 mg F⁻/l, and 100 mg. Cl⁻/l. at pH 7.1 is passed through a cell at 4.5 ml/min. Electrolysis with Al-anodes is conducted at 0.51 a/dm². The F⁻ content of the water is reduced to ~ 1 mg/l. which is considered admissible.

Kozhemyakin, V.A., Pochtarev, A.N., Filimonova, N.S. Bul. 7/25.2.79. 16.5.75. as 135811 (2pp835)

TSIN=★ D15 82093B/45 ★SU-648-539
Consolidation, dehydration and sterilisation of town effluent solids - using electrolysis in presence of anion-active polyelectrolyte to kill pathogenic bacteria and helminths eggs

TSHK BR IND WATER 11.02.77-SU-451768
A97 (25.02.79) C02c-03 C02c-05/12

Town effluent solids are treated by sedimentation on a rotating electrode using direct current.

Solids are better consolidated, dehydrated and sterilised by operating as follows: electrolysis is conducted for 3-6 mins. at 4-10 a/dm² in presence of an anion-active polyelectrolyte, e.g. 0.5-3.0 mg polyacrylamide/l

The procedure allows solid phases to be treated 2.5 times faster, reduces water content from 80 to 71% and reduces volume 1.5-fold. and kills all pathogenic bacteria and helminths eggs.

Chumakov, F.P., Karimov, Kh.K., Artemev, S.N. et al. Bul. 7/25.2.79. 11.2.77. as 451768 (2pp835)

ATUP=★ D15 82208B/45 ★SU-648-799
Solar still for desalination of salty desert water - contg. inclined heat pipe parallel to transparent plastic film window with horizontal section in water container

AS TURK PHYS TECH 12.06.72-SU-795738
A88 Q74 (25.02.79) C02b-01/02 F24j-03/02

The thermal efficiency of the solar still used in desert and other dry regions with hot climate, is ensured by use of condensation heat for preheating the water in the still container.

The still contains heat pipe mounted in parallel to the inclined transparent window, e.g., made from polyethylene film, and having its working section immersed in the water to be distilled. The vertical surface on which the vapour condensates is a wall of the upright chamber filled with water to be distilled which is thus preheated. The distillate is collected in the trough fixed to the wall and flows to the outlet nozzle.

Bairamov, R., Leontev, A.N., Rybakova, L.E. et al. Bul. 7/25.2.79. 12.6.72. as 795738 (2pp135)

MEDI= ★ D15 82256B/45 ★SU -649-443
Electrodialysis unit for water desalination - contg. frames with porous draining packings and chambers with heteropolar diaphragms adjoining one another follow power consumption
MEDICAL BIOLOG PROB 27.01.77-SU-447376
A91 J03 (29.03.79) B01d-13/02

Reduced power consumption in the cell for sepn. of electrolytic solns. by dialysis, and particularly for deionisation of water by electrolysis, is ensured of the frames of the cell have collar shape and contain transverse channels and grooves with porous packings for drainage.

The concentration chambers of the cell contain pairs of heteropolar diaphragms, i.e., cation-selective and anion-selective, adjoining one another and on peripheries separated by porous packings.

Gaidadymov, V.B., Chizhov, S.V., Sinyak, Yu.E. Bul. 8/28 2.79. 27.1.77. as 447376 (3pp135)

ALUM= ★ D15 82322B/45 ★SU -649-659
Lifting device for revolving arms of rotary-rake thickener - contg. vertical hollow screw connected to shaft of revolving arms moved by worm gear drive, used in chemicals and cement mfr.

ALUMINIUM MAGNESIUM 16.08.74-SU-056923

J01 L02 Q38 (28.02.79) B01d-21/20 B66f-03/18 C02c-01/26

Simplified construction and reduced overall dimensions of the mechanism for lifting the revolving arms of the rotary-rake thickener used in chemical and cement industry, are ensured if the vertical screw of the mechanism is made hollow and in it is mounted a rod rigidly fixed to the shaft of the revolving arms of the rake.

The thrust bearing of the rod is mounted on the top end of the screw which is moved by the worm gear drive. Reversible motor revolves the worm shaft which moves accordingly the hollow screw up or down, its turning being prevented by a metal strip fixed to its bottom end and sliding in the slot in the casing of the mechanism.

Kaufman, V.I. Bul. 8/28.2.79. 16.8.74. as 056923 (2pp 135)

PETR= ★ D15 82323B/45 ★SU -649-660
Pressure flotation control system for effluent purificn. - using effluent and reflux flow-rate meters connected to relative flow-rate regulator for actuator

PETROLEUM DRILLING 12.05.77-SU-484549

R26 (28.02.79) C02c-05/02 G05d-27

The previous control system for purificn. of effluents by pressure flotation contains pressure and flotation tanks, turbidimeter and an actuator of the reflux pipe. In order to improve purificn., flowrate meters are introduced for the effluent and reflux and also a relative flow regulator. A set quality can now be maintained for the effluent when the inflow fluctuates. The method can be used without various coagulating reagents, or when they are present under optimal conditions.

Pak, O.M., Zinger, M.I. Bul. 8/28.2.79. 12.5.77. as 484549 (2pp840)

SOFR- D15 84345A/47 =US 4172-428
Active surface protection of optical impurity monitor - by protective fluid swilling glass clean

SOFRANCE SA 05.05.77-FR-013713

J04 Q69 + R13 R16 (30.10.79) *DT2726-897 + G01f-15/12

The device constitutes, in the wall of a pipe, an optical pick-up window which may be scavenged by a protective fluid. A chamber, with a fluid inlet and outlet, passes through the wall and opens into the pipe, the opening of which constitutes the outlet. A tube passes into the chamber to form, around the tube, an annular conduit starting near the chamber inlet and leading towards the outlet.

One end of the tube is provided with the window and is placed opposite the outlet. The other end of the tube opens outside the chamber. The distance between the window and the outlet is short enough for the flow of protective fluid in front of the window to be a sheet.

The device does not produce eddies in front of the window, giving accurate measurements. 28.4.78 as 901090 (4pp976)

GUAR/ ★ D15 82385B/45 ★US 4172-706
Detection and measurement of carbonyl cpds. in aq. solns. - by reaction with a radioactive derivative of ammonia, for analysis of biological fluids, sewage etc.

GUARNIERI M 04.08.77-US-821770

B05 E19 K08 R16 (30.10.79) G01n-23/10 G01n-33/18

Carbonyl cpds. are detected and measured in aq. solns. by reaction with a radioactive deriv. of ammonia, separation of the reaction product and measurement of the amt. of the product by radioactivity measurement.

The carbonyl cpd. may be an aldehyde or a ketone or a cpd. convertible thereto. The sensitivity of the process is determined by the specific activity of the deriv. e.g. 1 mole of acetone mixed with excess hydrazine contg. 1 curie /mole would yield a hydrazone contg. 1 curie or 10^{12} counts per minute; a hydrazine contg. 100 curie/mole yields a hydrazone contg. 10^{14} cpm; and because radioactivity measuring devices can measure 10^2 cpm with accuracy the latter reaction would detect 10^{-12} mole of acetone.

The aq. soln. may be any sample of water, sewage or a biological fluid. 4.8.77 as 821770 (3pp476)

SEAR/ ★ D15 82410B/45 ★US 4172-767
Appts. for purifying impure water source - using solar heating and cooling of vapour by passing through water source

SEAR WE 16.12.77-US-861239 (26.07.76-US-708784)

Q74 (30.10.79) B01d-03 F24j-03/02

A water purificn. system is located in a constant water supply. It comprises a container for holding a static body of the impure water and includes a valve for preventing outflow of the water but permitting constant replenishment from the source. Heat accumulates beneath a flexible plastic cover so that the water vaporises and collects in the upper portion of the container.

Cloth covered baffles increase the evapn. area within the container. A blower moves the vapour across the container to a pipe which carries it to an area of lower natural temp. to condense the vapours. The condensed vapours are pumped to a storage tank.

The appts. is used to purify salt water, brackish water or water from raw sewage. 16.12.77 as 861239 (6pp295)

ORON- ★ D15 82412B/45 ★US 4172-773
Halogenation of water - by passing electrolysis current through anode and cathode defining electrodc gap for water flow

ORONZIO DE NORA IMP 11.05.78-IT-023283

E36 J03 (30.10.79) C02b-01/82

Water is halogenated by passing an electrolysis current through a porous permeable anode and a cathode defining an electrodc gap. An aq. soln. of an alkali metal halide contg. ≥ 25 g/l of the halide is passed through the anode into the gap and the hydrodynamic flow through the anode controlled to maintain the wt. ratio of active halogen to halide in the water leaving the gap at ≥ 0.2 .

Used for sterilising water for potable water systems or swimming pools.

The halogenation process can be operated at a high current density, e.g. $4000-5000$ A/m², with a Cl₂ discharge current efficiency higher than 85%. This increases the anode lifetime because the anodes are not subjected to excessive O₂ evolution which reduces the catalytic activity of their noble metal oxide coating. 31.7.78 as 929494 (11pp67)

ASAH D15 24200A/13 =US 4172-779
Multistage electrodialysis of sea water or brine - to obtain fresh water, using a series of cells each contg. a gasket with holes for passage of liquid

ASAHI KASEI KOGYO 30.07.76-JA-091018

J03 (30.10.79) *J53016-374 B01d-13/02

Sea-water or brackish water is desalinated by multistage electrodialysis, by passing dilution streams using a pump unit in series through a multi-stage sheet flow type electrodialysis appts.

The electrodialysis appts. comprises ≥ 2 electrodytic units assembled in series, each unit contg. ≥ 1 stack arranged between a pair of electrodes. Each stack has 50-500 pairs of electrodes, each pair contg. an anion and a cation exchange membrane of area 30-250 dm², respectively arranged alternately. Gaskets are interspaced be-

between the membranes to define alternately concn. and dilution compartments.

Desalted water can be produced in amt. $\geq 100 \text{ m}^3/\text{day}$ from sea-water or brackish water. 27.7.77 as 819545 (3pp931)

DTZ- D15 85247A/47 = US 4172-780
Recovery of metal from effluent in electrolytic process - with mechanical sepn. of metal from cathode
GOTZELMANN KG 22.12.77-DT-757271 (03.05.77-DT-719667)
M11 (30.10.79) *NL7804-692 C25d-17/10 + C25d-17/06 C25d-21/10

Electrolytic treatment of metal contg. waste waters is described using an anode and multiple cathodic rods. The rods are held parallel to each other using two movable holding devices which allow the rods to be moved relative to each other. Pref. the rods are held in a cage like structure which rotates allowing individual rods to fall against each other.

This action serves to detach surface deposits of metal obtained by the electrolysis. At the base of the chamber conical surface feeds into a collecting zone from which the deposits can be removed.

The design allows the anode-cathode spacing to be reduced thus reducing the electrical energy required. Thus continuous operation is possible without excessive heating up. on dilute metal contg. solns. 3.8.78 as 930648
Inv. ex 4144148 (+ 2.5.78 - US - 902261) (10pp397)

AD ★ D15 82416B/45 ★ US 4172-781
Strong waste water treatment by activated sludge - with addition of powdered activated carbon and recycling of carbon contg. sludge
STANDARD OIL CO (IND) 15.06.77-US-806749
H05 (30.10.79) C02c-01/06 C02c-05/10
an activated sludge process waste water passes to a first aeration zone where oxygen or air, and activated sludge are introduced. The effluent from this zone passes to a first clarification zone where suspended sludge particles are removed and recycled to the first aeration zone. The water is passed on to a second aeration zone where 5-500 ppm powdered activated carbon is added.

Oxygen or air is introduced and the effluent passed to a second clarification zone to separate suspended sludge from carbon particles. These are recycled to the second aeration zone to maintain the average sludge age in the second aeration zone greater than 10 days. Decontaminated water is reclaimed from the second clarification zone.

The appts. is used for treating contaminated waste water from municipal or industrial sources. It can efficiently treat a strong waste having a COD value $> 1000 \text{ mg/l}$. 15.6.77 as 806749 (10pp295)

PERU ★ D15 82417B/45 ★ US 4172-783
Regenerating condensate demineralisation resin - with clear calcium hydroxide soln. contg. no other anions
PERMUTIT LTD 15.03.78-US-886670 (12.01.77-US-758603)
(30.10.79) B01d-15/06

Condensate purification process comprises passing the condensate through a demineraliser consisting of mixed anion (A) and cation (C) exchange resin, then sepg. into a layer of mainly (A) with some entrained (C), and a second layer of (C).

At least the first layer is regenerated with aq. NaOH, then it is treated with lime soln. to displace Na ions with Ca ions on the (C) particles. The second layer is regenerated and the two layers mixed.

The process is improved by (i) passing aq. soln. of a Ca salt through a strong anion exchange resin (A') of uniform basicity giving a Ca ion soln. contg. no anions other than OH, then (ii) using this soln. to displace Na ions from the first layer.

The purified $\text{Ca}(\text{OH})_2$ solns. avoid problems of impurities (e.g. CaCO_3) present in commercial lime solns. No extra chemicals are needed and by supplying the NaOH regenerant for (A') countercurrent to the Ca feed soln., Na leakage is minimised. 15.3.78 as 886670 (4pp1251)

DEGS

D15

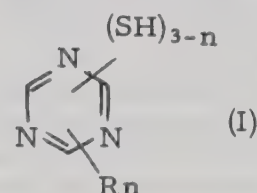
23489A/13 = US 4172-784

Cadmium separation from water contg. chelating agents - by pptn. with mercapto-triazine cpds. in presence of ferric ions

DEUTSCHE GOLD & SILBER 20.09.76-DT-642198

E32 (E19) (30.10.79) *DT2642-198 C02c-05/04 + C02b-01/20

Cadmium (Cd^{2+}) ions, present as complexes of nitrilotriacetic acid, EDTA and/or diethylenetriamino pentaacetic acid, or their anionic salts, are sepd. from aq. liqs. by contacting them with an HS-contg. triazine cpd. of formula (I), or its water-soluble salt, to ppte. the cadmium ions.



In the formula, R is H, 1-3C alkyl, $-\text{NR}^1\text{R}^2$ or $-\text{OR}^3$; R^{1-3} are each H, Ph or 1-6C alkyl; and $n = 0, 1$ or 2 . The triazine cpd. is contacted with ≥ 1 equiv. of mercapto or mercaptide gps. per equiv. of cadmium ions, such that pptn of Cd^{3+} takes place in the presence of ≥ 1 equiv.

of Fe^{3+} ions w.r.t. the complexing agent. Pptn. takes place at pH 4-10, and the ppte is separated from the aq. liq.

The process is esp. used to remove cadmium (Cd^{2+}) ions from sewage, waste water and aq. solns. 6.9.77 as 831014 (3pp931)

DEGS

D15

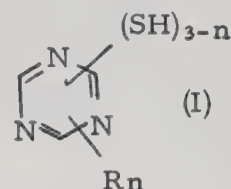
23493A/13 = US 4172-785

Copper pptn. from solns. contg. chelating agent - using mercapto-triazine precipitant in presence of ferric ions

DEUTSCHE GOLD & SILBER 20.09.76-DT-642238

E32 M13 (E13) (30.10.79) *DT2642-238 C02c-05/04 + C02b-01/20

Seqn. of cupric ions from an aq. liq. contg. Cu^{++} , EDTA and/or Cu^{++} diethylenetriamine pentaacetic acid complexes comprises contacting the liq. with an HS-contg. triazine cpd. of formula (I) at pH 4-10, and sepg. the ppte from the aq. liq.



In (I) R is H, the same or different 1-3C alkyl, $-\text{NR}_1\text{R}_2$ or OR_3 ; R_{1-3} are each H, 1-6C alkyl or phenyl; and n is 0-2. (I) is contacted in such an amt. that ≥ 1 equiv. of mercapto or mercaptide gps. is present per equiv. of cupric ions

and the pptn. of cupric ions takes place in the presence of an at least equiv. amt. of ferric ions, relating to the (I) in the liq. Process is used to treat sewage, waste water and aq. solns. 19.9.77 as 834596 (5pp936)

USAS ★

D15

82418B/45 ★ US 4172-786

Prevention of scale, corrosion and algal growth - in industrial water systems by adding high levels of ozone

NAT AERO & SPACE ADMIN 29.09.78-US-946992

E36 (30.10.79) C02b-05/02

Scale formation, corrosion and algal growth on surfaces in contact with circulating water in a system including a heat exchanger and a coding tower down which air is blown is prevented by injecting ozone into the water in the basin at a level of at least 2 mg per l., in the absence of any other corrosion inhibitor, and maintaining the ozone level in the water at 2-20 mg per l.

No other treatment agents are required. The ozone removes existing scale, prevents its formation, passivates metals and is an active biocide. 29.9.78 as 946992 (5pp955)

COPE-

D15

42515B/23 #US 4172-789

Separator for settling suspended solids in liquids - has series of parallel plates mounted in bundle

COPEF 23.11.77-DT-752296 (23.11.77-US-854474)

J01 (30.10.79) *DT2752-296 B01d-21/08

A liq. loaded with suspended solids is clarified, by decantation, by passing it up along a flow path, inclined to the horizontal, between two plates, which are arranged in gps. in an enclosure. Each gp. contains equidistant parallel plates at an angle different from 90° to the vertical but $20-75^\circ$ to the other plate. The suspended substances are deposited on the plates and then slide down them toward the enclosure wall.

More rapid decantation is obtd. than with prior art devices. Pref. one gp. of plates is located downstream of the other, and they are angled on respective sides of the vertical plane. 23.11.77 as 854474 (12pp976)

TDCO ★ D15 82421B/45 ★ US 4172-796
Tap mounted domestic water purifier with filter cartridges - has valve selecting filtered or aerated water treatment
TELEDYNE INDUSTRIES 01.06.76-US-691830 (29.09.75-US-617449)
(30.10.79) B01d-29/38 B01d-35/02

A water purification device comprises a cylindrical filter cartridge located in a housing. The base of the housing directs water upwards into the filter, and filtered water from the top of the cartridge passes downwards through an axial pipe to be discharged at a port in the housing base. Untreated water is supplied to the device via coupling and is intercepted by a valve in the housing base.

The valve has two positions. In one position the inlet water is directed to the filter and leaves via the outlet port. In a second position inlet water is directed instead to an aeration fitting so that aerated water is discharged from the base of the housing.

The device is connected to a domestic tap and allows the user to select filtered or aerated water. 1.6.76 as 691830 (10pp295)

SALA- ★ D15 82521B/45 ★ WP 7900-864
Apparatus for dissolving gases in liquid - with axial flow pump impeller drive shaft encased to form gas passageway
SALA INT AB (LIND/) 31.03.78-SW-003691
J02 Q56 (01.11.79) B01f-05/12 F04d-19 F04d-31
D/S: N(CH, DK, DT, GB, JA, SU, SW, US) + E (FR).

The liquid is raised by an axial-pump impeller through a vertical riser whose lower end forms an inlet for the liquid and whose upper end forms an outlet. At the upper end guide surfaces deflect the liquid radially from the axis of the riser.

The drive shaft of the pump impeller extends coaxially within the riser line, from a drive unit located above the liquid, to the impeller. The drive shaft is enclosed by a stationary line whose inner wall defines together with the drive shaft, a gas passage whose lower end opens into the riser via a passage extending radially to the centre line. The gas passage communicates at its upper end with a gas source such as the surrounding atmosphere.

The apparatus is primarily intended for the oxygenation of sewage water in biological purification works.

The apparatus operates efficiently and provides a higher liquid velocity than using prior art apparatus. The axial liquid flow is uniform over the whole flow area.

30.3.79 as SW0076 (21pp295)

(E)ISR: SW-354789; NO-127049; DT2559234;
DT2608705.

BERT- ★ D15 82528B/45 ★ WP 7900-88
Regenerating liq. filters by automatically initiated program incorporating unclogging of elements by ultrasonic waves sedimentation and discharge of dislodged particles

BERTIN & CIE (POTI/) 05.04.78-FR-010041

J01 K07 (01.11.79) B01d-27 B01d-35/20 C02c-05

D/S: N(JA, US) + E(DT, GB, SW).

A process for regenerating filtration appts., esp. liquid filters comprises three successive phases. The first phase is an unclogging phase. The second phase is a sedimentation of the particles coming from the unclogging. The third phase is the discharge of the sediments.

The process is initiated automatically when the pressure drop through the appts. has reached a predetermined value, and takes place according to a cycle. The unclogging is brought about by ultrasonic waves transmitted to the body of the fluid in the filtration appts.

The method obviates the need for frequent changing of filter cartridges, thus making the process suitable for filtering contaminated material, e.g. in the secondary circuit of a nuclear reactor. It also allows the filter to be regenerated without dismantling or manual handling, does not need a large flow of fluid and allows direct discharge of the sediments at the end of the regeneration cycle, immediately downstream of the filtration equipment.

4.4.79 as FR0030 (15pp1192)

(F)ISR: FR2070242; FR-820743; GB1168580; CH-541981; FR2101844.

See Also

D17 DT 2915872

D18 SU 648522

D16: FERMENTATION INDUSTRY

GLAX ★ D16 80819B/45 ★ BE-875-844
Acremonium chrysogenum strains for cephalosporin prodn. - obtd. by crossing parent strains to give improved properties e.g. yield and growth rate

GLAXO GROUP LTD 26.04.78-GB-016528

A97 B04 (25.10.79) C12d C12k

Novel improved Acremonium chrysogenum strains are prepd. by subjecting parent strains to protoplasmic fusion and nuclear fusion. The modified strain is then selected from descendants or their mutants.

The strains are used for the fermentative prodn. of cephalosporins. The process allows various strains (even very different strains) to be crossed to give modified strains with a combination of required properties, e.g. higher yield or more rapid prodn. of cephalosporins, better sporulation or stability, better growth characteristics, on various media, easier extn. etc. 25.4.79 as 875844 (24pp941)

ROST- ★ D16 80863B/45 ★ BE-877-474
Protecting sugar beet against damping off - using dry compsn. contg. Pythium oligandrum Drechsler oospores to treat seeds

VU ROST LINNE ROBY 05.07.78-CS-004462

C03 P11 (05.11.79) A01c A01n

Compsn. comprises a dry, powdered substrate, (pref. grain or maize) fermented with Pythian oligandrum Drechsler and contg. $\geq 10^6$ (pref. $50-500 \times 10^6$) oospores, per g.

Compsn. is prepd. by culturing P. oligandrum Drechsler on a substrate wetted with liq. nutrient medium to give

the above oospore count, then drying and milling at $\geq 35^\circ\text{C}$. Pref. the substrate, contg. 2-3% CaCl_2 as well as usual components (e.g. sugars, maize steep liquor and mineral salts), is spread out on a flat surface and irradiated during fermentation with visible light using blue or green filters.

When applied to sugar beet seeds, the compsn. stimulates growth of seedlings as well as preventing damping off. Compared with liq. oospore suspensions previously used, the compsns. have a higher oospore concn. and are more storage stable. The compsns. adhere well to seeds, requiring little or no adhesive. 4.7.79 as 877474 (12pp941)

STAL D16 12826R/08 = DS 1942-748
Enzymic saccharification of starch hydrolysate
STALEY A E MFG CO 26.08.68-US-755094
(31.10.79) *BE-737-923 + C12d-13/02

Enzymatic conversion of dil. starch hydrolysate to sugars. comprises treatment with a mixt. contg diastase, glucamylase and amylo-1,6-glucosidase. Syrups are obtd. with a dextrose equiv. of $\geq 68\%$.

The fermentable extract is $\geq 77\%$, and the max. dextrose content is 47%. 22.8.69 as 942748 (11pp047)

CORP D16 30106V/16 = DS 2365-722
Enzymatic isomerisation of dextrose to levulose - using increased temp. in second phase of process to raise enzyme activity
CPC INTERNATIONAL INC 02.10.72-US-294397
E13 (31.10.79) *NL7313-551 C07g-07/02 C12d-13 C13k-11
New stabilised and immobilised xylose - isomerase enzyme

(I) is useful for converting dextrose into laevulose.
10.73 as 365722 Div.ex 2349464 (8pp481)

(31.10.79) *BE-846-713 C05f-09

Refuse or mixtures of refuse and sewage sludge are turned to compost by removing unsuitable components by screening and dumping the rest in shallow stockpiles in which adequate aeration cavities are left. Cavities, shaped like gothic arches and extending half or three-quarter way up the pile thickness are arranged throughout the length at a distance of 1-1.5m from each other. They are produced by perforated sheet metal structures on wheels.

Other holes extend parallel to them, offset and a little above the points of the arches. Vertical short holes are also provided on the pile surface.

This allows the compost to ripen without putrefaction.

PLYU D16 08029Y/05 = DS 2633-085
Automatic living tissue culture growing - in gastight housing with
fish loading, feeding observation and atmosphere maintaining
appliances

OLYMPUS OPTICAL KK 22.07.75-JA-089315
(31.10.79) *DT2633-085 C12k-01/10

(31.10.79) *D12633-085 C12k-01/10
An automatic cultivator for living tissues or cells has at one side of the casing with the culture dish carrier (on ball bearings) two objectives for optical examination. A dish charging device is arranged at the opposite side. An actuator is used for cell separation, cell collection, cell dilution and injection, together with a nutrient solution, in the empty dishes. The gas atmosphere is automatically controlled. A central control unit activates all parts for the operations in turn.

The result is an automatic standardised system in which no contamination of the grown cultures by bacteria or germs is possible. 22.7.76 as 633085 (11pp39)

DAMB- ★ D16 80920B/45 ★ DS 2854-956
Multideck compositing tower - with inlet and outlet aeration valves
controlled in specified cycle

controlled in specified cycle
DAMBACH-INDUSTRIEAN 20.12.78-DT-854956
(31.10.79) C05f-09/02

(31.10.79) C05f-09/02

A multideck composting tower has air chambers between the perforated plates of each deck and the top of the compost on the next lower plate. Inlet valves from a compressed air main at one side and outlet valves for an exhaust main at the other side are so controlled that adjoining pairs of decks are never ventilated together.

This facilitates the rotting and composting process control. The times of aeration can be altered to suit any particular composting material. 20.12.78 as 854956(7pp39)

particular composting materials
SUMO ★ D16 80990B/45 ★ DT 2818-086
Carriers for enzyme immobilisation - comprising macroporous
amphoteric ion-exchange resins with introduced carboxymethyl
gps. CHEMICAL KK 25 04.78-DT-818086

gps. SUMITOMO CHEMICAL KK 25.04.78-DT-818086
A96 B04 (31.10.79) C07g-07/02 C08f-08/10

Carriers comprise macroporous amphoteric ion-exchange resins with (a) a cation exchange capacity, due to carboxymethyl gps., of ≥ 0.5 meq./g. (dry basis); (b) an anion exchange capacity of ≥ 1 meq./g. (dry basis); (c) a specific surface of ≥ 1 (pref. ≥ 5) m.²/g. (dry basis); and (d) a total macropore vol. (in pores of dia. 0.01-0.2 μ m) of ≥ 0.1 (pref. ≥ 0.2) cc./g. (dry basis).

The carriers can be used to immobilise a wide range of enzymes (e.g. lactase, proteases, urease, glucose isomerase).

merase and pullulanase) for catalysing aq.-phase reactions. The immobilised enzymes have a high specific activity and a long service life compared with those immobilised on conventional ion-exchange resins. 25.4.78 as 818086 (45pp367)

THEU/ ★ D16 81045B/45 ★ DT 2819-110
Biologically active peptide(s) prodn. - by producing anti-isotype
antibodies from the peptide(s) or RNA containing synthesis
information for such peptide(s)

THEURER K 29.04.78-DT-819110
B04 (31.10.79) C12d-13/06

The synthesis of biological peptide active substances comprises the prodn. of informative ribonucleic acid (iRNA) with the synthesis information for anti-isotype antibodies against the biologically active group of the corresp. oligo- or polypeptide molecule and the prodn. of antibody fragments of the antideterminant group by enzymatic and/or chemical fragmentation.

Used for the prodn. of peptides such as lower-molecular metabolic regulators (inhibitors, repressors or stimulants) and hormone-like substances. Process per its prodn. of peptide products without prior structural elucidation.
29.4.78 as 819110 (6pp280)

COCH/ ★ D16 81082B/45 ★DT 2915-145
Moulded, transparent plate used in biological agglutination study -
consists of cellulose acetate and is divided into rows of cylindrical,
concave-bottomed, depressions

COCHARD M 18.04.78-FR-011332

A89 J04 R16 (31.10.79) G01n-33/16

Plate for biological agglutination tests has relatively numerous cells is moulded from transparent material, e.g. a cellulose acetate, having a specific resistance below 10^{11} ohm.m. The cells are cylindrical with concave bottoms.

The bottom of each cell has a calotte-shaped, central portion adjacent a frusto-conical, annular portion. The slope of a generatrix of the annular portion corresponds to the limiting slope at normal agglutination. The apical half-angle of the frusto-conical portion is 60° . The radius of the sphere of the central portion is 0.6 times the radius of the cylinder defining the sidewalls of the cells; the radius of that cylinder being 3 mm. 12.4.79 as 915145 (9pp267)

DUNH/ ★ D16 81147B/45 ★ GB 1555-004
Oxidising hydroxyl gps. in steroid(s) to oxo gps. - by use of
microorganism, or enzyme derived from it, in solvent which is
mostly water-immiscible

DUNHILL P 26.02.75-GB-008020

A96 B01 (07.11.79) C07g-07/02 C07j-01 C07j-07 C07j-09

An OH gp. of an OH-contg. steroid is converted to an oxo gp. by reacting the steroid with oxygen in a medium, ≥ 50 vol. % of which is a water-immiscible organic liq. in which the steroid is dissolved, in the presence of an enzymic oxidation catalyst which is either a microorganism of the genus *Mycobacterium*, *Nocardia*, *Brevibacterium* or *Arthrobacter*, or an enzyme recovered from the microorganism and immobilised by covalent attachment to a carrier.

The process is esp. for treating steroids having an OH gp. in the 3-position; e. g. cholesterol can be oxidised to cholest-4-en-3-one which can then be converted to androsta-1,4-diene-3,17-dione (ADD). ADD is important for the prodn. of fertility control hormones. Thus the rate of prodn. of ADD and other useful steroidal cpds. from steroidal starting materials can be increased, compared with prior art multi-step processes. 24.5.76 (4pp914).

MOUN- D16 11160Y/07 = GB 1555-142
Blood group determination - with blood corpuscles immobilised on
solid support

MT SINAI SCHOOL MED 14.08.75-US-604808

B04 P31 R16 + P34 (07.11.79) *BE-845-201 G01n-33/16

Method for assaying cell type or compatibility on a solid matrix comprises (a) forming a first monolayer of cells irreversibly bound to a solid matrix, the cells having intrinsic or acquired antigens on them; (b) contacting the layer with a soln. contg. antibodies to bind a layer of the latter by immunoadsorption, to the extent that the anti-

bodies and antigens are reactive; (c) applying a suspension of second cells carrying antigens and (d) measuring extent of immunoadherence of the second cells by antibody bound to the first monolayer.

Both agglutination and cell lysis test procedures on human cells are improved in that the sensitivity is increased and further as the result of immune reaction is readily measurable. 10.8.76 as 033231 (10pp963).

DAVI/ D16 49648Y/28 =GB 1555-378
Nutrient compsn.

DAVIS RD 25.11.75-US-634667

(07.11.79) *J52066-672 A231-01/30 + A61k-31/34 A61k-33/26

A stable nutrition supplement in aq. soln. comprises water, ascorbic acid, metabolically available iron and gelatine. The ascorbic acid and iron are present in proportions suitable to act as supplement for human diet. Gelatine is present in a proportion to retard the determination of ascorbic acid in the presence of iron, but without producing a gel.

Prof. supplementary copper is also present. Gelatine is present in amt. 0.1-0.4 wt. % w.r.t. soln. The supplement is prepd. by adding metabolically available iron to the gelatine soln., then adding ascorbic acid.

The supplement is prepd. in a water miscible, dry powdered or granular form, suitable for use as part of a powdered drink mix, or as a flavouring to be directly applied to various foods. 23.11.76 as 048847 (4pp931).

WADL D16 23813B/12 =GB 1555-449
Fungal growth medium containing purified saponin - as well as substrate for phenol oxidase, oxgall and support

WADLEY RES INST BLOOD BK 25.08.77-US-827573

B04 + R16 (07.11.79) *US4144-133 C12k-01/06

Dry prepn. for use in forming a fungal growth medium by mixing the dry prepn. with water and a supporting agent, comprises oxgall, purified saponin which is nontoxic to microbial pathogens, and a phenoloxidase substrate.

Prof. the prepn. contains a supporting agent, esp. agar. Prof. the phenoloxidase substrate is caffeic acid. Specific fungal growth medium comprises an aq. mixt. of the dry prepn. Specific phenoloxidase substrate is 2,3-dihydroxybenzoic acid, methyl ester of caffeic acid etc.

The prepn. provides a growth medium that rapidly and reliably identifies fungi which can be pathogenic under certain conditions e.g. in patients receiving immunosuppressant drugs. 17.3.78 as 010698 (12pp924).

SCNE- ★ D16 81175B/45 ★GB 2019-733
Extn. appts., e.g. mash tun used in brewing - has a floor which can be moved away from the top straining plate

SCOTTISH & NEWCASTL 10.05.79-GB-016296 (15.04.78-GB-014875)

J01 (07.11.79) B01d-11/02 B01d-23/20

Appts. for forming a liq. extract from a particulate solid/liq. mixt. comprises a container having a peripheral wall and a floor, with a strainer for sepg. the mixt. and removing the liq. via an outlet. The floor is movable to and from the wall to enable discharge of spent solids.

Prof. the peripheral wall has an annular seat at its lower end on which the floor is mounted. The floor comprises a vessel with a liq. outlet at the bottom, and the strainer includes a straining plate closing the vessel top, so that with the floor in the open position, the plate slopes downwards from the bottom of the wall and spent solid is discharged over its surface.

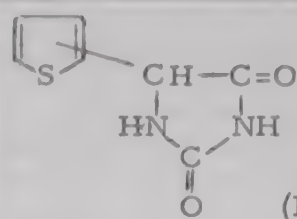
Appts. is e.g. a mash tin, used in brewing to produce wort by extracting malt with liquor. It is simple, cheap, gives high efficiency, and allows spent solids to be easily removed after each extn. 10.5.79 as 016296 (9pp976).

KANF ★ D16 81190B/45 ★GB 2019-835
N-carbamoyl-D-thienylglycine prepn. - by selective enzymic hydrolysis of 5-thienyl hydantoin

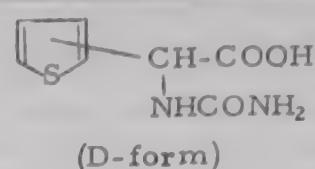
KANEGAFUCHI KAGAKU 15.03.78-JA-030062

B03 (07.11.79) C07d-333/20

N-Carbamoyl-D-(2- or 3-thienyl)glycine (I) is prepd. by selective enzymic hydrolysis of 5-(2- or 3-thienyl)hydantoin (II):



(DL-, D- or L-forms)



The enzyme is in the form of a culture of a microorganism such as Aerobacter, Agrobacterium, Bacillus, Brevibacterium, Corynebacterium, Microbacterium, Pseudomonas, Actinomyces, Mycobacterium, Nocardia and Streptomyces.

(I) are intermediates for D-(2- or 3-thienyl)glycine which is used for prepg. Semisynthetic penicillins and cephalosporins. 9.3.79 as 008422 (9pp916).

COUE ★ D16 81224B/45 ★GB 2020-00
Testing chamber for bio-hazardous substance falling as droplets with air curtain preventing escape of droplets

COULTER ELECTRONICS INC 26.04.78-US-900103

B04 J04 P43 (07.11.79) B08b-15 B08b-21/22

A testing chamber includes an analysis and sorting system in which a sample liquid is converted into droplets which are electrically deflected into a number of collection cells depending on their characteristics. The front wall of the test chamber is open and to prevent the escape of droplets from the test chamber a negative pressure is maintained with the chamber. Ambient air is drawn into the chamber by the negative pressure at a rate which would normally interfere with the droplet deflection process.

A baffle is placed behind the droplet stream on the side away from the open wall of the chamber and this creates a region of stagnant air which includes the droplet deflection system.

The appts. sorts droplets formed from a sample e.g. during cytology or haematology. The baffle allows a negative air pressure to be used to prevent escape of droplets yet does not interfere with the sorting process. 24.4.79 as 014192 (7pp295).

MILE ★ D16 81227B/45 ★GB 2020-017
Deoxyribonuclease determination device - contains DNA, methyl green and PVA or CMC

MILES LABORATORIES INC 01.05.78-US-901446

A96 B04 J04 R16 (A11 A14) (07.11.79) G01n-31/14

Test device for determining deoxy-ribonuclease activity in a biological sample comprises a carrier matrix contg. DNA, methyl green and PVA and/or CMC. The device may also contain an inhibitor which selectively allows the growth of β -haemolytic Streptococci.

Suitable carrier matrix includes paper, cellulose, wood, synthetic resin, fleeces and woven and non-woven fabrics. In use, the test sample is contacted with the device and incubated at 37°C for 12-48 hrs. and any clear zone indicates the presence of ribonuclease. Suitable inhibitors include crystal violet, amphotericin B, sodium cholistine-methane, nalidixic acid, gentamycin and lithium chloride.

Used for the selective determination of deoxy-ribonuclease producing organisms in biological specimens. 12.4.79 as 012931 (6pp916).

KIRI- ★ D16 81683B/45 ★J5 4126-670
Preventing alcohol pollution - using active carbon fibre in discharge pipe or in tank to adsorb it

KIRIN SEAGRAM KK (TOXF) 27.03.78-JA-034173

E17 J01 (02.10.79) B01d-53/34

Active carbon fibre structure body made from acrylonitrile polymer etc. is provided in a discharge pipe in a factory (such as liquor producing factories, Soy-source factories, or printing factories) where alcohol vapour is produced, or in a tank where alcohol vapour is produced (such as a prepn. tank for liquors) in order to remove alcohol from waste gas. The adsorbed alcohol can be sepd. and recovered. 27.3.78 as 034173 (5pp55)

GREC ★ D16 81730B/45 ★J5 4126-788
Human lysozyme prepn. - by contacting human urine with silicone contg. absorbent, eluting and anion exchanging

GREEN CROSS CORP 20.03.78-JA-031998

A96 B04 (02.10.79) C07g-07/02 C12d-13/10

prepn. of human lysozyme comprises contacting human urine with absorbent contg. silicone; eluting the absorbed product; contacting the obtd. impure soln. contg. urokinase with lysozyme, with basic anion exchanger to absorb the impurities; and recovering lysozyme from a concentrate contg. urokinase and lysozyme.

When contacting fresh urine with absorbent, the urine is preferably adjusted to pH 6-9. The amt. of absorbent used is 1-500 g per litre urine, and the treatment time is 10 mins. to 5 hrs. Elution is carried out using, e.g., alk. soln. contg. 0.5-2 moles basic amino acid. The eluate contains conc. urokinase and lysozyme. The eluate is then dialysed and treated with anion exchanger. Urokinase and lysozyme are not absorbed by the anion exchanger and colouring material and pyrogens are adsorbed to the anion exchanger. Examples of such exchangers are QAE-Cephadex, DEAE-Cephadex. Contact with the exchanger is carried out at pH 7-11.

Highly pure lysozyme can be thus obtd. efficiently. The lysozyme can be used for the treatment of pul caused by bacteria and for removal of sputum which chokes the small bronchus in asthma. 20. 3. 78 as 031998 (7pp108)

MOY ★ D16 81731B/45 ★ J5 4126-789
Glutamic acid dehydrogenase prepn. - by cultivating Proteus microorganisms e.g. IFO 12930, IFO 3849, IFO 3045 etc.
CHUGAI PHARMACEUTICAL KK 22.03.78-JA-031632
B04 (02.10.79) C12d-13/10

prepn. of glutamic acid dehydrogenase comprises culturing a glutamic acid dehydrogenase producing microorganism belonging to the Proteus genus in a cultivation medium, and recovering the glutamic acid dehydrogenase from the obtained cells.

Method of cultivation can be either liquid or solid cultivation. For commercial prodn. submerged cultivation with aeration and stirring is used. The cultivation temp. is pref. ca. 30°C for 15-30 hours. The pH of the medium is initially 7-8. Extraction of the enzyme can be carried out conventionally.

By using glutamic acid dehydrogenase it is possible to measure glutamic acid, alpha-ketoglutaric acid and ammonium. The glutamic acid dehydrogenase therefore is potentially useful in clinical diagnosis. For example, it is possible to determine transaminase activity (GOT, GPT, AST, ALP). The glutamic acid dehydrogenase is stable, e.g., when stored at 0-5°C in the form of suspension of suitable salt such as ammonium sulphate, it maintains 100% activity even after 1 month. The enzyme oxidises glutamic acid to form alpha-ketoglutaric acid and ammonia. 2. 3. 78 as 031632 (4pp108)

RIY ★ D16 81732B/45 ★ J5 4126-790
Pyridoxamine-5'-phosphate oxidase prodn. - by aerobically culturing a fungus of Saccharomyces genus, esp. baker's yeast
ORIENTAL YEAST KK 22.03.78-JA-031730
B04 (02.10.79) C12d-13/10

prodn. of pyridoxamine (pyridoxin) 5'-phosphate oxidase comprises culturing pyridoxamine (pyridoxin) 5'-phosphate oxidase-producing fungi of Saccharomyces genus and taking out pyridoxamine (pyridoxin) 5'-phosphate oxidase from resultant fungi body.

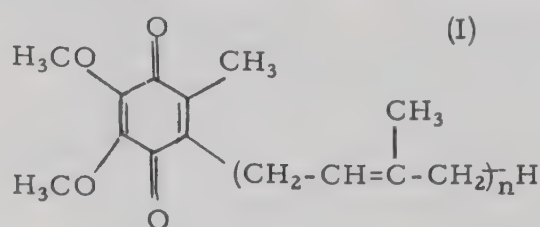
PAMP oxidase-producing fungi is cultured in aerobic condition in culture medium contg. carbon source such as waste molasses, starch saccharified substance or glucose, nitrogen source such as urea, ammonium sulphate or protein-hydrolyses substance to give fungi body.

Pyridoxamine (pyridoxin) 5'-phosphate oxidase (called PAMP oxidase) is known as an enzyme that participates in metabolism of vitamin B₆ and plays important role in mutual conversion of vitamin B₆ in vivo. As PAMP oxidase-producing fungi baker's yeast (Saccharomyces cerevisiae) is preferred. 22. 3. 78 as 031730 (5pp69)

AIDA/ ★ D16 81733B/45 ★ J5 4126-792
Fermentative prodn. of coenzyme Q₁₀ - by culturing fungi of genera e.g. Cryptococcus, Rhodotorula, Sporobolomyces, Oosporidium, Aspergillus etc.
AIDA H 20.03.78-JA-031098
B05 (02.10.79) C12d-03/02 C12d-13/10
prodn. of coenzyme Q₁₀ comprises culturing fungi of Cryp

-tococcus, Rhodotorula, Sporobolomyces, Torulopsis, Sporidiobolus, Oosporidium, Aspergillus and Cledosporium genus in culture medium contg. isopentenol to yield coenzyme Q₁₀ and taking out the substance.

Coenzyme Q of formula (I) is 2,3-dimethoxy-5-methyl-1,4-benzoquinone having isoprene side chain at 6-position



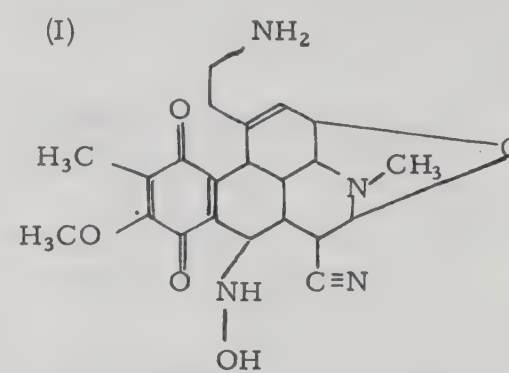
of quinone ring. The substance is contained widely in animals and vegetables and in microbes and plays important role as a component in terminal electron transport system

Coenzyme Q has excellent pharmacological action and physiological action on various diseases.

Coenzyme Q₁₀ (n=10) is most valuable as a pharmaceutical for human beings. 20. 3. 78 as 031098 (5pp69)

CHUS ★ D16 81734B/45 ★ J5 4126-793
Antibiotic 49A produced by Streptomyces fungi - with activity against Gram positive and Gram negative bacteria
CHUGAI PHARMACEUTICAL KK 17.03.78-JA-029824
B02 (02.10.79) A61k-31/41 C07d-491/08 C12d-09/14

Novel antibiotic No. 49A substance has formula (I). It is prepd. by culturing No. 49A substance-producing fungi of the Streptomyces genus in nutrient medium e.g. Streptomyces sp. strain No. 49



separated out from soil at Tama city of Tokyo capital. The fungi strain is deposited as ATCC No. 31386 and FERM-P No. 400.

The antibiotic has strong antibacterial power against a wide range of Gram positive and Gram negative bacteria. 17. 3. 78 as 029824 (9pp69)

NIRA ★ D16 81754B/45 ★ J5 4127-194
Antithrombotic material prodn. - by treating carrier having functional gp. with soln. contg. urokinase
UNITIKA KK 24.03.78-JA-034511
B04 P34 (02.10.79) A61m-01/03

A carrier with a reactive functional gp. having covalent bondability is treated with a soln. contg. urokinase for fixing the urokinase to the carrier. The amt. of the urokinase in the soln. is 20 to 450 IU per mlit. of the soln.

The material of the carrier may be composed of powder, gel, tube, staple, filament, nonwoven fabric, sponge, cloth, knit, film, sheet, woven fabric or hollow thread. Reactive functional gp. having covalent bondability such as carboxyl gp., amino gp., diazonium gp., epoxy gp., isocyanate gp., formyl gp. and chloroformyl gp. is applied to the material. 24. 3. 78 as 034511 (3pp2)

AMAN D16 55869V/31 = J7 9032-068
Stachyose decomposing enzyme - from aspergillus inuii IAM 2268 cultured on wheat bran medium and corn steep liquor
AMANO SEIYAKU KK (AMAO) 18.07.72-JA-071239
(11.10.79) *J49030-586 + C12d-13/10

High yield of stachyose decomposing enzyme (I) was produced by a microbe cultured on a wheat bran medium contg. 10-40% corn steep liquor (II) and other necessary nutrients. Aspergillus inuii IAM 2268 was cultured on a medium prepd. from 1 kg. wheat bran with added 600 ml. soln. of (II) (200 ml. liq. (II) was adjusted to pH 6.0 and made up to 600 ml. with H₂O) at 30° for 4 days.

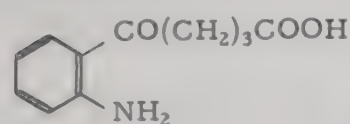
The mould bran was extd. with 5 l. H₂O. The extract was added with 3 l. EtOH and the ppte. appeared was removed. By addn. of 12 l. EtOH to the supernatant and keeping it at low temp. for 2 hrs. ppte. prepared; 24.8 g. of (I) with specific activity of 33.2 units/g. was obtd. (I) was mixt. of invertase and α-galactosidase, and had optimum pH 4.5-5.0 at temp. ~50°. 18. 7. 72 as 071239. C12d 13/10 (11.10.79) AMANO SEIYAKU CO., LTD. (4pp) (J49030586)

RHON D16 31257T/20 = J7 9032-069
Proteolytic enzyme 25048 rp - prepn by streptomyces nebulosus aerobic culture and use in bread and detergents
RHONE POULENC SA 30.10.70-FR-039202
(D11 D25) (11.10.79) *DT2154-031 C12d-13/10 + A21d-08/04 C11d-03/38 C11d-07/42

protein material, slightly soluble in conc. solns. of neutral salts and in aq. alcoholic or aq. acetone mixts. and insoluble in anhydrous alcohols and ketones, has max. activity on casein at pH 8 at 37-65°C and is inactivated at 75°C in 6 mins., hydrolyses more peptide bonds than trypsin in casein and has only slight esterolytic activity on the ethyl esters of benzoyl arginine or acetyl trypsin.

It is pref. prepd. by aerobic culture of Streptomyces nebulosus DS 14579 (NRRL 3864) in a nutrient medium contg. easily assimilated C- and N-sources until an appreciable amt. enzyme is collected and sepd., and used in detergent mixts. and as auxiliary in bread, biscuit and rusk mfr. pref. in 0.005-99wt. % concn. together with diluents, more pref. in 1-10wt. % concn. together with a carbohydrate or a mineral salt. 30.10.71 as 086718 (clg. 30.10.70-FR-039202) C12d 13/10; A21d 8/04; C11d 3/386; 7/42 (11.10.79) RHONE-POULENC SA. (11pp) (J47011992)

FUJI D16 14257V/08 = J7 9032-071
Ovalic acid for promoting rice root growth - prepd by culturing Pseudomonas ovalis in carbazole-contg medium
FUJISAWA PHARM KK 07.03.72-JA-023750
C03 H04 (11.10.79) *J48091-277 + C12d-01/02
Ovalic acid (I):



(I)

a novel substance stimulating the growth of rice root, is produced by a new isolate identified as Pseudomonas ovalis UB-1701 (II; FERM-P 1340) cultured in a medium contg. carbazole.

In an example, (I) was extd. from the culture filtrate with EtOAc and purified with silica gel chromatography eluted with a mixt. of CH₂Cl₂ and EtOH. Structures of (I) was deduced from element anal. m. pt. (124-5°) mol. wt. (207), UV and IR absorption and NMR spectra. Esters of (I) having the same effects as (I) were prepd. with halogenating reagents, alcohols, sulphate esters, or disazo cpds. (II) was cultured by shaking in a medium contg. carbazole 10 g., normal paraffins (11-18C) 5 ml. Na₂HPO₄ 12 H₂O 9.5, KH₂PO₄ 1.4, MgCl₂·6H₂O 0.2, FeSO₄·7H₂O 0.1, and meat extract 1 g. in 1 l. H₂O at 30°C for 3 days. 7.3.72 as 023750. C12d 1/02 (11.10.79) FUJISAWA PHARM. CO., LTD. (6pp) (J48091277)

HAYB D16 55317U/38 = J7 9032-073
Water-sol derivs of vitamin p prepd from rutin
HAYASHIHARA SEIBUTS 14.10.71-JA-080553
B02 (11.10.79) *J48044-260 + C12d-05

Rutin (I) or esculin was treated with hydrolysed starch and treated with a transglycosylase to give title prods.

In an example, 1 g. (I) was treated with 30 g. dextrin (mean degree of polymerisation 10) in 900 ml. H₂O and the mixt. heated 30 hrs. at 50° at pH 3 with a transglycosylase prepd. from Bacillus macerans IFO 3490 to give a mixt. of (I), rutin glucoside, rutin maltoside, and rutin maltotrioxide as well as others. 14.10.71 as 080553. C12d 5/00 (11.10.79) HAYASHIHARA SEIBUTSU KAGAKU KENKYUSHO (6pp) (J48044260)

FUJI D16 14259V/08 = J7 9032-074
3-(2-(3-oxo)indoliny) propionic acid prepn - from Pseudomonas ovalis UB-1701 (FERM-P 1340)

FUJISAWA YAKUHIN KO 07.03.72-JA-023749
B02 C02 H04 (11.10.79) *J48091-279 + C07d-215/38 C12d-13
Title acid (I) which stimulates growth of rice plants is produced from title culture in a medium contg. carbazole. (I) is extd. with EtOAc and purified by silica gel chromatography eluted with a mixt. of CHCl₃ and Et₂O. 7.3.72 as 023749. C12d 13/00; C07d 215/38 (11.10.79) FUJISAWA YAKUHIN CO., LTD. (6pp) (J48091279)

KOJK D16 57813W/35 = J7 9032-075
Extracting protein from microbial cell - by heating with dil. alkaline soln.

KOJIN KK 17.08.73-JA-091697
E37 (11.10.79) *J50042-096 + C12d-13/06

In an example, 10 kg. fresh baker's yeast was suspended in 200 l. water and the suspension was added with 600 g. NaOH (0.075N). Protein was extd. by stirring at 95° for 2 hrs. and pptd. from the extract at pH 4.5. The protein was defatted with 80 l. EtOH, and spray-dried to give a yield of 5.3 kg. The protein was dissolved in 34 l. water at 1.5% and the soln. was added with 1.2 kg. NaCl and heated at 90° for 5 mins. Good quality of protein gel was obtd. by standing overnight. 17.8.73 as 091697. C12d 13/06 (11.10.79) KOJIN KK (3pp) (J50042096)

HIGA- D16 58417Y/33 = J7 9032-077
Seishu rice liquor prepn. - using powder scraped from surface of rice grains, and refined sugar soln.
HIGASHIKOMA GIJUTSU 25.12.75-JA-154108
(11.10.79) *J52079-088 C12g-03/02

Prepn. of seishu (Japanese liquor prepd. from boiled rice), comprises adding refined sugar soln. of D.E. 50-95 in the last stage of fermentation, which is carried out by hydrolysis of rice malt with the addition of liquefying amylase to shiro-nuka (powder scraped off from the surface of rice grain. About 20% of rice grain is scraped off as 'shiro-nika' generally for mfr. of seishu).

Yield of seishu is increased by using shiro-nuka as raw material. The saccharified soln. of shiro-nuka, refined by removing impurities in it, contains glucose as principal component, disaccharides such as maltose and water-soluble oligosaccharides having high mol. wts., and gives good sweetness to seishu. 25.12.75 as 154108. C12g 3/02 (11.10.79) HIGASHIKOMA GIJUTSU (4pp) (J52079088)

REGC D16 62235T/39 = J7 9032-358
D-vanillylmandelic acid determination in biological sample - - by specific enzymic degradation to vanillyl glyoxylate/vanillin
UNIV OF CALIFORNIA 19.03.71-US-126295

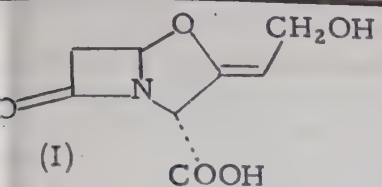
B04 R16 (13.10.79) *BE-780-875 G01n-31/14 G01n-33/16
In the title process, the acid is degraded by an enzyme prepd. from Pseudomonas putida A and the vanillin glyoxylate/vanillin concn. measured by UV spectroscopy or, pref. by fluorimetry after treatment with 1,2-diaminonaphthalene. L-Mandelic acid may also be sepd. from mixts. of D- and L-forms. 21.3.72 as 027554 (clg. 19.3.71-US-126295) G01n 33/16, 31/14 (13.10.79) UNIVERSITY OF CALIFORNIA (6pp) (J47033692)

TOXN D16 74819V/43 = J7 9032-436
Semipermeable pharmaceutical microcapsules - made from vinyl polymers contg. gastric or intestine soluble adducts
TOYO JOZO KK (TOYO) 13.05.72-JA-047342
A97 (15.10.79) *J49007-170 + A61k-09/50 B01j-13/02 C12k-01/08

Semipermeable microcapsules were prepd. An organic solvent soln. of film-forming cpds., such as styrene, vinyl chloride and acrylonitrile, contg. >1 poly(alkylene glycol), nonionic surfactants, gastric and intestine soluble polymers was homogenised with an aq. suspension of the materials to be encapsulated such as dried bacterial cells and enzyme preps.

In an example, vinyl chloride-vinyl acetate copolymer was dissolved in CH₂Cl₂ and to this was added Dishome CA-220 (a poly(alkylene glycol) deriv.). The soln. was mixed with an aq. suspension of dried Acromobacter cells and to this gelatin was added. Evapn. of solvents yielded semipermeable microcapsules of Acromobacter cells, having high enzyme activity. 13.5.72 as 047342. B01j 13/02; A61k 9/50; C12k 1/08 (15.10.79) TOYO JOZO CO., LTD. (4pp) (J49007170)

BEEC D16 72840W/44 = SU -648-117
Clavulanic acid and derivs. - as antibacterials and beta-lactamase inhibitors prepd. from Streptomyces clavuligerus
BEECHAM GROUP LTD 20.04.74-GB-017410
B02 C02 (20.02.79) *DT2517-316 + C12d-13
Clavulanic acid of formula (I) and its salts and esters have been prepared. (I) is prepared by cultivating Streptomyces clavuligerus esp.



(I) ATCC 27064. (I) has antibacterial activity and inhibits β -lactamase so synergises the activity of penicillins and cephalosporins against β -lactamase synthesising bacteria. It may be used in human or veterinary medicine. Cole, M., Haworth, T. T., Riding, C. et al. Bul. 6/15.2.79. 18.4.75. as 129801 (11pp)

BEKI ★ **D16** 82152B/45 ★SU -648-601
Aerodynamic foam breaking unit - uses spiral gas flow in cylindrical chamber with axial inlet for foam, used in chemical and microbiological industry

BELOUSS KIROV TECHN INS 18.03.77-SU-464470
J01 (25.02.79) B01d-19/02 C12b-01/18

The efficiency of foam breaking is enhanced by swirling the gas stream in the cylindrical chamber when flowing at a velocity of 15-30 m/sec. The foam is admitted along the axis of the cylindrical chamber in the depression zone formed by the gas stream.

The bubbles of the foam subject to pressure gradient and to centrifugal forces exceeding the gravitational pull impact the wall of the chamber. This breaks up the bubbles and the separated fluid is thrown to the wall where it is entrained by the gas stream.

Prudnikov, F.V., Markov, V.A., Vaitekhovich, P.E. et al. Bul. 7/25.2.79. 18.3.77. as 464470 (2pp89)

PETR- **D16** 36376Y/21 =SU -648-603
Biogenic material and residual hydrocarbons removal from biomasses - useful as feedstuffs and in the prodn. of protein isolates, by extraction with a mixt. of polar and nonpolar solvents
VEB PETROLCHEMISCHE (BIED/) 19.03.76-DL-191929
C03 H04 (D13) (25.02.79) *DL-124-057 C12c-11/26 +C12b-01/10

Removal is by extraction with a solvent mixt. of polar and non-polar substances. The non-polar solvent is a naphtha comprising mainly normal and branched (aliph)hydrocarbons having a b.pt. of $\leq 140^\circ\text{C}$. The polar solvent is methanol and the naphtha:methanol wt. ratio is 99-40:1-60 (pref. 95-60:5-40).

Biedermann, W., Heinze, G., Beck, D. et al. Bul. 7/25.2.79. 25.2.77. as 455501 (3pp)

LEFO = ★ **D16** 82154B/45 ★SU -648-604
Microbiological citric acid prodn. - by fermenting carbohydrate using *Aspergillus niger* culture and air passed through polymeric fibres impregnated with antimicrobial surfactant
LENGD FOOD IND (KIRO) 15.09.76-SU-407026
E17 (25.02.79) C12d-01/04

The yield of citric acid is increased by aeration of *Aspergillus niger* culture medium with air passed through ion-exchange fibres based on polyvinyl alcohol or polyacrylonitrile treated with surface-active substances having microbicidal properties with respect to microbes antagonistic to the producers of citric acid.

The content of this antimicrobial substance in the fibrous material is ≤ 30 wt. %.

Fishkova, E.S., Gorbataya, E.I., Goma, I.G. et al. Bul. 7/25.2.79. 15.9.76. as 407026 (4pp70)

FERM = ★ **D16** 82155B/45 ★SU -648-605
Microbiological hydrolysis of vegetable materials - using microbial strain producing cellulolytic and opt. amylolytic enzyme, used in prodn. of alcohol fodder, feed grade yeast biomass etc.
FERMENTATION PRODS (AUBO=) 12.10.77-SU-532925
(25.02.79) C12d-13/02

This process is intensified by using as enzyme sources higher basidial fungi *Laetiporus* Mur or *Lactiporus* sulphureus B.6 or B-7.

The hydrolysate is enriched in biologically active components, e.g. vitamins B and C, and triterpenic acids etc.

Strains *Laetiporus* sulphureus B-6 and B-7 can be used with addn. of amylolytic enzymes producers pref. *Aspergillus oryzae*, *Aspergillus betatae* or malt.

The products can be used for the prodn. of ethyl alcohol, compound fodders, fodder yeasts biomass and other microorganisms. The process is simplified because fine comminuting is not necessary.

Yarovenko, V.L., Danilyak, N.I., Melnichuk, G.G. et al. Bul. 7/25.2.79. 12.10.77. as 532925 (2pp70)

GPOL = ★ **D16** 82156B/45 ★SU -648-606
Vegetable food material e.g. grapes, crusher - has counter-rotating elliptical cross/section rollers with controlled ratio of axes for better particle grip

GEOR POLY (CHAI=) 25.04.77-SU-481994

P41 (D14) (25.02.79) A23f-03 B02c-04/02 C12g-01/02

The crusher for grinding grapes, tea leaves or other vegetable material intensifies the process using rollers with an elliptical cross section. The ratio of ellipse axes is 1.6-1.8, and it ensures a greater angle of pick-up, as well as permits one to grip particles which cannot be nipped by cylindrical rollers, except by altering the clearance between the rollers.

The grapes from the hopper reach the elliptical rollers revolving in opposite direction to each other. The elliptical shape ensures that grapes are lifted by the outer part and pressed by the lower part after the preliminary loosening up.

Zaldastanishvili, N.K., Tskhakaya, V.P., Kintsurashvili, V.S. Bul. 7/25.2.79. 25.4.77. as 481994 (2pp89)

LENU = ★ **D16** 82157B/45 ★SU -648-607
detection of toxic chemicals damaging genetic cell materials - by carrying out comparative microbial growth tests using two colour contrasting e.g. diploid and other yeast strains

LENGD NUCLEAR PHYS 11.05.77-SU-484382

B04 (25.02.79) C12k-01/02

Harming action of chemical substances on the genetic material of living cells can be revealed by observing the inhibiting effect of these substances on the growth of two different yeast strains.

The sensitivity of this method is improved by using one diploid strain and one tetraploid strain. The strains should be differently coloured. The tetraploid strain should be inapt to reparation. Substances harming the genetic material of cells suppress predominantly the growth of the tetraploid strain.

Zakharov, I.A. Bul. 7/25.2.79. 11.5.77. as 484382 (2pp70)

KIFO = ★ **D16** 82330B/45 ★SU -649-744
Beer prodn. mash separator - has hollow shaft with water header connected to chambers bounded by trays and perforated discs

KIEV FOOD IND INST 18.07.77-SU-508696

(28.02.79) C12c-07/14

Intensified washing of mash in beer brewing, and efficient leaching of grains coupled with a reduced loss of extractable substances are ensured by the water header. The latter is housed inside the hollow shaft, while wash chambers for grains are formed by perforated discs below each tray. The chambers are connected to the header and exhibit a narrowing cross section towards the periphery.

The mash is pumped onto the filter discs with the first stage ensuring the sepn. of the main wort by the discs acting as a strainer. The second stage involves leaching by wash with hot water with wort discharged from trays through holes in rings and through the hollow shaft.

Polyakov, N.F., Peresunko, S.R., Kobzar, V.A. et al. Bul. 8/28.2.79. 18.7.77. as 508696 (3pp89)

USPI = ★ **D16** 82331B/45 ★SU -649-747
Rectified spirit prodn. unit - includes heaters of fermented mash distillate and water connected to distillation column condenser
UKR SPIRIT LIQUOR 01.09.76-SU-397991 (01.09.76-SU-402309)
(28.02.79) C12f-01/08

The quality and yield of rectified alcohol, are improved and heating losses minimised by using fermented mash separator and heater for both mash and water. The heater of mash distillate is connected to the condenser of the distillation column and to the stripping and purification columns.

The boiling chamber of the stripping column is linked to the feed tray of the rectification column, and the condenser of the distillation column is connected to the collector of the mash distillate.

The condenser of the stripping column is connected to the feed tray of the purification column via the collector

of the topping and forms a circulation loop with the lower part of the purification column. The condensers of the latter and of the rectification column are connected to the barometric condenser with a branch to the top tray of the purification column. The heater of the fermented mash is in series with the dephlegmator and is also connected to the distillation column through the ferment separator. Artyukhov, V.G., Balshin, M.S., Drogovoz, G.K. et al. Bul. 8/28.2.79. 1.9.76. as 397991 (3pp89)

EPID= ★ D16 82332B/45 ★SU-649-750
Faecal sample microbiological analysis - involves extrn. of microbial biomass before inoculation by aerosol, used in medical diagnosis
EPIDEMOLOGY MICROBI 18.01.77-SU-443602
B04 (28.02.79) C12k-01/04

The accuracy of the diagnostic microbiological analysis of human faecal sample is improved by removing the microbial mass from the sample prior to the inoculation. The latter is carried out with an aerosol with the specimen placed on a mesh in a bowl. The addn. of the physiological fluid is made in a ratio of 1:10.

Uniform suspension of stool is obtd. by shaking the specimen with the soln., and then placing the bowl in a centrifuge. Then the strainer with coarse particles is removed, and the rod is screwed in to remove the fluid over the sediment by pressing the piston. The amount of sediment is determined by the division of the syringe, or by weighing.

Vaitilavichus, A.I. Bul. 8/28.2.79. 18.1.77. as 443602 (4pp89)

ASBI= ★ D16 82333B/45 ★SU-649-752
Animal tissue cell culture propagator - has top trough inside and outside diameter smaller than in trough below it, used in viral prod. mfr.

AS USSR BIOLOG PHYS 17.03.77-SU-464063
B04 C03 (28.02.79) C12k-01/10

The damage to tissue cells grown in the unit is prevented by the distributor of culture fluid having a flow divider and a gravity-flow trough. The latter exhibits a ring shape with a convex surface facing the flow of the culture fluid, the inside and outside diameter of the trough at the top being smaller than that below it.

It is used in medicine or veterinary science for mfr. of virusological preps. utilising human or animal tissue cells.

Pankratov, V.P., Lezhnev, E.I. Bul. 8/28.2.79. 17.3.77. as 464063 (3pp89)

PHYS= ★ D16 82334B/45 ★SU-649-753
Regulator of pH for culture liquids and perfusates in medicine - has output from comparator to two time setters formed by switchable constant resistors in sequences

PHYSICS INST KIRENS 13.06.77-SU-495435
(28.02.79) C12k-01/10

The previous pH-regulator contains a sensor connected to a comparator and also an actuator. For holding the pH-value more accurately, two programmers are introduced along with time setters formed by switchable constant resistors arranged in ascending and descending sequence according to an antilogarithmic function. The proposed regulator is useful for culture liquids and perfusates of animal cells and organs in the microbiological industry and in medicine.

Samoilov, V.A. Bul. 8/28.2.79. 13.6.77. as 495435 (2pp840)

BUCA/ ★ D16 82362B/45 ★US 4172-446
Apparatus for collecting body fluids - with compressed enclosure expandable to draw in fluids

BUCA LO L 30.12.75-US-645380 (20.12.74-US-534893)
B04 P31 (30.10.79) A61b-10

Fluids are collected from a cavity of a human or animal body in an appts. which includes an enclosure shaped to fit within the cavity. The enclosure has a hollow interior closed off to the atmosphere via a one-way valve which allows ingress of the body fluid but prevents its egress.

A trigger device is operatively connected with the enclosure for automatically initiating the transfer of fluid from the body cavity to the enclosure after the enclosure is positioned in the cavity.

The appts. is used to collect samples of a body fluid. An additive such as a nutrient may be held in the enclosure and if desired culturing may take place in the body cavity within the enclosure. It may be used in vaginal testing or may include a magnet so that stomach fluid testing can take place and the enclosure recovered from the faeces. 30.12.75 as 645380 C.i.p. 3998211 (cf. 01696Y/1)(7pp295)

UYDE- ★ D16 82408B/45 ★US 4172-763
Bovine milk xanthine oxidase isolation and purification - by process which includes incubation with non ionic detergent and ultrafiltration

UNIV OF DELAWARE 15.06.77-US-806736
B04 (30.10.79) C07g-07/02

Xanthine oxidase (XO) from cows' milk is isolated and purified by incubating the milk in the presence of sodium salicylate, ethylenediaminetetraacetate and a phosphate buffer and then adding a non-ionic detergent to the milk and letting it incubate for a shorter period of time, reducing the temp. to stop incubation and adding sufficient ammonium sulphate to precipitate the caseins but not the XO, separating the caseins and other solids and adding sufficient ammonium sulphate to precipitate the XO, separating the red-brown precipitate, dissolving it in Tris/CaCl₂ buffer, storing the soln. at freezing or below for ≥15 hrs., thawing the mixture and removing the solid, filtering the liquid with an ultrafilter which will retain molecules of > 50,000 daltons, applying the concd. retained material on an equilibrated chromatographic column, eluting the column with a buffer soln., collecting the eluent in multiple fractions, testing these for XO activity and combining the active ones, and continuing this process with chromatographic columns of varying characteristics until the desired XO purity is obtained.

XO catalyses the oxidation of many purines, pteridines, aldehydes and other heterocyclic cpds. by a number of electron acceptors such as oxygen, NADH, dyes, ferricyanides and cytochrome C. The presence of XO in excess or its absence, inhibition or stimulation reflects on the biochemistry of normal or abnormal cellular activity. Also, XO in bovine milk is a factor in the development of atherosclerosis in humans. The production of high purity XO will stimulate research in these fields and may lead to clinical and industrial applications. 15.6.77 as 806736 (5pp476)

ANVR D16 42583A/24 =US 4172-764
Hybrid yeast strains prepd. from two parent strains - by removing cell walls; fusing, pref. in presence of polyethylene glycol; reforming walls; and developing

AGENCE NAT VALORISATION 21.09.76-FR-028360
A97 (30.10.79) *FR2364-968 C12k-01/02

Hybrid or recombinant (H) yeast strains are produced from parent P1 and P2 strains by removing the walls from the cells of auxotrophic mutant strains AP1 and AP2 having distinct auxotrophies and derived from the parent strains.

The protoplasts obtd. are then fused, and the prods. of fusion placed in a medium promoting the regeneration of the walls. The strains obtd. are cultured on a medium on which the auxotrophic mutant strains cannot develop, and the strains of hybrid or recombinant yeasts able to grow under these conditions stabilised to produce a uninucleated strain having the genetic information of its parent strains.

The strains obtd. in the process are used for preparing yeast proteins. 20.9.77 as 834937 (5pp931)

TECD ★ D16 82409B/45 ★US 4172-765
Rapid determ. of pancreatic and salivary alpha-amylase - with high sensitivity after enzyme treatments

TECHNICON INSTRUMEN 14.09.77-US-833318
B04 J04 R16 (30.10.79) G01n-31/14

Pancreatic and salivary α-amylases in an aq. sample also contg. glucose are determined by first passing the sample through immobilised reagents (A) to react with and to remove the glucose, and then through an immobilised starch reagent (B) so that the α-amylases react quantitatively to produce oligosaccharides (I); and passing through an immobilised reagent (C) to react with (II) and to produce a glucose reaction prod. (II). The sample is finally passed through an immobilised reagent (D) to react with (II) to generate H₂O₂, which is detected and related to the α-amylases in the sample.

α -Amylases in blood serum, urine etc. are determined rapidly and quantitatively with high specificity and sensitivity, esp. in the diagnosis of pancreatitis.

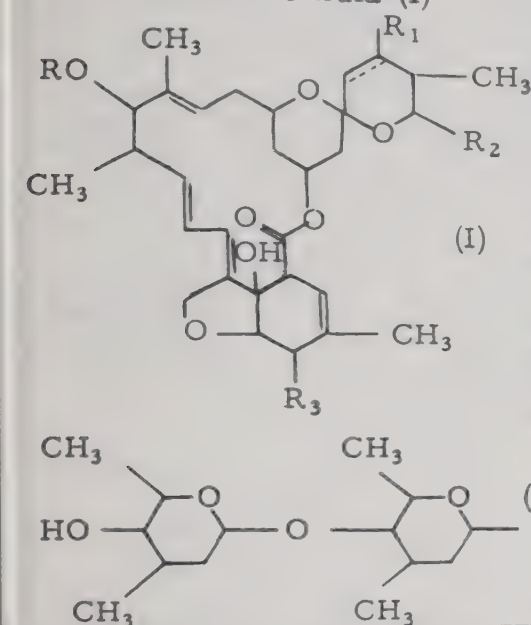
The aq. sample may first be diluted with aq. buffer. (A) are pref. co-immobilised glucose oxidase and catalase, opt. followed by immobilised catalase. (B) is prepd. from a starch having a high in amylose content, e.g. potato starch (C) may be derived from glucoamylase or maltase. (II) is pref. a 2-6 monomer of glucose. (D) is pref. derived from glucose oxidase. 14.9.77 as 833318 (18pp1248)

MERI ★ D16 82501B/45 ★US 4172-940
Isolation and purificn. of C-076 - produced by micro-organism *Streptomyces avermitilis* using activated alumina and activated carbon beds

MERCK & CO INC 03.10.77-US-838693
B02 (30.10.79) C07h-17/08

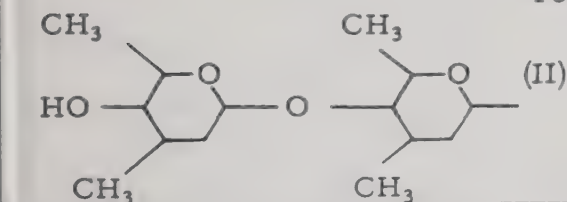
A method for removing impurities from C-076 non-polar solvent solns. comprises passing the soln. through a single column contg. both a bed of acid washed activated alumina and a bed of activated carbon followed by elution with a non polar solvent selected from methylene chloride, chloroform, benzene or hexane contg. 1-10% isopropanol.

C-076 is of formula (I)



(where R is α -L-oleandro-syl- α -L-oleandroside of formula (II); the dotted line is an opt. double bond; R₁ is OH, and is present only when the bond is single; R₂ is propyl or butyl; and R₃ is MeO or OH).

(I) have parasitocidal activity. They are obtd. by growing under controlled conditions, strains of microorganisms. of *Streptomyces avermitilis*. 3.10.77 as 838693 (5pp954)



SVSO ★ D16 82524B/45 ★WP 7900-875
Modification of enzyme characteristics - by using a soluble complex with substance having hydrophobic and functional part

SVENSKA SOCKERFAB AB (MART/) 03.04.78-SW-003732
B04 (01.11.79) C07g-07/02

D/S: N(DK, DT, GB, JA, US).

Enzymatic process is effected by using an enzyme in the form of a soluble complex. The enzyme is bound to a substance having a hydrophobic part and a functional part for modifying the kinetic productivity characteristics of the enzyme.

Enzymes possessing different types of catalytic activity can have most functional gps. introduced by a mild technique that is simple and economic but is sufficiently effective to give adequate binding of the substance to the enzyme. The enzymes are used in washing agents, in tanning, in pharmaceuticals prodn., in analytical procedures, etc.

BRBL D17 72515W/44 =DS 2436-044
Massecuite centrifuge for sugar refinery - has rigidly mounted outer case with independent, resilient suspension for basket and drive assembly

BRAUNSCHWEIG MASCH 26.07.74-DT-436044
P41 (31.10.79) *BE-829-514 B04b-07/02

A continuous centrifuge with a perforated basket has four antivibration mountings which support not only the basket and inner housing but also the drive bracket with motor which is rigidly joined to the inner housing by a horizontal

2.4.79 as SW0081 (24pp1248)

(E)ISR: SW7808308; US4006059; 1 Journal Reference.

SYNT

D16

78496B/43 =WP 7900-882

Direct immunoassay method for ligand or receptor determ. - using solid particles as carrier for ligand or receptor

SYVA CO 24.11.78-US-964099 (05.04.78-US-893650)

A96 B04 J04 R16 (01.11.79) *NL7902-663 C07h-11/04 C12q-01/66 G01n-33/16

D/S: N(BR, JA, SW) + E(CH, DT, FR, GB).

(A) Determination of a component of a specifically binding pair comprising a ligand (e.g. an antigen) and its homologous receptor (e.g. antibody) uses a test system comprising

(a) an aq. medium;

(b) uniformly dispersed solid particles to which a component of the ligand-receptor pair is coupled, forming a particle conjugate which creates around it a local environment different from the bulk medium;

(c) a signal-producing system capable of producing a measurable signal which depends on the extent to which the signal-producing system is present in the environment of the particle conjugate;

(d) a signal-indicator conjugate comprising at least one component of the signal-producing system coupled to a component of the ligand-receptor pair, whereby the amt. of signal-indicator conjugate bound to the particles is related to the amt. of analyte in the aq. medium.

If the analyte is a 1st receptor, the component coupled to the particles can be the homologous ligand or a receptor for the 1st receptor, and the component forming the signal-indicator conjugate can be the receptor for the 1st receptor or its homologous ligand.

The method comprises (1) contacting the sample with the aq. medium contg. (i) the particle conjugate, (ii) the signal-indicator conjugate, (iii) the homologous component of the ligand-receptor pair (if the analyte, particle conjugate and signal-indicator conjugate all comprise the same component of the ligand-receptor pair) and (iv) any other components of the signal-producing system; and (2) comparing the observed signal with a standard.

(B) Novel particle conjugates comprise at least one ligand mol. and at least one enzyme mol. covalently bonded to porous particles with a dia. of 50nm to 100 μ m. Other novel conjugates comprises a 1st enzyme and a component of a ligand-receptor pair coupled to a porous particle, to which is non-covalently bound (by ligand-receptor interaction) the other component labelled with a 2nd enzyme, such that the product formed by one of the enzymes is the substrate for the other.

(C) Phosphate-substd. glycosidyl ethers of umbelliferone and its derivs. are new.

No separation or segregation is required in the analysis. 2.4.79 as US0202(113pp367).

(E) ISR: US4134792; US4130462; US4118349; US3826613; US3652761; US3951748; US3169956; US3817837; US3852157; US4080264; US4104029.

See Also

D13 J5 4126794

D13 J5 4126795

D13 J7 9032070

D13 J7 9032078

D13 J7 9032079

D13 SU 648192

D13 US 4172899

D13 US 4172900

D14 SU 649600

D17 DT 2915872

D17 J7 9032076

D18 BE 876994

D23 J7 9032072

D17: SUGAR; STARCH

tube for the V-belt between motor pulley and basket shaft pulley. The entire outer housing which is used to collect and discharge the solid residue, complete with cover, is designed stationary and encloses the inner housing, leaving a recess for the horizontal tube.

This keeps the mass of the vibrating system to the minimum, in spite of large basket sizes. It permits a complete prefabrication of all parts and their separate transport to the site of assembly. 26.7.74 as 436044 (5pp39)

SUDC D17 12796Y/08 =DS 2545-111
Xylose recovery from nutshells - by treating with conc. then dil. alkali followed by acid hydrolysis

SUD-CHEMIE AG 08.10.75-DT-545111

E13(D13) (31.10.79) *BE-847-081 C13k-13

Process for the degradation of natural products containing xylan to produce xylose comprises digestion of the raw materials with alkali metal hydroxide solution, (1.5-1.6 mole/dm³), at 10-50°, followed by dilution (to a concn. of <0.75 mole/dm³) and further digestion at >60° (pref. up to reflux temp) until degradation is complete; the resulting solid is then subjected to hydrolysis with dilute mineral acid. Also, alkali of concn. 1.75-2.5 mole/dm³ can be used in the first stage.

Xylose is isolated for use as a nutrient and sweetening agent. 8.10.75 as 545111 (4pp047)

LENT-★ D17 80983B/45 ★DT 2817-884
Shredded sugar-beet drying - by contact with back-pressure turbine steam and using vapours in process

LENTJES F DAMPFKESS 24.04.78-DT-817884

C03 Q76 (D13) (31.10.79) F26b-03/04

Shredded sugar beet roots are dried in the sugar refineries before use as animal feeding stuff by indirect contact with steam in tubes which are welded together to a revolving paddle mechanism. The drying vapours are condensed and used in the process; the condensed heating steam serves as feed water for a boiler.

This utilises the heat in the drying vapours and eliminates pollution of the environment by the vapour emission. 24.4.78 as 817884 (17pp39)

TOYJ ★ D17 81095B/45 ★DT 2915-872
Allose-contg. polysaccharide produced by pseudomonas viscogena - useful as stabilisers, emulsifiers and quality improvers in food, pharmaceuticals, cosmetics etc., and as flocculation additives

TOYO SODA MFG KK 05.12.78-JA-149715 (20.04.78-JA-045918)

(D13 D15 D16) (31.10.79) C12d-13/04 C12k-03

New polysaccharides contain allose as the sugar component. Preferred polysaccharides additionally contain galactose, glucose, mannose, and glucuronic acid as sugar components, have a molecular weight of ca. 1×10^4 to ca. 1×10^7 , and are the extracellular product of Pseudomonas viscogena FERM-P 3811, ATCC 31504.

The polysaccharides are useful as viscous materials, stabilisers, emulsifiers, quality-improving agents, etc., in the same way as dextran, xanthan gum, plant mucilage etc. They can be used in the production of foods, pharmaceuticals, cosmetics, etc. The polysaccharides can also be used as formable raw materials for biodegradable films, and as flocculation additives (since they form gels in aq. soln. in the presence of a calcium salt). 19.4.79 as 915872 (33pp280)

NANS- D17 44406Y/25 =J7 9032-054
Clarifying raw sugar soln. - by mixing with aq. chitosan soln. to aggregate particles

NANSEI TOGYO KK 21.10.75-JA-125887

(11.10.79) *J52057-342 C13d-03

Suspensoids comprise (e.g. organic colloids, inorganic colloids, cellulose, slaked lime and other fine particles). Flocculant is added to the soln. to sediment the aggregates and obtain a clear supernatant which is opt. filtered.

Chitosan obtd. by deacetylising chitin and though insoluble in water, is soluble in acid-forming salts. For example, crab shell is demineralised, deproteinised, washed with water and dried, and obtd. chitin is deacetylsed, washed with water and dried. Chitosan is dissolved in water in the presence of acid and the soln. is added 1-100 ppm. pref. 2-50 ppm. (solid wt./vol. of raw sugar soln.).

Using chitosan large clarifier and filter station are unnecessary. Nonsugar content in raw sugar soln. can be decreased and the recovery of sugar can be increased. Excellent clarity is obtd. and addn. of lime to the top layer before filtration is unnecessary. Because of good filtrability the amt. of washing water for the filter cake can be decreased and steam consumption can be saved. Because of good filtrability the interval of replacing filter cloth can be prolonged. 21.10.75 as 125887. C13d 3/00 (11.10.79) NANSEI TOGYO KK (4pp) (J52057342)

TSUB D17 66303W/40 =J7 9032-076
High viscosity polysaccharides prepn. - by extracting yeast with hot water, treating with glucanase and re-extracting

KUMIAI CHEM IND KK 14.09.73-JA-103285

(D16) (11.10.79) *J50052-285 +C12d-13/04

Low viscous polysaccharides are removed from yeast cells by repeated extns. with hot water. The yeast cells are briefly treated with a yeast glucanase and again extd. with hot water obtaining high viscous polysaccharides.

In an example, 30g. baker's yeast extd. 3 times with hot water, was suspended in 200 ml. of 0.05% soln. of yeast glucanase (52 units/mg.) of Fusarium oxysporum and reacted at 40°C, for 10 mins. The enzyme soln. was removed by centrifugation and the yeast cells washed with water and boiled with 200 ml. water for 10 mins. High viscous polysaccharides were pptd. from the extract with MeOH yielding 2.8 g. No polysaccharide was extd. from the cells without the enzyme treatment. 14.9.73 as 103285. C12d 13/04 (11.10.79) KUMIAI CHEM. IND. KK (3pp) (J50052285)

KIFO=★ D17 82153B/45 ★SU-648-602
Microbiological nutrient medium prodn. - by thermal treatment of molasses in presence of lactic acid, useful in ethyl and butyl alcohol(s), acetone and baker's yeasts etc. mfr.

KIEV FOOD IND TECHN 21.11.77-SU-546485

(25.02.79) C12b-03/16

Molasses designated are subjected to thermal treatment at 85-140°C.

This method is improved by preliminarily introducing into the molasses 0.1-0.2 wt. % of lactic acid to inhibit melanoidin forming reaction thermal description of sugars and loss of biologically active materials accelerating the microbial growth.

Shvets, V.N., Savchuk, M.Ya. Bul. 7/25.2.79.

21.11.77. as 546485 (2pp70)

MOFO=★ D17 82159B/45 ★SU-648-609
Clarification of sugar-contg. soln. e.g. sugar beet extract - includes addn. of modified starch soln. contg. tri:sodium phosphate after sedimentation of first stage extract

MOSC FOOD IND TECHN 27.10.77-SU-538687

(25.02.79) C13d-03

Sugar-contg. solns. can be clarified and decolourised by sedimentation using a modified starch as a flocculant.

The sedimentation is accelerated, and the clarification degree is enhanced by introducing the modified starch in mixt. with Na₃PO₄ pref. in a ratio of 1:1 to 1:2. The concn. of Na₃PO₄ is pref. 0.5-10 wt. %. This method is suitable for the clarification of the first-saturation juices in the sugar prodn.

Bugaenko, I.F., Krylova, V.V. Bul. 7/25.2.79. 27.10.77 as 538687 (2pp70)

See Also

D13 DS 2618146

D14 SU 648608

D18: SKINS; HIDES; LEATHER; TOBACCO

BRWI ★ D18 80848B/45 ★BE-876-994
Treating tobacco to reduce the nitrate content - by contacting with aq. medium contg. denitrifying bacteria
BROWN & WILLIAMSON CORP 15.06.78-US-916323
P15 (D16) (01.10.79) A24b

The process comprises contacting the tobacco with an aq. medium contg. a microorganism which reduces the nitrate content for 18 hrs. at 5-37°C. A process for preparing an aq. medium contg. bacteria used for reducing the nitrate content of a substance comprises preparing an at least 5% nutrient agar soln., adding 0.5-1% of the nitrate contg. cpd., sterilising the soln. at a temp. $\geq 121^\circ\text{C}$. and a pressure of ≥ 1.03 bars. for ≥ 15 mins., then adding a culture of denitrifying *Micrococcus* and incubating at 20-40°C. for 3-5 days.

A further embodiment of the tobacco treating process comprises mixing the tobacco in an aq. soln., removing the tobacco to leave an extract, adding a denitrifying *Micrococcus* culture, incubating, and adding the incubated culture to the tobacco. Another embodiment of this process comprises passing the extract through a semipermeable membrane before treatment.

The treated tobacco on smoking gives reduced emission of hydrocyanic acid and nitrogen oxides without loss of taste, flavour etc. 14.6.79 as 876994 (26pp597)

DAIL D18 19774V/11 =DS 2341-686
Cellulose acetate fibre cigarette filter - treated with 1,3-butylene glycol diacetate, dipropionate and/or dibutyrate plasticiser
DAICEL KK 17.08.72-JA-082343

A88 E17 F04 P15 (A11) (31.10.79) *DT2341-686 A24b-15/02
A cigarette filter (I) comprising cellulose acetate fibres (II) is produced by opening a skein (III) comprising (II); 1-20 wt. %, based on the wt. of (II), of a plasticizer (IV) is added to the opened (III); and the opened (III) so treated is formulated to produce (I).

(IV) used contains a diacetate-, dipropionate- and/or dibutyrate ester of 1,3-butylene glycol component. Pref. 3-10 wt. % of (IV) is added, based on the wt. of (II).

(I) hardens rapidly and adequately without giving off any disturbing taste when smoking. 17.08.73 as 341686(4pp481)

FARH D18 27532Y/16 =DS 2660-142
Cigarette filter contg. modified paper - which is impregnated with isocyanate or fatty acid or coated with insolubilised cellulose ether
BE080477)

HOECHST AG 10.10.75-CH-013171
A88 F09 P15 (A11 A82) (31.10.79) *DT2644-056 A24b-15/02
The parent patent describes a cigarette filter comprising at least in part, modified cellulose (I) contg. cellulose modified with an organic isocyanate or with higher molecular fatty acid gps.

The novelty is that (I) is modified paper. The filter has an improved combination of filter carrier material and active material. 30.9.76 as 660142 Add to 2559542 Div. ex 2644056 (2pp481)

PLAC ★ D18 81021B/45 ★DT 2818-608
Filter absorbing apolar organic cpds. from gases - esp. in cigarette smoking, contains phosphoric acid, phosphate ester or phosphatidyl gp.-contg. absorbent
MAX PLANCK GES WISSENSCH 27.04.78-DT-818608
E11 J01 (31.10.79) B01d-53/14

Filter for removing apolar organic substances from gases, e.g. air, contains as absorbent, ≥ 1 cpd. having formula $\text{X}_1\text{-CH}_2\text{-CHX}_2\text{-CH}_2\text{-X}_3$ (I) (where one of X_1 , X_2 or X_3 is a phosphoric acid-, phosphate ester or phosphatidyl gp. and two of X_1 , X_2 or X_3 are satd. fatty acid ester or satd. 8-20C alcohol ether gps.).

The filters are used (a) for tobacco goods, partic. cigarettes, (b) for collecting industrial waste gases, and (c) in kitchens. (I) can form thin surface films having high absorption for apolar organic substances, partic. cpds. normally enriched in lung tissue; have low phase transition temps.; resist oxidn. and are non-toxic. 27.4.78 as 818608 (13pp200).

PHIM ★ D18 81097B/45 ★DT 2916-032
Humate-dyed, tobacco paper - is treated with magnesium sulphate to insolubilise humate and reduce carbon monoxide generation on pyrolysis

PHILIP MORRIS INC 24.04.78-US-899128
E24 F09 (31.10.79) D21h-05/16

When dyeing tobacco paper with a humic acid salt soln., pref. of pH 7-8, the humate is fixed by treating the paper with sufficient MgSO_4 soln. to insolubilise the humate on paper and render it colour-fast.

Fixing with MgSO_4 soln. achieves desired brown colour intensity and reduces generation of gas phase components, e.g. CO, on smoking. CO generation is lower than that obtd. on fixing with CaCl_2 or $\text{Mg}(\text{OAc})_2$.

Pref. the MgSO_4 soln. has a concn. of 1-5.5 wt. %; the humate is esp. Na humate; and acid-soluble material is pref. removed before dyeing, by treating the humate soln. at pH 5-7. 20.4.79 as 916032 (14pp200)

DAIL ★ D18 81098B/45 ★DT 2916-062
Cellulose acetate fibres cigarette filter - comprising fibres aligned at right angles to filter axis and having dissimilar denier values

DAICEL KK 22.04.78-JA-048245
A88 P15 (A11) (31.10.79) A24d-01/04

Cigarette filter comprises a bundle or strand of cellulose acetate fibres of ≥ 2 different denier values which are randomly distributed perpendicularly to the longitudinal axis of the filter.

The number average of the fibre-deniers is ≤ 4 . Ratio of wt. average of fibre denier : number average denier is ≥ 1.03 . The fibres have a number average of the fibre denier ≤ 3.5 den. Difference in denier values is ≥ 3 . 20.4.79 as 916062 (23pp267)

JOBB D18 70476X/38 =GB 1555-252
Cigarette filter manufacturing process - uses cloth with crimped absorbent layer made rigid locally before cutting out

SOC JOB ANC ETAB BARDOU (JOBB-) 19.06.75-FR-019233
F07 P15 + P72 (07.11.79) *BE-841-116 A24c-05/50

Cylindrical cigarette filter is formed from a stack of transversely curved ribbons made of absorbent fibrous material. Each ribbon has a series of longitudinal embossed ridges which are uniformly repeated down the length.

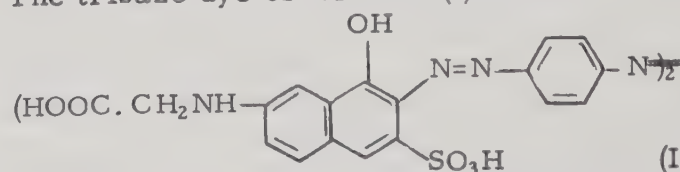
Adjacent ribbon sections are arranged so that the embossed portion of one ribbon contacts both the embossed and intact portions of the next ribbon.

The filters can be prepd. using two relatively long spools of material thus allowing longer intervals between spool changing than systems using spools of wadding. Prodn. speeds can also be increased. 21.6.76 as 025685 (16pp397).

AZIC ★ D18 81200B/45 ★GB 2019-866
Soluble black trisazo dye for leather and polyamide - prepd. from di:amino-azobenzene and N carboxymethyl-gamma acid

AZIENDE COLORI NAZIONALI 28.04.79-IT-022790
A60 E21 F06 (A23) (07.11.79) C09b-35/36 D06p-03/32

The trisazo dye of formula (I) is new.



It is prepd. by tetrazotising 4,4'-diamino-azobenzene (II) then coupling

to 2-carboxymethylamino-8-naphthol-6-sulphonic acid (III) in alkaline medium.

Used for dyeing natural or synthetic polyamides and esp. leather, partic. where successive retanning is required. On leather (I) gives reddish-black shades of good penetration and fastness to light and washing. It is prepd. without using toxic benzidine. 25.4.79 as 014490 (3pp1251)

PLOT/ ★ D18 82077B/45 ★SU -648-522
Prod'n. of chromium sulphate for aq. waste and skin treatment - by reducing alkali metal bi:chromate in presence of sulphuric acid using activated carbon

PLOTNIKOV N I 26.01.76-SU-316922

E31 (D15) (25.02.79) C01g-37/08 C14c-03/06

Cr sulphate, used in the leather and tanning industries and also in removing hexavalent Cr from aq. effluent streams, is obtd. by reducing an alkali metal bichromate with activated C, in the presence of H_2SO_4 .

The use of activated charcoal speeds up the process.

Plotnikov, N.I., Klimov, A.Yu. Bul. 7/25.2.79. 26.1.76. as 316922 (2pp314)

LEAT= ★ D18 82136B/45 ★SU -648-585
Synthetic tanning compsn. for chrome upper leather - contg. sulphonated phenol-formaldehyde resin, willow extract and condensn. prod. of urea, formaldehyde, phenol and phenol-sulphonic acid

LEATHER FOOTWRE IND 19.08.76-SU-400446

A97 (25.02.79) C08l-61/14

The compsn. (I) contains (in wt. %): sulphonated novolak resin (II) 20-40, a tanning agent extrd. from willow 15-25 and a condensn. prod. (III) of urea, formaldehyde (IV), phenol and phenolsulphonic acid (V) 45-55.

(II) is prepd. by converting phenol (100 pts. wt.) to a novolak and sulphonating with 25-50 pts. wt. of H_2SO_4 (calculated on monohydrate) at high temp. until a stable aq. soln. is obtd. and adjusting the pH to 3-4. (III) is prepd. by condensing phenol or cresol (100 pts. wt.) with H_2SO_4 (calculated on monohydrate) (90-100 pts. wt.) at

90-100°C, adding urea (35-50 pts. wt.), stirring and adding 80-95 pts. wt. of (IV), neutralising with alkali, adding phenol (20-30 pts. wt.) and (IV) (20-30 pts. wt.), heating and stirring until (IV) is not detectable by smell.

Golubeva, S.K., Lanina, L.V., Suchkov, V.G. et al. Bul. 7/25.2.79. 19.8.76. as 400446 (2pp1360)

KABI/ ★ D18 82160B/45 ★SU -648-610
Skin or fur stretching frame - has cylinder rod with articulated studs using heads controlling skin tension

KABIROV E G 20.08.74-SU-053866

(28.02.79) C14b-01/26

Improved work efficiency when clamping furs or skins in the stretcher for drying is ensured by the hollow pin attached to the rod and holding the stud with two heads. One head is in the cavity of the pin above which is the cantilevered leaf spring.

The skin is placed on the frame and the cylinders are pressurised for extending their rods carrying the studs above the skin. The extension of the rods results in a simultaneous tensioning of the skin along the guides, the tilt of the stud head depending on the properties of the skin.

Kabirov, E.G. Bul. 7/25.2.79. 20.8.74. as 053866 (2pp89)

MOGI= ★ D18 82161B/45 ★SU -648-611
Preserving hides e.g. ox hides - by treating with brine their flesh side and salting then rolling up hides and baling for storage

MOGILEV MEAT COMBNE (MEAT=) 22.10.73-SU-965185

(28.02.79) C14c-01/02

Hides are preserved by treating their flesh side with a brine; additionally salting the flesh side; squeezing; and storing for some time.

The duration of the whole process is shortened, without impairing the preservation, by rolling up the hides (flesh side inside) and baling before the storage. The legs and the collar are turned inside. The salt loss is reduced.

Lugavnev, F.T., Gimelfarb, N.N., Ivankin, M.T. et al. Bul. 7/25.2.79. 22.10.73. as 965185 (2pp70)

ROKH/ ★ D18 82162B/45 ★SU -648-612
Preservation of Persian lamb pelts - includes treatment with soln. contg flour, common salt and spent acids, with subsequent gradual addn. of organic acid, e.g. acetic acid

ROKHVARGER O D 20.09.76-SU-404455

(28.02.79) C14c-01/02

Pelts, pref. astrakhan furs, are subjected to additional preserving treatment with a soln. contg. flour and common salt, followed by an organic acid.

The quality of the furs is improved by carrying out the treatment in the presence of spent acids, and adding the organic acid portionwise (increments 1-2g/l) over 22-24h periods after the beginning of the treatment (the gradual increase of the acidity is beneficial for the skin).

Rokhvarger, O.D., Besedin, A.N., Petrov, V.F. et al. Bul. 7/25.2.79. 20.9.76. as 404455 (2pp70)

IVAN/ ★ D18 82163B/45 ★SU -648-613
Preserving fresh hides e.g. pig skins - by treatment with dry salt and antiseptics in rotating, hermetically closed drum at specified speed with brine removal

IVANKIN M T 28.03.77-SU-471331

(28.02.79) C14c-01/02

Fresh hides are preserved by treatment with dry salt and antiseptics in a rotating, hermetically closed drum.

The process is accelerated and the consumption of chemicals is reduced by applying the critical speed of the drum rotation and 100%- loading (i.e., complete filling of the drum with hides)

Ivankin, M.T., Gimelfarb, N.M., Lugovnev, F.T. Bul. 7/25.2.79. 28.3.77. as 471331 (2pp70)

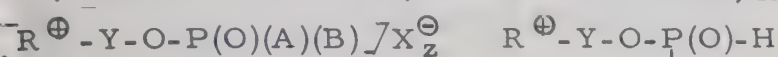
D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

JOHJ ★ D21 80842B/45 ★ BE-876-055
level phospho-betaine(s) and phosphitaine(s) - used as surfactants
sp. suitable for toilet compsns.

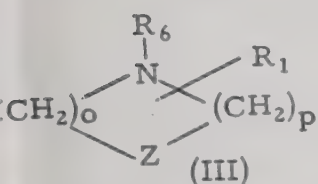
JOHNSON & JOHNSON (MONA-) 30.11.78-US-965462
(05.05.78-US-902121)
A97 E11 (D25) (05.11.79) C07f

The cpds. have the formula (I) or (II) below: in which A is
O⁻, -OM or -O-Y-R⁺; B is -O⁻ or -OM'; X is an



(I)

(II)



anion; Z is 0-2 and is sufficient for
electroneutrality; R is a group of
formula $\text{R}_1-\text{CO}-\text{N}(\text{R}_2)-(\text{CH}_2)_n-$
 $\text{N}(\text{R}_3)(\text{R}_4)-\text{Z}^{\oplus}$; R₁ is 5-22C alkyl,
alkenyl, alkoxy, or hydroxyalkyl or
up to 20C aryl or alkaryl; R₂ is H

or up to 6C alkyl, alkenyl or hydroxyalkyl or cycloalkyl,
pref. 2-5C, or up to 10C polyoxyalkylene; R₃, R₄ are each
up to 6C alkyl, hydroxyalkyl or carboxyalkyl or up to 10C
polyoxyalkylene, or from an N contg. heterocycle with the
N atom linked to Y other than by the N atom; n is 2-12; or
R is a heterocyclic group of formula (III) above in which Z
is N, S or O; o is 0-3, p is 1-3 and o+p is 3-4, R₁ as above
is linked to a C atom, R₆ = 2-6C alkyl or hydroxyalkyl; Y is
up to 12C alkylene opt. interrupted by up to 3 O atoms and
opt. substd. by up to 10C lower alkyl, alkoxy, hydroxyalkyl,
or hydroxy; M and M' are each (a) H, alkali or alkaline
earth metal, mono- di- or tri-ethanolamine or (b) up to 6C
alkyl or hydroxyalkyl, up to 10C polyhydroxyalkyl, gly-
ceryl, up to 6C cycloalkyl, or up to 10C aryl or arylalkyl
provided if one of M, M' is a radical (b), the other is one
of (a).

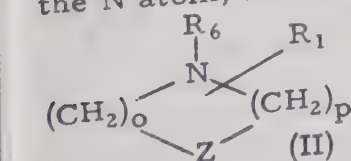
The cpds. are used as surfactants. They are highly ef-
fective, very stable, extremely tolerable for human tis-
sue, and have a very low ocular irritation and toxicity by
oral means which makes them very suitable for toilet
preps. 4.5.79 as 876055 (59pp597)

JOHJ ★ D21 80843B/45 ★ BE-876-056
Detergent and cleaning compsns. esp. shampoos - contg.
phospho-betaine(s) or phosphitaine(s) and a specified amphoteric
cpd.

JOHNSON & JOHNSON 30.11.78-US-965460
A97 E11 (D25) (05.11.79) C11d

The compsn. contains as active constituents (a) 1-20% of
a cpd. of formula $\text{RCONH}(\text{CH}_2)_x-\text{N}(\text{R}_1)-(\text{CH}_2)_{x'}-\text{COOM}$
(where R is 8-18C alkyl, R₁ is 2-4C hydroxyalkyl or
-CH₂OCH₂COOM; x and x' are each 1-5 and M is H or an
alkali metal), and (b) 1-20% of a cpd. of formula

$\text{R}^{\oplus}-\text{Y}-\text{O}-\text{P}(\text{O})(\text{A})(\text{B})\text{X}_z^{\ominus}$ (I).
In (I) A is -O⁻, -OM or -O-Y-R⁺; B is -O⁻ or
-OM'; X⁺ is an anion; z is 0-2 such that the cpd. is elec-
troneutral; R is a group of formula $\text{R}_1-\text{CON}(\text{R}_2)-(\text{CH}_2)_n-$
 $\text{N}(\text{R}_3)(\text{R}_4)-\text{Z}^{\oplus}$ in which R₂ is H, up to 6C alkyl, alkenyl,
hydroxyalkyl or cycloalkyl, pref. 2-5C, or up to 10C poly-
oxyalkylene; R₃, R₄ are each up to 6C alkyl, hydroxyalkyl
or carboxyalkyl or up to 10C polyoxyalkylene or R₃, R₄
and the N atom form an N-heterocycle not attached to Y by
the N atom; n is 2-12; or R is a radical of formula (II)



in which Z is N, S or O; o is 0-3, p
is 1-3 and o+p is 3-4; R₁ is attached
to a C atom; R₆ is 2-6C alkyl or
hydroxyalkyl; Y is up to 12C alkyl-
ene opt. interrupted by up to 3 O
atoms and opt. substd. by alkyl,

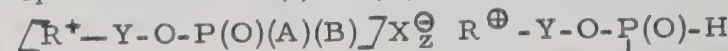
alkoxy, hydroxy or hydroxyalkyl up to 10C; M, M' are (a)
H, alkali or alkaline earth metal, mono-, di- or tri-
ethanolamino or (b) up to 6C alkyl, hydroxyalkyl or up to
10C polyhydroxyalkyl, glyceryl, up to 6C cycloalkyl and

up to 10C aryl or arylalkyl provided if one of M and M' is
(b) the other is one of (a); or a phosphitaine of formula:
 $\text{R}^{\oplus}-\text{Y}-\text{O}-\text{P}(\text{O})-(\text{H})(\text{O}^-)$, provided the sum of (a) + (b) is
not above 35% of the compsn.

The cpds. are used mainly in shampoos and also
skin cleaning compsns., foam baths, baby baths, etc. The
cpds. are non-irritating or very slightly irritating to the
eye and skin. In shampoos, they have good foaming proper-
ties and leave the hair shiny, supple and easy to comb.
4.5.79 as 876056 (23pp597)

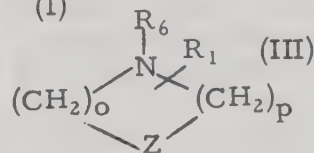
JOHJ ★ D21 80844B/45 ★ BE-876-057
Detergent compsns. contg. phospho-betaine(s) or phosphitaine(s) -
used esp. in shampoos having good foam volume and low irritation
JOHNSON & JOHNSON 30.11.78-US-965463
A97 E11 (D25) (05.11.79) C11d

The compsn. contains as active constituent 1-20% of a
cpd. of formula (I) or (II):



(I)

(II)



in which A is -O⁺, -OM or
-O-Y-R⁺; B is -O⁻ or -OM'; X is
an anion; z is 0-2 and such that the
cpd. is electroneutral; R is a group
of formula $\text{R}_1-\text{CON}(\text{R}_2)-(\text{CH}_2)_n-\text{N}(\text{R}_3)(\text{R}_4)-\text{Z}^{\oplus}$ in which R₁
is 5-22C alkyl, hydroxyalkyl, alkenyl, or alkoxy or up to
20C aryl or alkaryl; R₂ is H or up to 6C, pref. 2-5C, alkyl,
hydroxyalkyl, alkenyl or cycloalkyl or up to 10C polyoxy-
alkylene; R₃, R₄ are each up to 6C alkyl, hydroxyalkyl or
carboxyalkyl or up to 10C polyoxyalkylene or R₃, R₄ togeth-
er with the N atom form an N-heterocycle attached to Y
other than by the N atom, n is 2-12; or R is a radical of
formula (III) above in which Z is N, S or O; o is 0-3, p is
1-3 and o+p is 3 or 4, and R₁ is attached to a carbon atom;
R₆ is 2-6C alkyl or hydroxyalkyl; Y is up to 12C alkylene
opt. interrupted by up to 3 O atoms and opt. substd. by
alkyl, alkoxy, hydroxy or hydroxyalkyl of up to 10C in each
case; M, M' are either (a) H, alkali or alkaline earth metal,
or mono-, di-, or tri-ethanolamine or (b) up to 6C alkyl
or hydroxyalkyl, up to 10C polyhydroxyalkyl, glyceryl, up
to 6C cycloalkyl and up to 10C aryl or arylalkyl provided
if either of M, M' is (b) the other is one of (a).

The compsn. are esp. for the skin and scalp, particu-
larly for shampoos. They give a good foam volume of good
stability and because of their relatively slight irritation for
the eyes are recommended for babies and children.
4.5.79 as 876057 (28pp597)

COLG ★ D21 80873B/45 ★ BE-877-516
Stable aq. compsn. for re-mineralising dental enamel - contains
sources of calcium, phosphate and fluoride, and anti-nucleation
agent

COLGATE PALMOLIVE CO 13.10.78-US-951893
B05 (05.11.79) A61k

Stable aq. compsn. contg. dissolved Ca²⁺ and phosphate
ions, in sufficient amt. to remineralise dental enamel, also
contains an anti-carries agent supplying F and an anti-
nucleation agent (I). (I) is an acid or salt of formulae:
 $(\text{M}_2\text{O}_3\text{P}.\text{CH}_2)_2-\text{N}(\text{CH}_2)_n-(\text{CH}_2\text{PO}_3\text{M}_2)$; $\text{M}_2\text{O}_3\text{P}.\text{CH}_2\text{COOM}$;
 $\text{M}_4\text{P}_2\text{O}_8$ or $\text{MO}_3\text{S}-\text{CHR}_1-\text{CXR}_2/\text{a}-\text{CHR}_3-\text{CYR}_4/\text{b}-\text{H}$
(where M = H or orally acceptable cation. R₁, R₂, R₃ and
R₄ = H, CH₃ or C₂H₅. Y is ≥ 1 COOM, CONH₂ or CH₂OH. X
is ≥ 1 CN, COOR, COOR₅OR, CONHR or COONHR₅COR.
R = 1-8C alkyl. R₅ = 1-4C alkylene. n = 1-10. a = 0-7, a +
b = 4-15). The soln. has pH 5-9, pref. 6.8-7.5, and esp.
contains 1-500 ppm. (I).

(I) protects against pptn. of Ca and phosphate ions. The
solns. can be incorporated in mouthwashes, toothpastes,
powders, chewable tablets, etc. 5.7.79 as 877516
(17pp1251)

NATT D21 23268V/13 = DS 2340-590
Hair setting compsns. - comprising solns. of sulphonated styrene (co)poly-mers

NAT STARCH & CHEM CORP 13.09.72-US-288530

A96 (A13) (31.10.79) *DT2340-590 A61k-07/11

Hair setting agent (I) is based on a film-forming hydrophilic polymer (II) contg. sulphonate gps., and usual components.

(II) comprises partly- or fully - neutralised sulphonated polystyrene or sulphonated copolymers of styrene with acrylic - and methacrylic esters of aliphatic alcohols, acrylic acid, acrylonitrile, methacrylonitrile, dibutyl maleate, vinylidene chloride or N-vinyl pyrrolidone, and is present in aq. - or aq. - alcoholic soln. The sulphonated polymer has a mean mol. wt. of 6000 to 7×10^6 , pref. 8×10^4 to 5×10^5 and is present in amt. of 0.1-10.0wt.%, based on total soln. 10.8.73 as 340590 (8pp481)

FARB ★ D21 80936B/45 ★DT 2816-819
Cosmetic light-protective compsn. - contains 4-methoxybenzylidene-cyanoacetate as UV A filter and opt. a UV B filter

BAYER AG 18.04.78-DT-816819

E14 (31.10.79) A61k-07/42 A61k-31/22

Light-protective compsn. contains a 4-methoxybenzylidene cyanoacetate having formula $p\text{-MeO-C}_6\text{H}_4\text{-CH=C(CN)COOR}$ (I) (where R is n-hexyl, n-octyl, n-decyl or prim. 9-10C isoalkyl). In addn. to (I), the sun-protective compsns. pref. also contain UV. B filters, esp. 2-Ph-5-Me-benzoxazole, 2-Ph-benzimidazole-5-sulphonic acid or is amyl 3-methoxy-cinnamate, as well as standard solvents and additives. The use of compsns. where R is n-hexyl or isononyl is claimed. (I)-concn. in cosmetic compsns. may be 0.2-10 (0.5-6) wt.%.

(I) are used as UV. A filters in cosmetic compsns. for protecting the skin against UV. A radiation (i.e. having wave-length 320-400 nm.), e.g. protective compsns. against sunlight, artificial light sources and for treating pathogenic sensitivity. (I) have absorption max. 340 nm., high specific extinction, are oil-soluble, non-toxic, odourless, colourless, liq., stable to UV., oxidn., heat and pH, and can be synthesised easily in high purity. 18.4.78 as 816819 (23pp200)

BARO/ ★ D21 81121B/45 ★FR 2415-439
Non-flaking coloured surface esp. for artificial fingernails - made by electrostatically spraying minute fibres on to adhesive coating

BAROUSSE P 30.01.78-FR-002520

A96 P24 P42 (28.09.79) A45d-29 A45d-31 B05d-01/04

Fingernails are coated with a special varnish having adhesive qualities and coloured synthetic fibres are projected on to them. The coloured fibres are projected electrostatically and they have a gauge of 3-20 denier with an average length of 0.3-1.5 mm. An appts. contains an electrical circuit with means of projecting the fibres and covered containers for the varnish and for the fibres of different colours.

The fingernails are given an aesthetic, original and attractive appearance with a wide range of possibilities, and esp. a velvet-like surface which unlike that of painted nails does not flake off. 30.1.78 as 002520 (6pp1014)

GOUP/ ★ D21 81122B/45 ★FR 2415-457
8-Hydroxy quinoline deodorising agent - used in powder, cream, gel or soln. compsns.

GOUPIL J J 25.01.78-FR-001985

E13 (28.09.79) A61k-07/32 C07c

Deodorising compsns. contain 0.1-5% of 8-hydroxy quinoline in suitable supports such as talc, cream or gel excipients, or alcoholic solns.

Agent is used in powders, creams, gels and solns. for bodily application. It is very effective, particularly as a dry formulation which gives a quicker and more lasting action. 25.1.78 as 001985 (5pp597)

SPIT/ D21 16055B/09 = GB 1555-044
Compressed gas propellant aerosol spray - for cosmetics, pharmaceuticals, detergents, etc., has controlling orifices to give the desired proportion of gas and liq.

SPITZER J G 06.01.77-US-757414 (19.07.76-US-706857)

A97 B07 G04 Q34 (07.11.79) *CA1048-453 B65d-83/14

In an aerosol container comprising a pressurisable con-

tainer having an open/close valve, a valve stem, and a delivery port, for delivering liquid aerosol compsns. highly concd. w.r.t. the active ingredient at a low delivery rate, a valve stem orifice of dia. 0.50-0.65mm. connects a blending space with an aerosol-conveying valve stem passage leading to the delivery port. The valve is held in a closed position by a bias arrangement (I) and can be manipulated against (I) to an open position for expulsion of aerosol compsn. via the valve stem orifice to the delivery port.

A wall defines the blending space and separates it from liquid aerosol compsn. and propellant within the container. Through the wall is ≥ 1 liquid tap orifice (A) having a cross-sectional open area of 0.4-0.6mm² for flow of aerosol compsn. into the blending space, and ≥ 1 vapour tap orifice (B) having a cross-sectional open area of 0.4-0.8mm² for flow of propellant into the blending space, the ratio of (A) to (B) cross-sectional open area being 0.5-0.9. The open areas of (A) and (B) are selected to provide a vol. ratio of propellant gas : aerosol compsn. of 10-40:1, thus limiting the delivery rate of aerosol compsn. and propellant gas from the container when the valve is opened.

Esp. the aerosol compsn. is an anhydrous dispersion of astringent salt in propellant liquid and non-volatile organic liquid, and partic. includes a silicone polymer of viscosity $\geq 500,000$ cSt at 25°C to increase the viscosity of the organic liquid phase. Other products which can be dispersed by the container include pharmaceuticals and insecticides. 19.7.77 as 030225 (18pp990).

MINN D21 67244Y/38 = GB 1555-070
Abrasive discs for polishing of tooth fillings - with elastomeric backing of defined hardness and thickness

MINNESOTA MINING CO 11.03.76-US-665921

A96 P61 + P32 P33 (07.11.79) *DT2710-826 B24d-13/14

Novel abrading devices comprise a conformable elastomeric disc-shaped body (I) adapted for connection to a driving means, and an exposed abrasive layer supported on (I). (I) has a thickness of 0.15-0.4mm. and a Shore A hardness of 50-75. The abrasive layer has a thickness ≥ 0.3 mm. and the dia. of the abrasive layer is 1-1.1 times the dia. of (I).

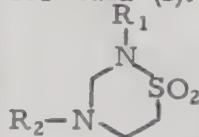
Pref. the Shore A hardness is 60-65. Pref. the abrasive material is supported on a paper substrate. Pref. it is Al_2O_3 , esp. of max. dimension 15μ . The devices are esp. used to polish dental composite restorative resins. 10.3.77 as 010220 (8pp974).

GABA D21 86346X/46 = GB 1555-106
Plaque inhibiting oral and dental preps. - contg. perhydro-1,2,4-thiadiazine 1,1-dioxides

GABA AG 28.04.75-CH-005386

B03 (07.11.79) *NL7604-527 A61k-07/16 + A61k-05

Novel dentifrice compsns. contain a bactericidal cpd. of formula (I).



R_1 and R_2 are each H, opt. substd. 1-8C alkyl, opt. substd. cycloalkyl, opt. substd. aralkyl, opt. substd. aromatic gp. opt. substd. heterocyclic gp. or opt. substd. CH_2NX or together are $-\text{[CH}_2\text{.NXN]}_3\text{CH}_2-$.

Both NX and NXN are perhydro-1,2,4-thiadiazine-1,1-dioxide rings, bonded through one or two N atoms resp.

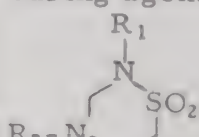
Compsns. inhibit plaque formation, paradentosis and caries. 27.4.76 as 016991 (6pp974).

GABA D21 86346X/46 = GB 1555-107
Plaque inhibiting oral and dental preps. - contg. perhydro-1,2,4-thiadiazine 1,1-dioxides

GABA AG 28.04.75-CH-005386

B03 (07.11.79) *NL7604-527 A61k-05 A61k-07/16

Novel liq. mouth rinse compsns. or concentrates of such compsns. contain cpd. (I), a sweetening and/or other flavouring agent and an aq. and/or alcoholic carrier.



R_1 and R_2 are each H, opt. substd. 1-8 C alkyl, cycloalkyl, aralkyl, aryl heterocyclic gp. or CH_2NX or together are $-\text{[CH}_2\text{.NXN]}_3\text{CH}_2-$. Both NX and NXN are

perhydro-1,2,4-thiadiazine-1,1-dioxide rings, bonded through one or two N atoms resp.

Compsns. inhibit plaque formation, paradentosis and

aries. 27.4.76 as 37258/78. Add to 1555106. Div. ex 1555106 (6pp974).

GABA D21 86346X/46 = GB 1555-108
Plaque inhibiting oral and dental preps. - contg. perhydro-1,2,4-thiadiazine 1,1-dioxides
GABA AG 28.04.75-CH-005386
B03 (07.11.79) *NL7604-527 A61k-05 A61k-07/16

Novel gels for use in the care of the mouth and teeth comprise cpd. (I) and a gel-forming carrier component.

R_1 and R_2 are each H, opt. subst. 1-8C alkyl, cycloalkyl, aralkyl, aryl, heterocyclic gp. or CH_2NX , or together are $-[CH_2.NXN]_3CH_2-$. Both NX and NXN are perhydro-1,2,4-thiadiazine-1,1-dioxide rings, bonded through one or two N atoms resp.

Compsns. inhibit plaque formation, paradentosis and caries. 27.4.76 as 37259/78. Add to 1555106, Div. ex 1555106 (5pp974).

FARB D21 57771Y/33 = GB 1555-204
Sun-tanning preps. having high protection factor - contg. water hydrophilic oily components and sunlight-protective agents (BE 4.8.77)

BAYER AG 04.02.76-DT-604121
(07.11.79) *DT2604-121 A61k-07/42

An anti-sunburn oil comprises water, a hydrophilic oil and >1 oil-soluble and/or water-soluble sunscreen agents. The amt. of hydrophilic oil is sufficient to make the anti-sunburn oil a clear liq. of oily character. The amt. of sunscreen agent is present to ≤ 80 wt. % w.r.t. anti-sunburn oil.

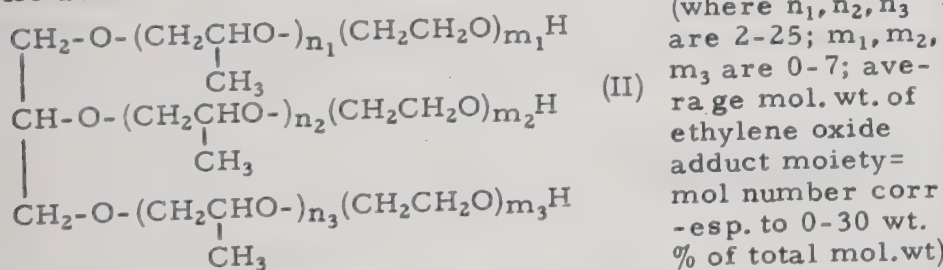
Pref. the hydrophilic oil comprises a polyol-fatty acid ester or ether. The overall prod. comprises 20-70 wt. % of hydrophilic oil and 10-50 wt. % of water.

The formulations prepd. show good light protection action, and outstanding penetrating power preventing losses by wiping off etc. 31.1.77 as 003840 (4pp931).

NISW ★ D21 81491B/45 ★ J5 4125-608
Hydrophilic ester(s) useful in hair dressings - prepd. by reacting specified poly:ol(s) with satd. aliphatic di:carboxylic acid and/or oxy:di:carboxylic acid

NISSHIN OIL MILLS KK 22.03.78-JA-032653
A96 E17 (A25) (29.09.79) A61k-07 C07c-69/34

Hydrophilic esters (I) are prepd. by reacting polyol (II) with satd. aliphatic dicarboxylic acid and/or oxydicarboxylic acid.



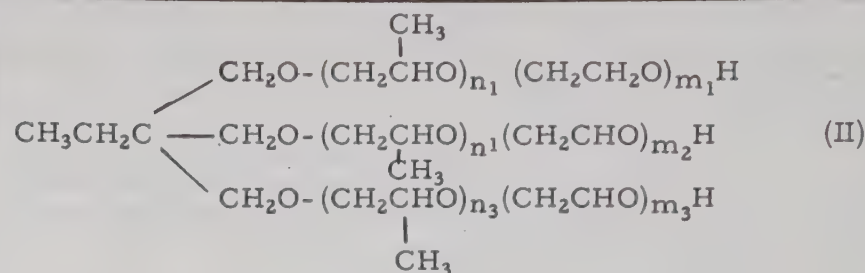
(I) is useful as a hair dressing. Disadvantages of known hair dressing cosmetic such as celluloid erosion are overcome by using (I) as base material. 22.3.78 as 032653 (6pp104)

NISW ★ D21 81492B/45 ★ J5 4125-609
Hydrophilic ester(s) useful in hair dressings - prepd. by reacting specified poly:ol(s) with satd. aliphatic di:carboxylic acid and/or oxy:di:carboxylic acid

NISSHIN OIL MILLS KK 22.03.78-JA-032654
A96 E17 (A25) (29.09.79) A61k-07 C07c-69/34

Hydrophilic esters (I) are prepd. by reacting polyol (II) with satd. aliphatic dicarboxylic acid and/or oxydicarboxylic acid.

(wherein $n_1, n_2, n_3 = 1-25$; $m_1, m_2, m_3 = 0-5$; average mol. wt. of ethylene oxide adduct part = mol number corresp. to 0-20



wt. % of total mol weight).

(I) is useful as hair dressing. Disadvantages of known hair dressing cosmetic such as celluloid erosion were overcome by using (I) as base material. 22.3.78 as 032654 (6pp104)

MORI ★ D21 81721B/45 ★ J5 4126-734
Compsn. for treating dermatitis in humans - contains ethylene bis:di:thiocarbamate of zinc or manganese
MORIOKA E 24.03.78-JA-032945
C01 (02.10.79) A61k-31/28

The compsn. contains as active component zinc ethylenebis-dithiocarbamate (I) or manganese ethylenebisdithiocarbamate. The compsn. is used, e.g. in the form of ointment, aerosol or coating agent. It is possible to use the active cpd. in combination with antibiotics.

(I) and (II) do not stimulate the human skin, and are very effective particularly against dermatomycosis. They are scarcely-water-sol., and have been used as agricultural insecticides. (I) and (II) show very strong antifungal effect.

In order to determine fungicidal effect of (I) there are used Trichophyton interdigitale, Trichophyton metagrophytes, Trichophyton rubrum, Microsporium gypseum and Candida albicans. (I) is dissolved in DMSO so that the concn. is 10 mg/cc, and the resulting soln. is diluted with sterilised water to a desired concn. 1 ml of the diluted liq. is placed in a vessel and 9 ml of medium added. Each bacterium is inoculated, and cultivation conducted for 3-5 days at 30°C. The minimum effective concn. is 1000 mcg/ml for Candida albicans, 1000 mcg/ml for Microsporium gypseum, 50 mcg/ml for Trichophyton interdigitale, 50 mcg/ml for Trichophyton metagrophytes and 5 mcg/ml for Trichophyton rubrum. 24.3.78 as 032945 (2pp108)

SHOH D21 69606X/37 = J7 9032-611
Dental amalgam alloy prodn - based on silver-tin powder and a silver-copper alloy
SHOHU TOSHI SEIZO 28.01.75-JA-012144
M26 P32 (16.10.79) *J51087-120 A61c-13 C22c-01/03 C22c-05/06

Prodn. of a dental amalgam alloy powder body in which spherical amalgam alloy powder of Ag > 65%, Sn < 29%, Cu < 6%, Zn < 2% and Hg < 3%, and Ag-Cu alloy powders of Ag 68-76% and Cu 32-24% are mixed together in the ratio 55-80% of the former and 45-20% of the latter into particles of dia. < 44μ.

The dental amalgam alloy powder body has good physical props., high early strength and excellent dental filling performance. The solidification time is 6.5-8 mins. compressive strength 1700-2349 kg./cm² after 1 hr., and 4339-5026 kg./cm² after 24 hrs., flowability 0.28-0.62% and dimensional variance 2-10μ/cm. 28.1.75 as 012144. C22c 1/03, 5/06; A61c 13/00 (16.10.79) SHOHU TOSHI SEIZO (4pp) (J51087120)

MOFO = ★ D21 81985B/45 ★ SU -648-226
Cosmetic hair dying tablets prodn. - includes mixing vegetable dye with soap powder and tea extract, with rapid cooling and press forming

MOSC FOOD IND INST 27.10.77-SU-538689
(27.02.79) A61k-07/13

Hair dying tablets, useful in perfumery and cosmetics industry, are based on vegetable source henna or black dye material. The dye tablets are prepd. by mixing fragmented and dried raw material, e.g. henna plant, with powdered soap and tea extract for 10-15 mins. followed by rapid cooling to 20-25°C, further mixing for 3-5 min., and pressing mixt. into tablets. The tablets are then heat-treated for 12-15 min. at 37-40°C to remove surface moisture. They have improved compact

appearance, and they can be prepd. by a mechanised process. Zurabishvili, G.G., Machkhin, Yu.A., Margvzlashvili, D.A. Bul. 7/25.2.79. 27.10.77. as 538689 (2pp938)

LEEP ★ D21 82350B/45 ★US 4172-323
Adhesively attaching pontic tooth or fixed bridge to adjacent teeth - using thin conformable screen applied to surface of adjacent tooth, and using curable liquid dental adhesive

LEE PHARMACEUTICALS 06.05.77-US-794544

A96 G03 P32 (A14 A23) (30.10.79) A61c-13/30

A pontic tooth or fixed bridge is adhesively mounted in place on the previously prepared support surfaces of abutment teeth in the mouth. The process comprises applying to the previously prepared surfaces a liq. dental adhesive which wets the surfaces, to insure good bonding. A screen of thickness ≤ 1.0 mm is then applied to each support surface, the screen being of a material which conforms readily to the shape of the surface. Adhesive is then applied between the pontic tooth or fixed bridge and the screen, and the tooth or bridge is held in its desired final position while the adhesive cures.

A mechanically strong bond is formed, so that the pontic tooth or fixed bridge can withstand chewing forces. 6.5.77 as 794544 (7pp914)

SYNT ★ D21 82383B/45 ★US 4172-703
Oxidative hair dye compsn. devoid of mutagenic components - contains dihydroxy-naphthalene, meta-amino phenol and para-amino di:phenylamine

SYNTEX (USA) INC 03.08.78-US-930832

E24 (30.10.79) A61k-07/13

Compsn. which dyes keratinous fibres brown when combined with an oxidising agent comprises (by wt.) 0.1-4 (0.25-2.5) pts. 1,5-dihydroxynaphthalene (I); 0.01-1.5 (0.05-1) pts. p-aminodiphenylamine (II) or its acid addition salts; 0.2-2.5 (0.2-2) pts. m-aminophenol (III), 1-15 pts. modifier and 0.5-7.5 pts. coupler, plus dye base to make 100 pts.

A pref. modifier comprises 0.3-2.5 pts. 1,7- and 0.2-1 pt. 2,7-dihydroxynaphthalene; 0.2-2 pts. each of resorcinol, pyrocatechol and phloroglucinol and 0.1-1.5 pts. glycine. A pref. coupler comprises 0.2-1.5 pts. o-amino-phenol and 0.2-2 pts. each of p-aminophenol and p-methyl-aminophenol sulphate.

Used for dyeing human hair various shades of brown. The compsns. contain no mutagenic phenylenediamines; 2,4-diaminoanisole or nitro dyes. They are easy and quick

to apply; give stable colours fast to light, perspiration and shampoos; do not irritate or stain the scalp, and give an illusion of natural colour. 3.8.78 as 930832 (6pp1251)

DEVA/ ★ D21 82465B/45 ★US 4172-86
Making dental prosthesis wax replica - using composite model with index pin and complementary model for pressing wax

DEVAULT Z P 31.08.78-US-938463

P32 (30.10.79) A61c-05/10 B29c-01/08

A replica is prepared by making a composite model with odontal die projecting from a base and with a cavity in which the prosthesis is to be implanted, an index pin embedded in the model, and making a complementary model with odontal projection defining an occlusal surface to engage the odontal die.

The odontal die and pin are removed, a spacer is placed intermediate a pin collar and the base and the die is returned by inserting the pin alignment shank into a receiving cavity. Wax is deposited into the die cavity and compressed by engaging with the complementary occlusal surface. The surface and wax deposit can then be removed. 31.8.78 as 938463 (7pp1358)

OREA D21 39724W/24 =US 4172-887
Hair-conditioning agents - contg crosslinked polyamino-polyamide polymers

L'OREAL SA 30.11.73-LU-068901

A96 (30.10.79) *DT2456-638 A61k-07/06

Cosmetic compsn. for the treatment of hair comprises a water-soluble crosslinked polymer and the alkylated cross-linked polymer dissolved in a water or hydro-alcoholic soln.

Crosslinked polymer is present in amts. of 10 wt. % without gel formation, having a viscosity of > 3 cP at 25° C. The polymer is present to 0.1-5 wt. % w.r.t. the composition. The crosslinked polymer is a polyamino-polyamide, which is the polycondensate of methyl itaconate and a mixt. of ethylene diamine and diethylene triamine.

Cosmetic compsns. can be provided as solns., gels, creams, dispersions or aerosols. A shampoo compsn. can be prepd. imparting easy combing out characteristics to hair. 26.1.77 as 762804 (+ 29.11.74 - US - 528577) (19pp 931)

D22: BANDAGES; DRESSINGS

SUPE- ★ D22 80871B/45 ★BE -877-509
Absorbant pads or tampons dissipating aq. fluids in core - comprises hydrophobic strips amongst core stuffing

SUPER IRIDE SPA 12.07.78-IT-012706

A96 P32 P34 (05.11.79) A61f A61p

The absorbent packing material for pads having a permeable cover for use as hygienic swabs or sponges comprises a mixt. of fibrous absorbent material and uniformly dispersed fibres, particles or strips of a non-absorbent, hydrophobic material which helps to spread permeating liquids throughout the body of the padding.

The composite core exhibits a higher liquid capacity in use than cores which become totally satd. and swollen near the fluid entry zone and thus impede flow to more remote parts of the pad. Pref. pads have cores made by shredding defective baby-pants made of cellulosic padding in a polyethylene cover. 5.7.79 as 877509 (7pp515)

PROC ★ D22 B/45 ★BR 7902-367
Solid compact deodorant compsn.

PROCTER & GAMBLE CO 18.04.78-US-897478

P34 (23.10.79) A611-09/*

18.4.79 as 002367

QUAK ★ D22 80888B/45 ★CA 1064-757
Sterilising food and medical supplies in sealed flexible pouches - on trays having conduit in bottom portion for circulation of heating medium

QUAKER OATS CO 21.04.76-CA-250622

Q31 (23.10.79) A231-03/12 B65b-55/02

Items to be sterilised are sealed in air and light impermeable, flexible pouches and positioned on stackable trays. The bottoms of the trays include a conduit portion for the circulation of a heating medium.

Protruberances project from the bottoms of the trays to space apart flexible pouches on the tray and are sufficiently open to allow circulation of the heating medium.

There is uniform sterilisation of the items in the pouches. The degree of sterilisation can be closely controlled through use of the tray which provides a uniform exposed cross-section of the pouch. 21.4.76 as 250622 (10pp1044)

SCHU D22 36754A/21 =DS 2651-465
Anti-microbial condensates of sec. amine and formaldehyde - used in preservative and disinfectant compsns. for cosmetics and drilling oil emulsions

SCHULKE & MAYR GMBH 11.11.76-DT-651465

E19 H01 P34 (D21 H07) (31.10.79) *DT2651-465 A611-13

Preservative and disinfectant based on condensn. prods.

of sec. amines and HCHO, esp. diamine derivs. of formula $R_1R_2NCH_2NR_3R_4$ and/or their salts is new. In the formula, R_1-4 are each opt. satd linear, branched or cyclic 1-12C aliphatic or aromatic group, opt. with O, S, N or other heteroatoms; or NR_1R_2 and/or NR_3R_4 are cyclic or polycyclic, aromatic or non-aromatic 2-8C heterocyclic rings, opt. with additional O, S, N or other heteroatoms and/or substituents, esp. ethyleneimine rings. 11.11.76 as 551465 (9pp047)

SDEM-★ D22 80980B/45 ★DT 2817-772
Air conditioning filter with radiation steriliser - using mercury vapour lamp inside filter housing to treat air flowing through filter element

SUDDEUTSCHE METALLW 22.04.78-DT-817772
J01 Q74 (31.10.79) B01d-46/02 F24f-03/16

Filter for cleaning and purifying air uses an electrical source of radiation. The filter housing has an electrical connection and a chamber containing a low pressure mercury lamp. The air inlet branch is onto this chamber.

A layer of suitable filter medium is mounted over the chamber and air flows into the chamber, past the lamp and out through the medium. The radiation serves to kill bacteria, odours and fungal spores.

For use on air conditioning plant esp. associated with kitchens. Provides a reliable means of getting odour removal and bacteria and fungi suppression, but avoids the problem of O_3 emission into the kitchen. 22.4.78 as 817772 (8pp1053)

MOLI-★ D22 81092B/45 ★DT 2915-781
Composite surgical bandage of tubular stretchable fabric - has non-extensible section encasing cotton wool pad (NL 23.10.79)
MOLINIER SA 21.04.78-FR-012864
A96 P32 + P34 (31.10.79) A61f-13 A61i-15 D04b-21/20

Tubular surgical bandage has a section which forms the actual dressing, e.g. a wad of cotton wool or the like. The bandage as a whole i.e. including the section with the pad in it is woven, knitted or mfd. in some other suitable fashion but that part not contg. the cotton wool pad is mfd. in such a way that it is elastic and stretchable to ensure secure and protracted positioning upon a patient's body. The cotton-wool-contg. portion is made of absorbent fibres e.g. cotton, cellulose, or non-absorbent material, e.g. polypropylene. 19.4.79 as 915781 (13pp767)

OSAK-★ D22 81369B/45 ★J5 4125-172
Deodorisation of gas contg. basic and acidic organic cpds. - by scrubbing with sodium hypochlorite and simultaneously catalytically oxidising, then treating with active carbon and zeolite
OSAKA SANSO KOGYO K 24.03.78-JA-033705
E34 (28.09.79) B01d-53/34

A method for deodorisation of gas (I) contg. basic and acidic organic cpds., comprises (1) scrubbing with sodium hypochlorite soln. (II) and catalytically oxidising, (I) simultaneously and (2) treating (I) with active carbon and zeolite after the step (1).

By scrubbing (I) with (II) and catalytically oxidising (I) simultaneously, hydrogen sulphide and ammonia in (I) can be removed with little consumption of (II), according to the following reactions: $H_2S + NaClO = S + NaCl + H_2O$ and $2NH_3 + 3NaClO = N_2 + 3NaCl + 3H_2O$.

As catalyst for the step (2), nickel peroxide or mixt. of active carbon and zeolite are used. Sodium hypochlorite, chlorine gas and ozone are contained in the (I)-step-treated gas and they are adsorbed to active carbon and zeolite. In the present method, sodium hypochlorite is regenerated from NaCl formed by the decomposition of hydrogen sulphide and ammonia. 24.3.78 as 033705 (6pp42)

KATA- D22 54649Y/31 = J7 9032-042
Protecting wood from teredo in sea water - using e.g. dialkyl-dithiocarbamate gel with polyacrylamide and gelling aid
KATAYAMA KAGAKU KOG 12.12.75-JA-149256
A97 C03 F09 P63 (11.10.79) *J52072-802 A01n-17/08 B27k-03/34

The control agent for teredo such as triphenyl-tin-acetate dialkyldithio-carbamate, ethylene-bisdithiocarbamate, etc. can be applied singly or together, moulded in jelly form with high molecular substance such as polyacrylate, poly-

acrylamide, etc. and the gelling aid such as CMC, starch gelatin, PVC, etc.

The jelly compsn. is pref. composed of 5-20w/w% control agent, 5-20 w/w% high molecular substance showing gelling property, 1-5w/w% surfactant, 1-5w/w% gelling aid, 5-10w/w% organic solvent and water. The compsn. is placed in a container such as net, cage perforated plastic bag, etc. and is hung suitably in sea water.

The control agent is effective at concns. as low as 1-100 ppb. Further effective concns. can be maintained for 2-3 months and pollution problems are avoided. 12.12.75 as 149256. B27k 3/34; A01n 17/08 (11.10.79) KATAYAMA KAGAKU KOGYO (3pp) (J52072802)

WAKA/★ D22 81926B/45 ★J7 9032-758
Deodorant material mfr. - by immersing porous flexible material in active charcoal powder dispersion, squeezing and drying
WAKAMATSU K 12.09.67-JA-058135
A88 J01 (A25) (16.10.79) B01d-53/02

Method comprises immersing porous, flexible material (I) in dispersion of fine powder of active charcoal, squeezing and drying (I).

The material has large specific surface area, and high efficiency of air-charcoal contact.

(I) is typically polyurethane foam. The dispersion medium for active charcoal is water, benzene, etc. In one pref. example, flexible polyurethane sheet of ca. 2 mm. thickness is impregnated with the dispersion, dried, wound into roll and packed in a flexible container having numerous holes in top and bottom. 12.9.67 as 058135. B01d 53/02 (16.10.79) WAKAMATSU, K. (3pp83)

ROME=★ D22 81975B/45 ★SU -648-187
Human cornea transplant preservation compsn. - using two solns. contg. specified nutrients, vitamin(s), antibiotics and enzymes
ROST MEDICAL INST 20.07.77-SU-509974
(28.02.79) A01n-01

Human cornea can be preserved for subsequent transplantation by treating with two-part soln. contg. human anti-measles γ -globulin (I) and disodium adenosine-tri-phosphate (II). The storage period is increased using first soln. contg. serotransfusin (III), nicotinamide (IV), cocarboxylase (V) riboflavin mononucleotide (VI) and monomycin (VII). The second soln. contains glucose (VIII) ascorbic acid (IV) and monomycin.

First soln. comprises (in wt. %): II 0.015-0.025; IV 0.008-0.013; V 0.038-0.063; VI 0.004-0.006; VII 0.011-0.019 and III the rest. The second soln. comprises (in wt. %): VIII 0.075-0.125; IX 0.075-0.125; VII 0.011-0.019 and I the rest.

The vital activity of transplant during storage is increased to 50 days by above method.

Bochkareva, A.A., Temirov, N.E. Bul. 7/25.2.79. 20.7.77. as 509974 (2pp938)

AKGO=★ D22 82117B/45 ★SU -648-564
Solid insoluble iodine-melamine-pectin complex - prepd. from aq. iodine and melamine deriv. of pectin at low PH, used in disinfectants

AS KIRG ORG CHEM 13.12.76-SU-430757
A11 (25.02.79) C08b-37/06

The insoluble solid melamine deriv. (I) of pectin (II) or pectic acid (III) is treated with iodine soln. at pH 1-1.5, in presence of aq. HCl to produce a brown powdery iodine complex (IV), insoluble in aq. media, acetone or alcohol.

The complex is isolated in 99-100% yield by filtration washing with water and air-drying. (I) derived from (II) contains 14.0% -COOH gps. and 11.6% N. (IV) contains 10.8% -COOH gps. and 10.0% N.

The prod. is used in mfr. of bactericidal and other disinfecting compsns.

Ashbuaeva Z.D., Manaev B.M., Musulmanova M.M. Bul. 7/25.2.79 13.12.76 as 430757 (2pp1360)

BECT★ D22 82387B/45 ★US 4172-709
Anesthesiology bacterial filter in transparent housing - with axial internal and external conductors to maintain electrical continuity
BECTON DICKINSON CO 02.02.77-US-765111 (23.03.76-US-669622)
B07 (30.10.79) B01d-46

Filter for anesthesiology and respiratory air systems has a filter element mounted in an electrically nonconductive transparent tubular housing with a connector mounted on a reduced tip at one end and a conductive end cap over the other end, the cap having an opening ending in a projecting connection.

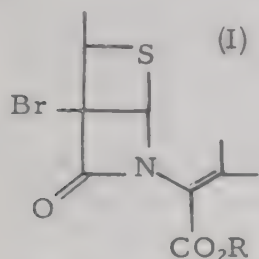
A conductive strip links connector and cap and is carried on the housing exterior without external supports. A conductive cylinder supporting the element has one end directly contacting the cap and its other end contacting a disc supported by spokes on a conductive funnel located in the reduced tip. The arrangement maintains electrical continuity throughout the housing. 19.5.78 as 907900 Div. ex 4063913, 4133656 (11pp1358)

MERI ★ D22 82443B/45 ★ US 4172-837
Substd. 3-oxo-6-thia-2-aza-bicyclo(2.2.0)hexane cpds. - yielding cpd. having broad-spectrum antibacterial activity when treated with reducing agent

MERCK & CO INC 11.09.78-US-941442 (28.11.77-US-855492)

B02 C02 E13 (D13) (30.10.79) C07d-513/08

New bicyclic cpds. are of formula (I) (where R is a readily removable blocking gp. or an acceptable ester moiety) and may be treated with a reducing agent to produce 5-methyl-2-(1-carboxyl-2-methyl-propen-1-yl)-3-oxo-6-thia-2-aza-bicyclo[2.2.0]hexane (A) of formula [(I); Br and R are each H].



Cpd. (A) and its acceptable salts and esters are broad-spectrum antibacterials for use as therapeutic agents, additives for animal feedstuffs, for preserving foodstuffs and as disinfectants. A preferred daily dosage for adult humans is 80-120 mg. of active ingredient per kg. of body wt.

US 4126692 claimed cpd. (A) and its

salts and esters. 11.9.78 as 941442 Div. ex 4126692 (5pp990)

USDA ★ D22 82446B/45 ★ US 4172-841
Water insoluble zinc acetate-peroxide complexes - useful as antibacterial finish for cellulosic and polyester textiles

US SEC OF AGRICULTURE 17.08.78-US-934288

A60 E12 F06 (30.10.79) C07f-03/06

Water-insoluble peroxide complexes (I) are made by first preparing an aq. soln. contg. 1-30% Zn acetate (II) and 1-50% H₂O₂ (and cf ≥ 5% (II) is present also 1-25% acetic acid), with 1.5-10 moles H₂O₂ per mole (II) and 0.2-3 wt. pt. acetic acid per wt. pt. (II). Sufficient acetic acid is used to give a clear soln. The mixt. is then evapd. to dryness, the solid residue washed with water to remove soluble impurities and unreacted starting materials, then filtered off and dried.

(I) impart antibacterial (and antifungal) activity to cellulosic and/or polyester textiles, including those with a durable-press finish. Their activity is resistant to laundering and (I) can be generated in situ on the fabric. If not prepd. in situ, (I) are useful as antibacterials dusting powders. Compared with similar Zr cpds. (I) are more stable and contain more peroxide. 17.8.78 as 934288 (8pp1251)

MOLN ★ D22 82522B/45 ★ WP 7900-871
Sterile solid compress for application to discharging wounds - contg. sodium chloride and zinc salts to stimulate wound healing

MOLNLYCKE AB (NORD/) 03.04.78-SW-003697

B06 E34 P34 (E32) (01.11.79) A611-15/*

D/S: N(GB, US) + E(DT, FR).

Sterile, solid, dry compress for the treatment of discharging wounds contains NaCl and/or Zn salt(s).

In use the salt(s) affects the wound bottom directly and stimulates wound healing and by osmotic forces causes secretion from the wound, and this is absorbed by the solid dry compress. The dry compress only requires to be changed twice daily, in contrast to the usual moist NaCl compress, which requires 3-6 changes daily; also the solid, dry complex is more easily handled. There is also an antibacterial effect and inflammation risk is decreased.

30.3.79 as SW0075 (8pp1248)

(E)ISR: DS-101756; DS-112192; DS-157133.

D23: OILS; FATS; WAXES

KASI/ ★ D23 81154B/45 ★ GB 1555-128
Palm oil prodn. - using de-gumming agent to assist sepn. of oil from digested fruit

THAMBIAH KASINATHAN 05.10.76-GB-041317
(07.11.79) C11b-03/02

Palm oil is prepd. by digesting palm fruit, pressing the digested mass to obtain a mixt. of palm oil, water and particulate solids, opt. removing some of the solids, then agitating the mixt. at elevated temp. with an effective amt. of a degumming agent. The mixt. is then allowed to settle, and the supernatant palm oil is sepd.

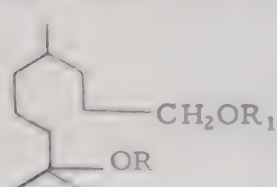
The process is simpler, quicker and can be carried out at lower temps. than the conventional process, and gives a prod. contg. ≥ 2 wt. % free fatty acids. 5.10.76 as 041317 (6pp955).

ALBR ★ D23 81163B/45 ★ GB 1555-331
Homo-citronellol derivs. and their ester(s) - useful in perfumery compsns.

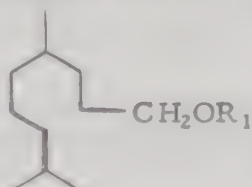
BUSH BOAKE ALLEN LT 11.04.75-GB-014952

E17 (07.11.79) A61k-07/46 C07c-33/02 C07c-43/10

New cpds. are of formulae (I) and (II):



(I)



(II)

where R₁ is H or acyl derived from a 1-6C carboxylic acid, R is 1-4C alkyl.

The cpds. are

useful as ingred-

ients in perfumery compsns. They have fruity floral type odours. Perfume compsns. can contain 0.1-95 wt. % of (I) or (II); pref. at least 2.0 wt. %. 11.4.75 as 014952 (4pp955).

ALBR D23 95568X/51 = GB 1555-333
2,6-Dimethyl substd. heptane derivs. - useful scent or aroma materials

BUSH BOAKE ALLEN LT 29.05.75-GB-023413

E17 (07.11.79) *NL7605-749 A61k-07/46 C07c-31/20 C07c-43/10 C07c-47/02 C07c-47/19

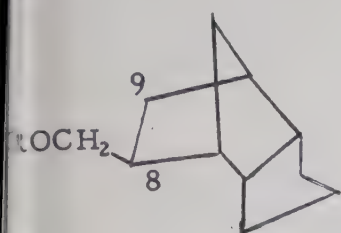
A compounded perfumery compsn. is prepd. comprising >1 odiferous cpd. and ≥1 hydroxy- or alkoxy-substd. 10C alkanol, alkanol or ester of formula (I).



In the formula, R₁ is H or 1-4C alkyl; Z is a formyl gp., prim. alcohol -CH₂OH, or -CH₂OR; R₂ is an acyl gp. derived from a 1-6C carboxylic acid. Pref. R₁ is Me and Z is formyl. (I) is present in amt. 0.1-20 wt. % w.r.t. the compsn. The compsn. contains linalool, citronellol, geranol, phenylethyl, alcohol, terpeneol, hydroxy-citronellal and/or methoxycitronellal as odiferous chemicals.

The compsn. possesses a marked fruity-floral type of odour, exhibiting a perceptible melon odour together with a floral note reminiscent of muguet or lily of the valley. 1.6.76 (6pp931).

AOS ★ D23 81193B/45 ★ GB 2019-841
Exo-hydroxymethyl-endo-tri:cyclo(5.2.1.0^{2,6}) decane(s) - useful
perfumery agents in soaps, shampoos, cosmetics, waxes, etc.
KAO SOAP KK 28.04.78-JA-051543
E15 (07.11.79) C07c-43/18 C07c-69/02 C07d-303/22
tricyclo[5.2.1.0^{2,6}] decanes (I) are new



In (I) R is opt. unsatd. 1-5C acyl, or a glycidyl gp.

(I)-esters are prepd. from (I; R = H) by esterification with a carboxylic acid and mineral acid catalyst; (I)-ethers are prepd. from (I; R = H) and NaH/alkyl iodide; and (I)-glycidyl ethers are prepd. from allyl ethers of (I) by treatment with peracids.



Chemical structure (I) is a bicyclic ether, specifically a 1,4-dioxane derivative, with a glycidyl group attached to one of the ring carbons. The structure is labeled with '9' and '8' on the ring carbons, and 'R OCH₂' on the glycidyl group.

(I) have fragrances ranging from green grass-like, fruit-like to wood-like, and are useful in high quality perfume compsns., soaps, shampoos, cosmetics and waxes, etc. 24.4.79 as 014165 (6pp478).

MITC ★ D23 81258B/45 ★ J5 4124-569
transparent candle forming no soot or bad smells on burning -
consists of 4-methyl-1-pentene polymer

MITSUI PETROCHEM IND KK 22.03.78-JA-031691
A97 (A17) (27.09.79) C11c-05

The basis consists of 4-methyl-1-pentene polymer with an average molecular weight of 200-50000. The 4-methyl-1-pentene polymer is 4-methyl-1-pentene monopolymer or copolymer of 4-methyl-1-pentene and alpha-olefin, such as 1-butene, 3-methyl-1-butene, 1-pentene, 1-hexene, 3-methyl-1-pentene, 1-octene, 1-decene, 1-tetra-decene, 1-octadecene, or mixture thereof. In such a copolymer, the content of 4-methyl-1-pentene is pref. > 50 mol %. The average molecular weight of 4-methyl-1-pentene is pref. 300-5000.

The 4-methyl-1-pentene is fabricated by using a titanium catalyst and an alkyl aluminium catalyst. Paraffin oil, naphthane oil, higher fatty acid, higher alcohol, higher fatty acid ester, paraffin wax, polyethylene wax, natural wax, antioxidant, pigment, dye, etc. are added in the candle basis, if desired. The candle basis is transparent. Soot or bad smells are not produced when burning.

22.3.78 as 031691 (3pp30)

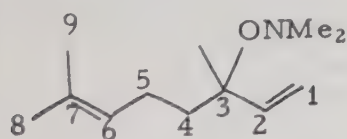
NISC ★ D23 81490B/45 ★ J5 4125-607
Linalool prodn. from O-linalyl N,N di:methyl:hydroxylamine - by
hydrogenating in presence of catalyst prepd. by adding e.g.
aluminium, antimony and/or sulphur to nickel or cobalt
NISSAN CHEM IND KK 20.03.78-JA-032033
B05 E16 (29.09.79) B01j-23/74 C07c-33/02

B05 E16 (29.09.79) B011-23/74 CO/C-33/02

Prod'n. of linalool (II) comprise hydrogenating O-linalyl-N,N-dimethylhydroxylamine (I) under hydrogen pressure of 30 kg/cm² in the presence of a multi-element reducing catalyst which is prep'd. by adding ≥ 1 of Al, Ge, As, Sb, S, Se and Cr to Ni or Co.

(II) is useful as perfume or as a starting material to vita-
mins. In the prior art, catalytic hydrogenation of (I) to (II) failed because the 1,2-double bond was readily hydrogenated. By using the catalyst, the saturation of the 1,2-double bond can be avoided.

When the element to

CN(C)O[C@H](C)(C)CC=CC(C)=CC(C)C

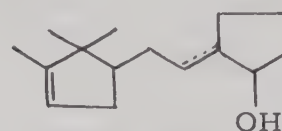
(I) as a starting material to vita-
mins. In the prior art, catalytic hydrogenation of (I) to
(II) failed because the 1,2-double bond was readily hydro-
genated. By using the catalyst, the saturation of the 1,2-
double bond can be avoided.

The catalyst is prepd. as follows. When the element to be added to Ni or Co is Al, Ge, Sb or Cr, $\text{Ni}(\text{NO}_3)_2$ or $\text{Co}(\text{NO}_3)_2$ is held on a carrier together with the nitrate of the metal in a predetermined ratio, then burned and preliminarily reduced. When the element to be added is S, Se or As, an aq. soln. of Ni salt or Co salt is mixed with a proper carrier, added a base (hydroxide or carbonate), then added an aq. soln. of $(\text{NH}_4)_2\text{SO}_4$, H_2SeO_3 or H_3AsO_4 , evaporated to dryness, then burned and preliminarily reduced. 20.3.78 as 032033 (3pp52)

TAKS ★ D23 81512B/45 ★ J5 4125-645
 Tri:methyl-cyclopentenyl-hydroxy-cyclopentyl idene)-ethane -
 useful in perfumes having natural sandalwood fragrance
 TAKASAGO PERFUMERY KK 17.03.78-JA-030881
 E15 (29.09.79) A61k-07/46 C07c-29 C07c-35/21

α -(2,2,3-trimethyl-3-cyclopentene-1-yl)- β -(2'-hydroxycyclopentane-1'-yl) (and ylidine)-ethane of formula (I) are new (where dotted line represents single or double bond).

(I) are obtd. by condensing
cannephrene aldehyde or cyclo-
pentanone to obtain the com-
pound and reducing the prod.
17. 3. 78 as 030881 (6pp78)



HOHN ★ D23 81594B/45 ★ J5 4126-206
Preventing brownish discolouration of phospholipid during heating
- by adding acidic aminoacid and basic aminoacid salt mixt., giving
prod. with superior surfactant and hypocholesterolaemic effect
HOHNEN OIL KK 25.03.78-JA-033963
B04 (01.10.79) A23d-05/04 C11b-05

A process for inhibiting brownish discoloration of a phospholipid at its heating step is claimed in which in the event of heating a fatty oil contg. ≥ 0.2 wt. % dissolved or dispersed phospholipid at $\geq 150^{\circ}\text{C}$, a salt mixt. consisting of acidic amino acid and basic amino acid is added in the fatty oil contg. the phospholipid, prior to the heating step or in the intermediate heating step and thereby, the brownish discoloration of the phospholipid is prevented.

The phospholipid comprises soyabean phospholipid, corn phospholipid, cotton seed oil phospholipid and rape seed oil phospholipid. The fatty oil comprises soyabean oil, Indian corn oil, cotton seed oil, rape seed oil, sesame oil, sunflower oil, peanut oil, palm oil and coconut oil. The salt mixt. of acidic amino acid and basic amino acid is chosen from a salt of alginine-glutamic acid, a salt of lysine-glutamic acid or a salt of lysine-aspartic acid.

The above phospholipid has a superior surfactant effect and it acts to reduce the content of cholesterol in blood soln. 25.3.78 as 033963 (2pp15)

HOHN ★ D23 81771B/45 ★ J5 4127-408
Heating phospholipid dissolved or dispersed in fatty oil - by adding sodium glutamate to prevent browning, used in food and feed, cooking, medicine, etc.

Sodium glutamate is added to the fatty oil contg. ≤ 0.2 wt. % phospholipid as a solute or dispersion before or during heating. It is added in an amt. > 3 (> 20) wt. % of the phospholipid.

Pref. the phospholipid is of soybean, corn, cotton seed, rape seed, etc.; and the fatty oil is bean oil, corn oil, cotton seed oil, rape oil, sesame oil, sunflower oil, palm oil, hardened oil, butter, margarine, shortening, beef fat, lard, etc.

Browning, which is caused by heating fatty oil contg. phospholipid at $> 150^{\circ}\text{C}$, is restrained. Field of use of the phospholipid is widened..27. 3. 78 as 035149 (2pp170)

KOBA- ★ D23 81807B/45 ★ J5 4127-469
Packaging fragile moulded prods., e.g. perfume releasing articles -
by placing preformed resin sheets into a mould, pouring the molten
prod., closing the mould and solidifying the prod.
KOBAYASHI NOKO 27.03.78-JA-035055
A92 (03.10.79) B29c-05/04

Into mould sets, preformed resin sheets each having raised patterned portion complementary to the shape of each mould set and flat portion extended around the raised portion are placed in the mould sets in position so that flat portions are piled together. A molten forming compsn. having lower m. pt. than that of the preformed resin is poured between the preformed resin sheets. The registered mould sets are pressed together to seal the resin sheets together and turned to form the molten mixture centrifugally until the mixture has been solidified.

In an ornament for evaporating perfume for a prolonged period, the moulded compsn. comprises paraffin wax for sustaining the shape, stearic acid for releasing perfume contained in the compsn. and perfume. The inclusion of stearic acid reduces the strength of the moulded compsn. It is thus preferable to coat the surface thereof with resin sheet integrally by the process.

The process provides moulding and packaging of a fra-

gile moulded product to prevent damage during moulding, transportation and use. 27.3.78 as 035055 (4pp59)

NITP D23 18812Y/11 = J7 9032-072
Biochemical sepn. of L:menthol from its isomers - which are in the form of the chloro-acetic acid esters

NIPPON TERPENE KAGA KK 18.07.75-JA-087389

B05 E15 (D16) (11.10.79) *J52012-989 C12d-13

1-Menthol is sepd. from mono-chloroacetic acid esters of dl-menthol isomers by reacting the mixt. with an esterase produced by esterase-producing bacteria belonging to Arginomonas in the form of its cultured prod., its bacterial body or fixed enzyme. Monochloroacetic acid ester of 1-menthol is hydrolysed selectively by the esterase. Pref. bacteria is Arginomonas nonfermentants NOF-5, FERM-P No.1924.

Using an isomer mixt. in the form of monochloroacetic acid esters, gives a remarkable increase in reaction velocity and a remarkable decrease in the amt. of waste water produced. Obtd. 1-menthol is free of the fermentative odour. Prod. is used as a perfume or medicine. 18.7.75 as 087389. C12d 13/00 (11.10.79) NIPPON TERPENE KAGA KK (5pp) (J52012989)

ASAE D23 08053W/05 = J7 9032-447
Reversion-type oil-in-water emulsions - sucrose fatty acid ester in water mixed with polyol fatty acid ester in oil

ASAHI DENKA KOGYO (ASAHI) 21.07.72-JA-072495

(15.10.79) *J49031-709 + A23d-05

Reversion-type oil emulsion compsns. are prepd. from an aq. phase contg. 5-10% (based on final emulsion wt.) water and 0.5-5% sucrose fatty acid ester (HLB value >10) and an oil phase contg. 50-95% oil and polyol ester of mixed fatty acids contg. 0.25-2.5% unsatd. fatty acid.

In an example, an aq. phase from 150 kg. water and 10 kg. sucrose palmitate stearate (I) (HLB value = 11, stearate:palmitate = 70:30, mono:di + tri ester = 50:50) was mixed with an oil phase from 820 kg. hardened fish oil and 10 kg. glycerol palmitate stearate oleate linoleate (II) (palmitate:stearate:oleate:linoleate = 30:20:45:5, mono:di + tri ester = 90:10) at 60° and cooled rapidly to give a water-in-oil emulsion which on stirring gave an oil-in-water emulsion, while an emulsion using sucrose stearate palmitate (HLB value 7) in place of (I) or glycerol palmitate stearate in place of (II) did not show the reversion. 21.7.72 as 072495. A23d 5/00 (15.10.79) ASAHI DENKA KOGYO KK (5pp) (J49031709)

TAKS D23 21658W/13 = J7 9032-761
2,6-Dimethyl-2,7-octadien-1-ol prepn - by heating isoprene and acetic acid with palladium cpd., phosphorus cpds. and tert. amine catalyst

TAKASAGO PERFUMERY KK 06.04.73-JA-039366

E17 (16.10.79) *J49125-310 + B01j-31/02 C07c-27/02 C07c-33/02 C07c-67 C07c-69/14

2,6-Dimethyl-2,7-octadien-1-ol (I) is prepd. by heating isoprene and AcOH in a solvent with a catalyst comprising Pd cpds., P(III) cpds., and tert. amines, followed by alkaline hydrolysis of the resulting (I) acetate. (I) is perfume of green note.

In an example, 1.2 g. Pd(NO₃)₂, 1.45 g. 2,6,7-trioxal-1-phospha-4-ethylbicyclo(2.2.1)heptane, 40.4 g. N-methylmorpholine, 25 ml. AcOH, 100 ml. isoprene, and 50 ml. Me₂CO in a sealed tube was heated at 85° for 12 hrs. and the acetate hydrolysed with 5% aq. KOH to give 25% (I). 6.4.73 as 039366. C07c 33/02, 69/145, 27/02, 67/00; B01j 31/02 (16.10.79) TAKASAGO PERFUMERY CO. (3pp) (J49125310)

AROM = ★ D23 81965B/45 ★SU -647-216
Container for collecting, transporting and processing flowers - has baffle at front wall of body forming condensate collection compartment

AROM OIL PLANT CULT 09.11.76-SU-419060

Q37 (18.02.79) B65j-01/06 C11b-09/02

The container is used for raw material for aromatic oils prodn. and comprises a body able to turn round a horizontal axis and mounted on a vehicle. The body has a loading window and a rear hatch opening for unloading the waste, and bubblers for connecting to a live steam line. For better steaming and unloading the baffle is fitted at the

front wall of the body where it joins the bottom, forming compartment for collection of the condensate, with removal channels alongside the front wall and above the bottom.

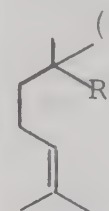
Vaisman, M. L., Pererva, A. E., Reznikov, A. R. et al. Bul. 6/15.2.79. 9.11.76. as 419060 (3pp18)

ANIS D23 36385X/20 = SU -648-08
Octene-nitrile derivs for perfumery use - prepd from 3,7-dimethyl-3-hydroxy-6-octene nitrile by dehydration or by acetylation (BE270476)

ANIC SPA (SNAM) 30.10.74-IT-028956

E19 (19.02.79) *DT2548-502 C07c-120 C07c-121/30

Octene-nitrile derivs. having structural formula (I) (where n = 0 or 1, and if n = 0, R is =CH-CN, while if n = 1, R is



-CH₂CN, and Y is halogen, hydrocarbyl, an ether, ester, amine or phosphine gp. or similar), are prepared by using 3,7-dimethyl-3-hydroxy-6-octene-nitrile, (II), as starting matl. (I) are used in prepn. of perfumes, esp. for cosmetic industry, as perfumes and soaps, but also for detergents and cleansers. Geranonitrile and neronitrile, prepared by dehydration of (II), are perfumery ingredients. The acetyl deriv. of (II) is a strong, stable cpd. with strong smell, useful for stabilising perfume blends. Derivs. esp. where n = 0, are prepd. in quantitative yields and with high selectivity. Prevedello, A., Platoni, E. Bul. 6/15.2.79. 16.10.75. as 180263 (2pp)

VINN = ★ D23 82151B/45 ★SU -648-600
Vegetable oil primary cleaner - uses scraper sieve and sedimentation followed by centrifuge to improve mechanical impurities removal

VINNITSA OIL FAT 11.01.77-SU-444055

(28.02.79) C11b-03/16

Improved cleaning of vegetable oil from mechanical impurities at lower power costs is achieved by stages with the first one removing particles of 1-3 mm size. The second stage separates particles greater than 0.015-0.02 mm, and the third stage uses centrifugal straining with filtering layer formed by particles removed in the second stage.

The oil expressed from plants is fed to scraper conveyor fitted with a mesh bottom for the efficient removal of particles with diameter of 1-3 mm, and followed by a settling unit for eliminating small particles of the cake. The oil is then pumped to the auger-type straining centrifuge, a rotameter controlling oil addition when forming the filtration layer.

Kushnir, I. E., Ovcharenko, V. E., Demets, K. S. et al. Bul. 7/25.2.79. 11.1.77. as 444055 (3pp89)

FOOD = ★ D23 82269B/45 ★SU -649-468
Control of sepn. of free-flowing oil-contg. material into fractions - by varying electric field strength according to deviation of inter-electrode gap conductance from set value

FOOD IND AUTOMATION 20.12.76-SU-432674

J01 P41 (04.04.79) B03c-09

The previous automatic control process for sepn. of free-flowing materials into fractions, mainly in an electrostatic extractor, involves varying the electric field strength. For more effective extraction, the electric conductance of the medium in the inter-electrode gap is determined, and the field strength is varied according to any variation from set conductance. This increases the mean field strength and avoids stoppages in extraction of oil-contg. materials in oil and fat production.

Lyashchenko, A. D., Tkhorzhhevskii, V. V. Bul. 8/28.2.79. 20.12.76. as 432674 (3pp840)

DOWC D23 63841A/36 = US 4172-814
Hydrogenation of hydrocarbon(s) in water immiscible liq. phase - using aq. emulsion of metal contg. catalyst

DOW CHEMICAL CO 28.02.77-US-772874 (30.11.78-US-964996)

E14 H04 (H09) (30.10.79) *DT2808-561 + B01j-27/04 C10g-13/06

An organic substrate other than coal is hydrogenated by contacting it in a water-immiscible liq. phase with H₂ in the presence of a metal-contg. hydrogenation catalyst.

The catalyst is initially added to the water-immiscible

ase as an emulsion of a water soln. of a cpd. of the met-
in the liq. phase. The cpd. used is convertible to the
hydrogenation catalyst under conditions of hydrogenation.
ref. the metal cpd. used is ammonium heptamolybdate,
ch that 0.02-0.5% of molybdenum is present in the slurry
r. t. the substrate.

The substrate is hydrogenated to lower boiling prods. at
elevated temp. of 400-500°C, and pressure. The pro-
cess is esp. used for the liquefaction of coal. 30.11.78 as
4996 Div. ex 4136013 (5pp931)

NFL ★ D23 82451B/45 ★ US 4172-850
rganoleptic 2,6,6-trimethyl-1-acetyl-2 cyclohexene prepn. - by
selective catalytic hydrogenation of corresp. 1,3-cyclohexadiene
INT FLAVORS & FRAGR INC 01.12.78-US-965418
E15 (D13) (30.10.79) C07b-01 C07c-45

2, 6,6-Trimethyl-1-acetyl-2-cyclohexene (I) is prepd. by
catalytic hydrogenation of 1-acetyl-2,6,6-trimethyl-1,3-
cyclohexadiene (II) in presence of Pd/CaCO₃ or Pd/BaSO₄
catalyst, at 0-100°C and 1-100 atmos. pressure.

(I) is an intermediate in the prepn. of related cpds.;
many cpds., including intermediates, have desirable organo-
-leptic properties e.g. in perfumes, foodstuffs, chewing
gums, toothpastes, medicinal prods., tobacco and its sub-
-stitutes, flavouring compsns. etc. (I) is produced simply.
1.12.78 as 965418 (33pp1248)

D24: SOAP; SOAP DETERGENTS

NOTHING TO REPORT

D25: OTHER DETERGENTS

BENK D25 25868T/17 = DS 2048-913
o-aminoalkane-1,1-diphosphonic acid prodn - by reacting corresp.
nitrile with phosphorous acid in presence of hydrogen halide
HENKEL KG AUF AKTIEN 06.10.70-DT-048913
E11 F06 (31.10.79) *DT2048-913 C07f-09/38
Prepn. of 1-aminoalkane-1,1-diphosphonic acid complex-
ing agents of formula RC(NH₂)/[PO(OH)₂]₂ comprises re-
action of formula RCN with H₃PO₄ in the presence of hydro-
gen halide. In the formula, R is 1-12C alkyl.
The prods. are used to soften hard water, in purificn.
processes and esp. in the textile industries. 6.10.70 as
048913 (3pp047)

KAOS ★ D25 81188B/45 ★ GB 2019-825
stabilising sodium percarbonate - by treating with an aq. alkaline
earth metal salt soln.
KAO SOAP KK 28.04.78-JA-051763
E34 (07.11.79) C01b-15/10
Na percarbonate particles are stabilised by treatment with
an aq. soln. of one or more alkaline earth metal salts,
pref. in an amt. 0.07-0.3, esp. 0.1-0.2 mole per mole
of Na percarbonate.

The alkaline earth metal salt(s) used pref. has a higher
water sol. than the corresp. alkaline earth metal carbon-
ate, pref. salts are MgSO₄, MgCl₂, CaCl₂, SrCl₂ and
BaCl₂. Treatment is pref. carried out such that a thin
film of the salt is formed on the surface of the Na per-
carbonate, e.g. by spraying, mixing, etc.

Na percarbonate prod. has excellent high temp. and
high humidity storage stability; the moisture absorption
can be maintained at a very low level for a long time with-
out degradation of solubility or reduction in specific con-
tent of available O₂. 23.4.79 as 014135 (5pp314).

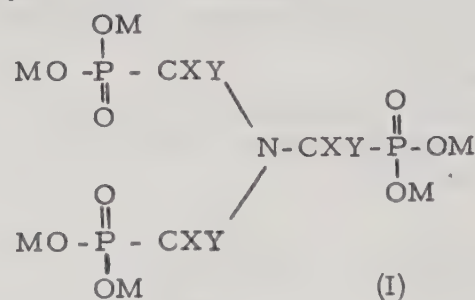
PROC ★ D25 81243B/45 ★ J5 4108-813
Detergent compsn. produced by atomising drying process -
comprises powdery mixt. contg. water soluble organic surfactant
and crystalline or amorphous aluminosilicate
PROCTER & GAMBLE CO 02.11.77-US-847983
E33 (25.08.79) C11d-03/60

Compsn. comprises powdery mixt. which contains (a) 5-40
wt. % of a aq. water soluble, organic surfactant (anionic,
nonionic and/or amphoteric) and (b) about 10 to 60 wt. % of
a crystalline aluminosilicate of formula: Na₂[(AlO₂)_z(SiO₂)_y]
· xH₂O --- (1) and/or an amorphous aluminosilicate salt of
formula: M₁(1. AlO₂. mSiO₂). In the formula, x is an inte-
ger y and z are integers ≥ 6, M is Na atom, K atom,
NH₄ group or substituted amonium group, 1 is a 0.5-2 and
m is 1.

The compsn. is used for cleaning a textile in an auto-
matic laundry machine. 2.11.78 as 135665 (12pp15)

KAOS ★ D25 81550B/45 ★ J5 4125-775
Bleaching agent compsn. - contg. sodium percarbonate and/or
tetra:sodium ethane-1,1,2,2-tetra:carboxylate adduct of hydrogen
peroxide and specified chelating agent
KAO SOAP KK 20.03.78-JA-031921
E34 F06 (E11 E12) (29.09.79) D061-03/02

Bleaching agent compsn. contains, as the essential ingredi-
ents (a) sodium percarbonate and/or tetrasodium ethane-
1,1,2,2-tetracarboxylate adduct of hydrogen peroxide, and
(b) ≥ 1 chelating agent of general formula (I), where each



of X and Y is H or 1-5C
alkyl; and M is H, alk-
ali metal, ammonium,
or 2-5C alkyl.

Bleaching compsn.
permits bleaching of
white ground of dyed
textile products without
causing discoloration of
the dyed (or printed)
parts. The additive (I)

hinders catalytic reaction of metal ion (esp. Cu⁺⁺) present
in the dye with H₂O₂ or peroxide to form reactive species
by which the discoloration is caused. 20.3.78 as 031921
(5pp173)

KAOS ★ D25 81551B/45 ★ J5 4125-777
Bleaching agent for textiles - contains sodium percarbonate and an
alkane poly:phosphonic acid (salt) to avoid discolouration of dyed
areas

KAO SOAP KK 20.03.78-JA-031923
E34 F06 (E11) (29.09.79) D061-03/02

Bleaching compsn. contains as the essential ingredients
(a) sodium percarbonate and (b) ≥ 1 alkanepolyphosphonic
acid and/or salt of formula X-(PO₃M₂)_n (I) (where X is
(CYZ)_m, Y is H or (m)ethyl; Z is H, OH or (m)ethyl; m
is 1-4, n is 2 or 3, and M is a counter-ion selected from
H, alkali metals and alkylolamines having 2-3C alkyl gr-
oup(s).

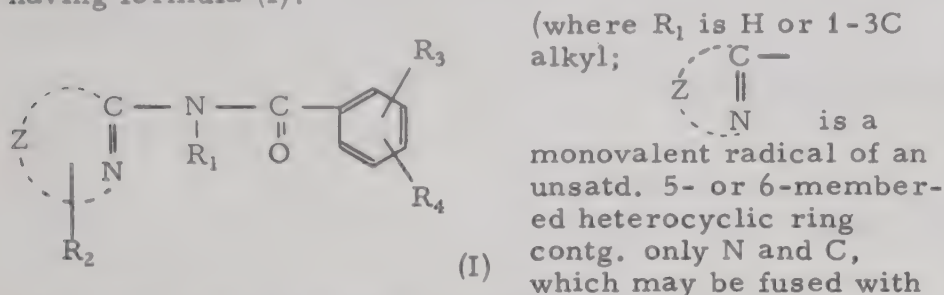
The bleaching compsn. permits bleaching of white
base of dyed textile products without causing discoloration
of the dyed (or printed) parts. (I) is capable of hindering
catalytic reaction of metal ion present in the dye with per-
oxide to form reactive species which causes the discolora-
tion.

Typical (I) is ethane-1,2-diphosphonic acid or methylene

-diphosphonic acid. Typically, the compsn. contains 40-99.9 wt. % of sodium percarbonate, 0.1-20 wt. % of (I), and any other necessary ingredient (e.g. builder). 20.3.78 as 031923 (6pp173)

KAOS D25 96565X/52 = J7 9032-644
Stabilising bleaching compsn. contg. inorganic peroxide cpd. - together with surfactants and builders by adding heterocyclic cpd.
KAO SOAP KK 04.06.75-JA-067268
E13 (E34) (16.10.79) *DT2622-761 C11d-03/32

Stable, bleaching cleansing agent mixt. consists of, by wt. 4 components: (A) 1-30%, w.r.t. (A)+(B)+(C), water-soluble anionic, nonionic and/or amphoteric surfactant; (B) 1-50(5-30)%, w.r.t. (A)+(B)+(C), inorganic peroxide cpd. capable of releasing oxygen in aq. soln.; (C) water-soluble neutral or alkaline inorganic builder-forming salts or organic builder-forming cpds. or their mixts., and (D) 0.001-5(0.01-3)%, on 100 pts.wt. (A)+(B)+(C), of ≥ 1 cpd. having formula (I):



Mixt. is used as powdered bleach for household and technical purposes. Incorporation of (D) improves peroxide storage-stability in compsn. Addn. of (I) does not colour the powdered compsn., which retains a good, white appearance. 4.6.75 as 067268. C11d 3/32 (16.10.79)

KAOS SOAP KK (9pp) (J51143010)

KAOS D25 06563Y/04 = J7 9032-645
Storage stable bleaching detergent powder compsns. - contg. oxalo bis(benzilidene hydrazide) derivs.

KAO SOAP KK 04.06.75-JA-067269

E14 (E37) (16.10.79) *J51143-011 + C11d-03/32

Stable bleaching detergent compsns. contain inorganic peroxides and cpds. of formula (I):



(where R_1, R_2 are H, 1-20C alkyl, phenyl or halogen, or R_1 and R_2 may combine to form benzo radical). Typical (I) are oxabis(benzylidenehydrazide), oxalobis(2- or 4-methylbenzylidenehydrazide), etc.

Addn. of the compsns. in amts. of 0.001-5 pts.wt. to 100 pts. wt. of powder detergent improves the stability of inorganic peroxides, prevents lowering of effective oxygen content caused by decompsn. during storage and helps maintain of bleaching effect. 4.6.75 as 067269.

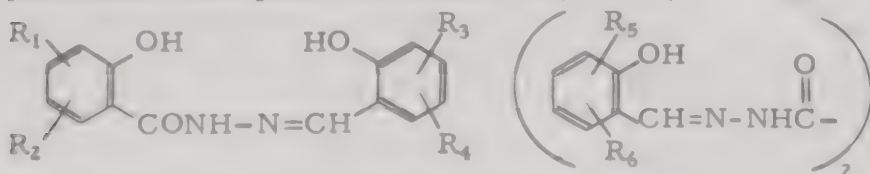
C11d 3/32 (16.10.79) KAO SOAP KK (4pp) (J51143011)

KAOS D25 06564Y/04 = J7 9032-646
Storage stable bleaching detergent powder compsns. - contg. N-salicylidene N-salicyl hydrazide and oxalo bis(hydroxy benzilidene hydrazide) derivs.

KAO SOAP KK 04.06.75-JA-067270

E14 (E37) (16.10.79) *J51143-012 + C11d-03/32

Stable bleaching detergent compsns. contain inorganic peroxides and cpds. of formulae (I) or (II):



(I)

(II)

(R_1-R_6 are H, 1-20C alkyl, alkoxy, phenyl or halogen; R_1 and R_2, R_3 and R_4, R_5 and R_6 may combine to form benzo radical). Typical cpds. used are N-salicylidene-N¹-salicylhydrazide, oxalobis-(salicylidenehydrazide), oxalbis-(2-hydroxy-5-methylbenzylidenehydrazide), etc.

Addn. of the compsns. in amts. of 0.001-5 pts. wt. to 100 pts.wt. of powder detergent improves the stability of inorganic peroxides, prevents lowering of the effective oxygen content by decompsn. during storage and helps maintain the bleaching effect. 4.6.75 as 067270.

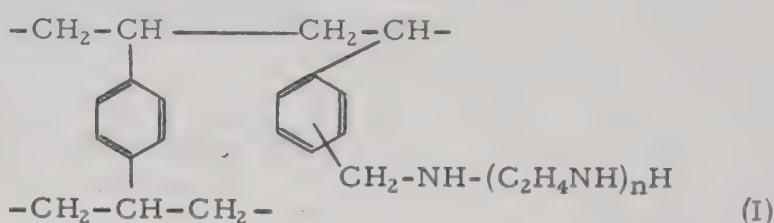
C11d 3/32 (16.10.79) KAO SOAP KK (5pp136) (J51143012)

KAOS D25 06798Y/04 = J7 9032-647
Bleaching detergent of excellent storage stability - contg. inorganic peroxide and chelate resin having copolymer of styrene and divinyl benzene as skeleton with polyaminoethyl functional gp.

KAO SOAP KK 06.06.75-JA-068328

A97 (A13) (16.10.79) *J51144-407 C11d-03/37

The chelate resin of formula (I):



(where n is ≥ 1) is obtd. by treating styrene-divinylbenzene copolymer with methyl chloromethyl ether in the presence of catalyst such as $ZnCl_2$, and further treating with polyethylenepolyamine. The chelate resin is added at 0.001-5 pts.wt. per 100 pts.wt. of bleaching detergent.

Inorganic peroxide is $2Na_2CO_3 \cdot 3H_2O_2$, $NaBO_3 \cdot 4H_2O_2$, $Na_4P_2O_7 \cdot 3H_2O_2$, etc., which is added at 1-50wt. % (pref. 5-30wt. %) on the detergent.

The detergent has pure white colour and excellent appearance. 6.6.75 as 068328. C11d 3/37 (16.10.79)

KAO SOAP KK (3pp) (J51144407)

KAOS D25 17004Y/10 = J7 9032-648
Liq. bleaching detergent compsn. - contg. microbially decomposed surfactant and alkali metal hypochlorite

KAO SOAP KK 14.07.75-JA-085961

E12 (E34) (16.10.79) *J52009-006 C11d-03/24 C11d-10/02 + C11d-01/14

The compsn. contains 3-7wt. % alkali metal hypochlorite and 0.5-8wt. % $R_1-CH(R_2)-CH_2OSO_3M$ (where R_1 and R_2 are 1-12C alkyl having a total no. of C of 8-14; and M is Li, Na or K).

If the concn. of alkali metal hypochlorite in the aq. soln. is too high, the solubility of the surfactant may be reduced. The extent of the redn. of effective chlorine may also be larger when the compsn. is preserved for a long time.

14.7.75 as 085961. C11d 10/02, 1/14, 3/24, 3/395 (16.10.79) KAO SOAP KK (4pp126) (J52009006)

FATS= ★ D25 82329B/45 ★ SU -649-743

Washing powder prodn. components mixer - using electromagnetic field with high speed rotating ferromagnetic particles of specified size to improve homogeneity

FATS RES INST 22.06.76-SU-375157

(28.02.79) C11d-11/02

The prodn. of washing powder is accelerated and the prod. quality is improved by the prepn. of mixt. of component followed by spray drying.

The mixt. is subject to treatment by ferromagnetic particles with diameters of 2.5-4mm and rotated at 2200-2600 rpm. in the electromagnetic field.

The method eliminates the use of additional equipment for homogenisation of the suspension, and increases the bulk weight or powder, as well as improves its washing capacity and solubility. The electromagnetic treatment lasts 1-5 sec., and the dispersion takes place when the mass exhibits maximum viscosity.

Grin, V. T., Mordovin, V. V. Bul. 8/28.2.79. 22.6.76. as 375157 (3pp89)

NS ★ D25 82508B/45 ★US 4172-954
y:carboxylic acid salts and their acids and ester(s) - useful as
nplexing agents for metal ions and detergency builders
MONSANTO CO 02.09.77-US-830294 (17.05.74-US-471088)
E19 (30.10.79) C07c-61/38 C07c-69/74
lycarboxylic acid salts of formula (I):
$$[\text{O}-\text{C}(\text{COOM})_2-\text{O}-\text{CH}_2\text{COOM}]_n$$
 (where M is alkali metal
ammonium; n is 1-3; and R is a 5-9C cycloalkane rad-
al) and their acids and esters are new.
The new cpds. are useful as complexing agents for
rious metal and/or alkaline earth metal ions and as
etergency builders.
US 4118420 claimed cpds. of formula (I), where R is a
3C ether radical, > 20C alkyl, alkenyl or alkynyl, or
20C alkanol. 2.9.77 as 830294 Div. ex 4118420 (+
5.3.76 - US - 670336)(990)

See Also

D16 J7 9032069
D21 BE 876057D21 BE 876055
D22 DS 2651465

D21 BE 876056

CPI INDEXES

ALERTING PATENTEE INDEX (II)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

In Country Alerting Bulletin only

M22

*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502-292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or ≠ sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U A97D15M14
*645 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
*654 49862X A88H01Q4
*655 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A-M cumulations of from a quarter up to 5 years are available as COM.

CALI

Nitrile rubber smooth rolled sleeve for well impression packer - also contg natural rubber, hydrated 49862X/26 *US 3963-654

CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01

Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying earth in dams 49433X/26 *DT 2554-327

CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02

CANA

Emulsifying agents of microbial origin - used esp. for oil spills, are made by cultivating a species of 48076X/26 *CA -990-668

CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180
Europe	150
France	740
Germany, W. unexamined	1050
Japan unexamined	845*
Netherlands unexamined	240
PCT	40
Research Disclosure	20
South Africa	100
Sweden	260
United Kingdom unexamined	600
	<u>3325</u>

Slow publishing

Canada	450
Germany, E.	100
Germany, W. examined	465
Japan examined	340*
Netherlands examined	60
Soviet Union	1200
Switzerland	260
United Kingdom examined	300
United States	1200
	<u>4375</u>

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140
Denmark	120
Finland	60
Norway	80
Portugal	30
	<u>430</u>

Slow publishing

Austria	125
Czechoslovakia	180
Hungary	35
Israel	40
Italy	155
Rumania	25
	<u>560</u>

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MV
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

- ABBO 20.03.78 ABBOTT LABORATORIES A96 B04 D16 J04 =SW 7902-389
Stable reagents for hepatitis testing - 69922B/39
- AGEN 12.10.76 AGENCY OF IND SCI TECH A97 D15 J01 (A26) =J7 9032-680
Heavy metal ion absorbing agent prodn. - 41441A/23
- AGRA- 28.04.78 AGRARTUDOMANYIEGYE C03 D13 *HU T017-110
Prepn. of feedstuffs from by-products and wastes - B/45
- AHSC 17.01.75 AMER HOSPITAL SUPPL CORP D22 =CA 1064-791
Double window surgical drape - 22387X/12
- AIDA/ 20.03.78 AIDA H B05 D16 *J5 4126-792
Fermentative prodn. of coenzyme/Q-10 - 81733B/45
- AIRG= 27.09.77 AIR GAS TURBO COOL D14 *SU -648-800
Food products freezing unit - 82209B/45
- AJIN 14.08.75 AJINOMOTO KK B05 D13 E14 =CH -613-687
Deformylation of (N)-formyl amino acid or peptide esters - 15844Y/09
- AKGO= 13.12.76 AS KIRG ORG CHEM A11 D22 *SU -648-564
Solid insoluble iodine-melamine-pectin complex - 82117B/45
- ALBR 11.04.75 BUSH BOAKE ALLEN LT D23 E17 *GB 1555-331
Homo-citronellol derivs. and their ester(s) - 81163B/45
- ALBR 29.05.75 BUSH BOAKE ALLEN LT D23 E17 =GB 1555-333
2,6-Dimethyl substd. heptane derivs. - 95568X/51
- ALFA 20.04.78 ALFA-LAVAL AB D13 =DT 2912-471
Gravity pressure extrusion to mfr. blocks of cheese from curds - 64736B/36
- ALFA 20.04.78 ALFA-LAVAL AB D13 =NL 7903-152
Gravity pressure extrusion to mfr. blocks of cheese from curds - 64736B/36
- ALFA 24.04.78 ALFA-LAVAL AB D15 J01 =DT 2916-580
Sludge centrifuge with automatic sludge discharge - 64574B/35
- ALKU 24.09.76 AKZO NV B04 D16 =HU T017-194
Peroxidase compns. stabilised with poly-valent metal ions - 23355A/13
- ALUM= 16.08.74 ALUMINIUM MAGNESIUM D15 J01 L02 *SU -649-659
Lifting device for revolving arms of rotary-rake thickener - 82322B/45
- AMAN 18.07.72 AMANO SEIYAKU KK D16 =J7 9032-068
Stachyose decomposing enzyme - 55869V/31
- AMCA 21.04.78 AMERICAN CAN CO A97 D22 F09 (A18 A23 A96) #DT 2817-604
Pre-moistened toilet tissue prepn. from nonwoven fabric - 67132A/38
- AMCA 28.04.78 AMERICAN CAN CO D14 E24 G02 =DT 2906-758
Jet printing ink for foods and food packaging - 73412B/40
- AMCA 28.04.78 AMERICAN CAN CO D14 E24 G02 =GB 2019-864
Jet printing ink for foods and food packaging - 73412B/40
- AMCY 18.04.78 AMERICAN CYANAMID CO A91 D15 (A14) =DT 2914-053
Dewatering lime disinfected sewage sludge - 56195B/30
- AMCY 18.04.78 AMERICAN CYANAMID CO A91 D15 (A14) =NL 7903-041
Dewatering lime disinfected sewage sludge - 56195B/30
- *AMFE= 18.08.76 A MEDICINE FEEDSTUF D13 *SU -648-190
Lactose-free milk based food for lactose allergic subjects - 81977B/45
- AMMA 17.03.78 AMF INC D18 =SW 7902-385
Reconstituted tobacco leaf contg. fibres, partic. hardwood - 52610B/29
- *ANCL 30.09.77 ANDERSON CLAYTON LTD D13 *US 4172-828
Protein isolation from defatted soybean flakes - 82437B/45
- ANIS 20.12.73 ANIC SPA D25 E12 =CH -613-943
(Alkali metal) alkylsulphonates prepn from olefins - 32472W/20
- ANIS 30.10.74 ANIC SPA D23 E19 =SU -648-085
Octene-nitrile derivs for perfumery use - 36385X/20
- ANVR 06.05.74 AGENCE NAT VALORISATION B04 C03 D16 =HU T017-211
Water-soluble extracts of corynebacteria - 75780W/46
- ANVR 21.09.76 AGENCE NAT VALORISATION A97 D16 =US 4172-764
Hybrid yeast strains prepd. from two parent strains - 42583A/24
- *APUK/ 04.11.75 APUKHTIN BA D14 *SU -648-195
Increased throughput feedstuffs extruder - 81981B/45
- *ARGI- 02.08.78 ARGILES AND MINERAUX D15 *BE -877-495
Biological denitrification of surface or effluent water - 80868B/45
- ARIA/ 25.01.78 ARIAS JV D15 =FR 2415-670
Prevention of corrosion and scaling inside water pipes - 52561B/29
- *AROM= 09.11.76 AROM OIL PLANT CULT D23 *SU -647-216
Container for collecting, transporting and processing flowers - 81965B/45
- ASAE 21.07.72 ASAH DENKA KOGYO D23 =J7 9032-447
Reversion-type oil-in-water emulsions - 08053W/05
- ASAG 22.05.75 ASAH GLASS KK D15 M14 =J7 9032-634
Acid and metal recovery from waste liquor contg. acid (salt) - 02810Y/02
- *ASAG 24.03.78 ASAH GLASS KK D15 E37 J03 *J5 4125-171
Deodorisation of gas or liq. contg. oxidisable odorous cpds. - 81368B/45
- ASAH 30.07.76 ASAH KASEI KOGYO D15 J03 =US 4172-779
Multistage electrodialysis of sea water or brine - 24200A/13
- ASAH 23.03.78 ASAH CHEMICAL IND KK D16 J04 =J5 4125-885
Membrane potential of vesicles determn. - 73829B/41
- *ASAH 24.03.78 ASAH CHEMICAL IND KK A88 D15 J01 *J5 4125-187
Sepn. of oil-free liq. from emulsion - 81384B/45
- ASAH- 23.03.78 ASAH ENG CO LTD D15 F09 J04 =SW 7902-343
Aq. salt soln. disposal - 72092B/40
- ASAM- 10.08.76 ASAMA KASEI KK D12 =J7 9032-058
Preservation and improving quality of food and drink - 26436A/14
- *ASBI= 17.03.77 AS USSR BIOLOG PHYS B04 C03 D16 *SU -649-752
Animal tissue cell culture propagator - 82333B/45
- ATCH= 21.09.76 AS TADZ CHEM INST A60 D22 E23 F06 #CH -613-987
Bactericidal mono:chloro:triazine dyes prodn. - 12719A/07
- *ATUP= 12.06.72 AS TURK PHYS TECH A88 D15 *SU -648-799
Solar still for desalination of salty desert water - 82208B/45
- *AUBO= 12.10.77 AS UKR BOTANY INST D16 *SU -648-605
Microbiological hydrolysis of vegetable materials - 82155B/45
- *AUCO= 10.03.77 AS UKR COLLOID CHEM D15 *SU -648-525
Regeneration of water purificn. coagulant from hydroxide based slime - 82079B/45
- *AUHY= 23.03.77 AS UKR HYDROBIOLOGY INST D15 *SU -648-526
Destroying blue-green algal metabolites in water detoxication - 82080B/45
- *AZIC 28.04.79 AZIENDE COLORI NAZIONALI A60 D18 E21 F06 (A23) *GB 2019-866
Soluble black tris:azo dye for leather and polyamide - 81200B/45
- BACT- 25.04.75 BACTEX INC B04 D16 =HU T017-212
Neisseria gonorrhoeae filament crystals and piline GC isolation, - 83025X/45
- BADI 18.09.74 BASF AG D23 E15 =CH -613-928
2,5,6,6-Tetramethylcyclohex-1-ene-1-yl-methyl ketone - 25812X/14
- BADI 26.04.78 BASF AG B05 D23 E17 =DT 2818-150
Prodn. of phytol and homologues from isophytol cpds. - 79382B/44
- *BARO/ 30.01.78 BAROUSSE P A96 D21 *FR 2415-439
Non-flaking coloured surface esp. for artificial fingernails - 81121B/45
- BATT 25.02.78 BATTELLE-INSTITUT EV A88 D15 J01 (A11 A14) =J5 4126-677
Composite membrane prodn. for hyperfiltration - 64857B/36
- BAUM- 26.11.76 BAUMGARTNER PAPIER D18 =CH -613-850
Cigarette filter having compartment filled with filter material - 40679A/23
- *BEAF 11.01.78 BEATRICE FOODS CO C03 D12 *US 4172-901
Denaturing comminuted food - 82485B/45
- *BECT 23.03.76 BECTON DICKINSON CO B07 D22 *US 4172-709
Anesthesiology bacterial filter in transparent housing - 82387B/45
- BEDD/ 21.04.78 BEDDING P M J D25 (D16) =GB 2019-721
Cleaning soln. for soft contact lenses - 79480B/44
- BEEC 20.04.74 BEECHAM GROUP LTD B02 C02 D16 =SU -648-117
Clavulanic acid and derivs. - 72840W/44
- BEEC 13.08.74 BEECHAM GROUP LTD A97 B04 D16 =HU T017-195
Supported enzymes recoverable from aq. media - 14942X/09
- *BEER= 17.06.74 BEER NON-ALCOHOL IN C03 D13 (D16) *SU -648-192
Cultivation of fodder yeasts on brewery wastes - 81978B/45
- *BEKI 18.03.77 BELORUSS KIROV TECHN INS D16 J01 *SU -648-601
Aerodynamic foam breaking unit - 82152B/45
- BENY 25.01.78 BENTLEY LABS D22 =FR 2415-456
Implant consisting of collagen coated carbon esp. fibres - 56534B/31
- *BERT- 05.04.78 BERTIN & CIE D15 J01 K07 *WP 7900-884
Regenerating liq. filters by automatically initiated program - 82528B/45
- BIER- 11.08.77 BIER-DRIVE AG A92 D16 =HU H002-477
Beer tank charging system - 16151B/09
- *BODE/ 27.06.75 BODELL F W D12 *CA 1064-850
Meat carcass carrier for overhead l/beam rail - 80892B/45
- BOEF 24.12.75 BOEHRINGER MANNHEIM GMBH B04 D16 =HU T017-239
Kinetic determination of enzyme substrates using coupled reactions - 45260Y/26
- BOEF 20.03.78 BOEHRINGER MANNHEIM GMBH A89 B04 D16 J04 =SW 7902-238
Analytical determn. of alpha amylase - 69916B/39
- BOEH 21.02.78 BOEHRINGER CH SOHN D25 =DK 7900-741
Foamable compsn. for cleaning heating elements - 63335B/35
- BOHN/ 28.01.78 BOHNKE B D15 =FR 2415-603
Installation for treating water by activated sludge process - 39027B/21
- BRAS- 30.01.78 BRASSERIES KRONENBOURG D16 E17 J04 =FR 2415-802
Analytical appts. for measuring alpha-di:ketone concn. - 25979B/14
- BRAX/ 28.04.78 BRAXTON EJ B04 D16 =GB 2019-919
Adsorption to obtain trace constituents esp. urokinase from urine - 66356B/37
- BRBL 26.07.74 BRAUNSCHWEIG MASCH D17 =DS 2436-044
Massecuite centrifuge for sugar refinery - 72515W/44
- BRTI 10.08.74 BRITISH TITAN LTD A41 D16 E32 J04 =CH -613-921
Particulate titanium dioxide carrier for active materials - 15243X/09
- BRUU/ 30.12.77 BRUUN B C03 D13 #HU T017-111
Plant fodder treatment process - 46178A/26
- *BRWI 15.06.78 BROWN & WILLIAMSON CORP D18 (D16) *BE -876-994
Treating tobacco to reduce the nitrate content - 80848B/45
- *BUCA/ 20.12.74 BUCALO L B04 D16 *US 4172-446
Apparatus for collecting body fluids - 82362B/45
- BUCH 27.07.76 BUCHERGUYER MASCH D15 =CH -613-872
Aeration of foaming liquors - 10641A/06
- CALI 31.05.77 CHEVRON RESEARCH CO C02 D13 E13 (E16) =GB 1555-288
Increasing microbial cellulose fermentation rate - 72263A/40
- *CAMP/ 27.01.78 CAMPOLO A D15 J01 *FR 2415-477
Condenser for distn. plant partic. for aromatic plants - 81125B/45

- CARL-11.06.76 CARLE & MONTANARI D14 =CH-613-902
Transfer mechanism to discharge moulded confectionery prods - 65050Y/37
- CARL-06.08.76 CARLE & MONTANARI D13 =CH-613-846
Appts. for removing chocolates from moulds onto moving belt - 12571A/07
- CARL-17.03.77 CARLE & MONTANARI D13 =CH-613-845
Automatic prod. wt. control for e.g. chocolate moulding machine - 57578Y/33
- CELA 13.03.78 CELANESE CORP A97 C02 D18 E13 (D13) =J5 4126-799
Polymer encapsulated alkaloid(s) esp. tobacco alkaloid(s) - 68596B/38
- CELA 13.03.78 CELANESE CORP A97 D18 (A18) =J5 4126-800
Tobacco substitute contg. cellulose deriv. - 70271B/39
- CENC-20.04.78 CENCO INSTRUMENTEN D17 E13 J04 =NL 7804-208
Sepn. and analysis of saccharide mixt. - 79598B/44
- CENS 10.09.75 CENTRAL SOYA KK C03 D13 =CA 1064-759
Animal feedstuff mixer and extruder - 05736Y/04
- *CHAI=25.04.77 CHAI-GRUZIYA IND ASSOC D16 (D14) *SU-648-606
Vegetable food material e.g. grapes, crusher - 82156B/45
- CHAZ/10.09.74 CHAZAN R A97 D25 (D22) =CA 1064-798
Semi-solid germicidal cleaning compsn. - 22916X/13
- CHIM-27.01.78 CHIMICASA GMBH B05 C03 D16 (D13) =FR 2415-463
Terpene(s) steam-distilled from aromatic plants - 40655B/22
- CHIN 25.03.78 CHINOIN GYOGYSZER D16 (D13) #J5 4126-786
Plant waste conversion to protein by hydrolytic process - 73096A/41
- CHOK-07.04.72 CHOKAI MISO KK D13 (D16) =J4 8099-395
Prepn. of leaven for brewing miso - 81864B/45
- *CHOK-07.04.72 CHOKAI MISO KK D13 (D16) *J7 9032-079
Prepn. of leaven for brewing miso - 81864B/45
- *CHUS 17.03.78 CHUGAI PHARMACEUTICAL KK B02 D16 *J5 4126-793
Antibiotic 49A produced by Streptomyces fungi - 81734B/45
- CIBA 03.10.75 CIBA GEIGY AG A97 B02 C02 D16 =CH-613-992
Antifungal antibiotic papulacandin - 74329X/40
- CIBA 00.00.78 CIBA GEIGY AG A97 B02 C02 D16 =CH-613-993
Antifungal antibiotic papulacandin - 74329X/40
- CIBA 21.02.78 CIBA GEIGY AG A88 D15 J01 (A11 A14) =J5 4126-294
Semipermeable membrane polymer esp. for reverse osmosis - 63424B/35
- CIGA 21.04.78 CIGARETTE COMPONENT LTD D18 F07 =DT 2914-892
Cigarette filter additives carried on preimpregnated threads - 64740B/36
- CIGA 21.04.78 CIGARETTE COMPONENT LTD D18 F07 =NL 7903-179
Cigarette filter additives carried on preimpregnated threads - 64740B/36
- *CIST 27.07.78 CORNELIUS CO A88 D14 *US 4172-669
Mixing and dispensing machine for food concentrates - 82379B/45
- *COCH/18.04.78 COCHARD M A89 D16 J04 *DT 2915-145
Moulded, transparent plate used in biological agglutination study - 81082B/45
- COLG 30.12.74 COLGATE PALMOLIVE CO A97 D25 =CA 1064-799
Machine-washing textiles using washing auxiliaries - 52523X/28
- COLG 08.08.75 COLGATE PALMOLIVE CO D22 F04 =CH-613-612
Disposable absorbent pad - 68442X/36
- COLG 03.11.75 COLGATE PALMOLIVE CO D22 =CH-613-851
Tab fastener for disposable diaper - 10895Y/06
- COLG 06.03.78 COLGATE PALMOLIVE CO A96 D21 (A11) =J5 4126-741
Heat generating dentifrice - 52463B/28
- COLG 17.03.78 COLGATE PALMOLIVE CO A97 D25 E19 =J5 4125-207
Conc. single phase liq. detergent-softener compsn. - 17866B/09
- COLG 17.03.78 COLGATE PALMOLIVE CO A97 D25 E19 =SW 7900-098
Conc. single phase liq. detergent-softener compsn. - 17866B/09
- *COLG 13.10.78 COLGATE PALMOLIVE CO B05 D21 *BE-877-516
Stable aq. compsn. for re-mineralising dental enamel - 80873B/45
- *COMM=10.03.77 COMMUN WATER SUPPLY D15 E33 *SU-648-529
Treatment of hydroxide residue from water purificn. plants - 82083B/45
- *COMM=25.03.77 COMMUN WATER SUPPLY D15 *SU-648-528
Purification of domestic or industrial aq. effluent - 82082B/45
- COPE-23.11.77 COPEF D15 J01 #US 4172-789
Separator for settling suspended solids in liquids - 42515B/23
- CORG 24.02.78 CORNING GLASS WORKS D15 =J5 4124-557
BOD determ. and processing of organic waste in aq. medium - 65107B/36
- CORG 24.02.78 CORNING GLASS WORKS D15 E17 J01 (E36) =J5 4126-678
Porous hydrophobic inorganic membrane - 65097B/36
- CORP 02.10.72 CPC INTERNATIONAL INC D16 E13 =DS 2365-722
Enzymatic isomerisation of dextrose to levulose - 30106V/16
- CORP 11.10.73 CPC INTERNATIONAL INC D11 =CH-613-848
Flavoured food paste for slicing and use on bread - 29056W/18
- CORP 25.11.74 CPC INTERNATIONAL INC D17 J08 =CH-613-874
Fluid bed reactor with heat exchange - 42406X/23
- *COUE 26.04.78 COULTER ELECTRONICS INC B04 D16 J04 *GB 2020-008
Testing chamber for bio-hazardous substance falling as droplets - 81224B/45
- *CROK 20.03.78 NIPPON CROWN CORK A92 D13 *J5 4126-188
Carbonated drink container - 81591B/45
- *CSIR 16.03.78 COMMONWEALTH SCIENT ORG A91 D15 *J5 4125-185
Purificn. of brine water using amphoteric ion exchange resin - 81382B/45
- CUNN/25.04.77 CUNNINGHAM NT D16 #CA 1064-842
Ethanol prodn. by cereal fermentation - 52100Y/29
- DAIL 17.08.72 DAICEL KK A88 D18 E17 F04 (A11) =DS 2341-686
Cellulose acetate fibre cigarette filter - 19774V/11
- *DAIL 22.04.78 DAICEL KK A88 D18 (A11) *DT 2916-062
Cellulose acetate fibres cigarette filter - 81098B/45
- *DAIR=18.08.76 DAIRY IND RES INST D13 *SU-648-190
Lactose-free milk based food for lactose allergic subjects - 81977B/45
- *DAIZ 27.03.78 DAIDO TOKUSHOKO KK D15 E19 *J5 4127-150
Treating soln. contg. organic reductive substances - 81752B/45
- DALM-03.11.76 DALMOR D12 =CA 1064-657
Machine to extract edible muscles from crustacea - 19714A/11
- *DAMB-20.12.78 DAMBACH-INDUSTRIE AN D16 *DS 2854-956
Multideck compositing tower - 80920B/45
- DAVI/25.11.75 DAVIS RD D16 =GB 1555-378
Nutrient compsn. - 49648Y/28
- DEGS 20.09.76 DEUTSCHE GOLD & SILBER D15 E32 (E19) =US 4172-784
Cadmium separation from water contg. chelating agents - 23489A/13
- DEGS 20.09.76 DEUTSCHE GOLD & SILBER D15 E32 M13 (E13) =US 4172-785
Copper pptn. from solns. contg. chelating agent - 23493A/13
- *DEVA/31.08.78 DEVAULT Z P~ D21 *US 4172-867
Making dental prosthesis wax replica - 82465B/45
- DOUW 15.10.76 DOUWE EGBERTS KON D14 J01 =GB 1555-357
Separator for crystalliser mother liquor - 30471A/17
- DOWC 30.11.78 DOW CHEMICAL CO D23 E14 H04 (H09) =US 4172-814
Hydrogenation of hydrocarbon(s) in water immiscible liq. phase - 63841A/36
- *DUNH/26.02.75 DUNHILL P A96 B01 D16 *GB 1555-004
Oxidising hydroxyl gps. in steroid(s) to oxo gps. - 81147B/45
- *DURA/26.04.78 DURAN V D13 *DT 2915-038
Cooking liq.-absorbing food in protective sheath - 81079B/45
- DURA/26.04.78 DURAN V D13 =GB 2019-710
Cooking liq.-absorbing food in protective sheath - 81079B/45
- DYNN 29.04.78 DYNAMIT NOBEL AG D15 E33 F09 L02 =GB 2019-823
Directly usable alkaline aluminate prodn. in high yield - 66375B/37
- *EBAI 24.03.78 EBARA INFILCO KK D15 *J5 4127-148
Treatment of night soil-polluted water - 81750B/45
- *ECKA-16.10.78 ECKART J & SOHNE D15 *DS 2844-934
Appts. for aeration of liq. sewage - 80918B/45
- *EMEL/21.04.75 EMEYANOV BV D15 *SU-648-530
Industrial waste water purificn. - 82084B/45
- *EPID=18.01.77 EPIDEMOLOGY MICROBI B04 D16 *SU-649-750
Faecal sample microbiological analysis - 82332B/45
- ERAP 08.03.78 SOC NAT ELF AQUITA A28 C03 D15 F06 (A87 A91) =J5 4125-290
Addition polymer with lateral beta-hydroxy poly:sulphonium gps. - 66337B/37
- *EROK/27.01.76 EROKHIN PN D15 *SU-648-524
Portable solar still for desalination of sea water etc. - 82078B/45
- ESSO 14.04.78 EXXON RES & ENG CO D16 E13 =BE-875-511
Lower alpha-olefin, esp. propylene or diene epoxidation - 79327B/44
- ESSO 14.04.78 EXXON RES & ENG CO D16 E17 =DT 2915-106
Methyl ketone prodn. from n-alkane sec. alcohol - 75324B/42
- ESSO 14.04.78 EXXON RES & ENG CO C03 D16 (D13) =DT 2915-107
Microbial cells prodn. from methylotropic microorganism strains - 77805B/43
- FALL/19.11.76 FALLIS AG B01 D13 E17 =CA 1064-907
Isolation of cholesterol from egg powder - 38812A/22
- FARB 04.02.76 BAYER AG D21 =GB 1555-204
Sun-tanning preps. having high protection factor - 57771Y/33
- FARB 09.09.76 BAYER AG D15 =GB 1555-176
Treating waste water contg. organic matter by oxidn. - 19659A/11
- FARB 14.02.78 BAYER AG A26 C02 D17 E13 (A25 A60) =J5 4125-700
Azulminic acid stabilised with carbonyl cpds. - 61658B/34
- FARB 17.03.78 BAYER AG D15 =J5 4127-151
Biochemically reducing (in)organic materials in waste water etc. - 71922B/40
- *FARB 18.04.78 BAYER AG D21 E14 *DT 2816-819
Cosmetic light-protective compsn. - 80936B/45
- *FARB 27.04.78 BAYER AG D15 E14 *DT 2818-680
Purifying waste waters contg. nitro-hydroxy aromatic cpds. - 81028B/45
- FARH 01.06.73 HOECHST AG B03 D13 E13 =CH-613-960
3,4-Dihydro-1,2,3-oxa-thiazin-4-ones prepn - 88133V/51
- FARH 10.10.75 HOECHST AG A88 D18 F09 (A11 A82) =DS 2660-142
Cigarette filter contg. modified paper - 27532Y/16
- *FATS=22.06.76 FATS RES INST D25 *SU-649-743
Washing powder prodn. components mixer - 82329B/45
- *FERM=12.10.77 FERMENTATION PRODTS D16 *SU-648-605
Microbiological hydrolysis of vegetable materials - 82155B/45
- FIRM 30.04.65 FIRMENICH SA D13 E13 #DS 1793-844
Synthetic flavour - 54472S/34
- FIRM 30.04.65 FIRMENICH SA D13 E13 #DS 1793-845
Synthetic flavour - 54472S/34
- *DAGM-26.04.78 DAGMA DEUT AUTOMATE D15 *DS 2818-283
Water imcreanation with carbon dioxide - 80907B/45

- FIRM 13.05.76 FIRMENICH SA B05 D23 E15 (D13) = CH -613-619
(2)-(N)-alkyl-cyclopentanone derivs. - 85082Y/48
- FIRM 16.03.78 FIRMENICH SA B02 D13 E13 = J5 4126-777
1,6-Naphthyridine and alkyl derivs. - 72125B/40
- FISH- 29.01.76 FISHER SCIENTIFIC B04 D16 = HU T017-193
Extracting membrane or surface antigens - 54082Y/31
- FISS/ 22.06.72 FISSOLO M F D13 = DS 2329-172
Liq filled chocolate bonbon prodn - 80810U/52
- FMCC 25.01.78 FMC CORP D15 #FR 2415-605
Eliminating cyanurate cpds. from waste water - 56782A/32
- FOOD- 06.11.75 FOOD TECHN PROD C03 D13 E12 = CA 1064-761
Hay or alfalfa fodder treatment with sodium diacetate - 18235Y/11
- FOOD= 20.12.76 FOOD IND AUTOMATION D23 J01 *SU -649-468
Control of sepn. of free-flowing oil-contg. material into fractions - 82269B/45
- FUJII 07.03.72 FUJISAWA PHARM KK C03 D16 H04 = J7 9032-071
Ovalic acid for promoting rice root growth - 14257V/08
- FUJII 07.03.72 FUJISAWA YAKUHIN KO B02 C02 D16 H04 = J7 9032-074
3-(2-(3-oxo)indoliny) propionic acid prepn - 14259V/08
- FUKU/ 23.03.78 FUKUSHIMA H D13 (D16) *J5 4126-794
White seasoning liquor prodn. - 81735B/45
- GABA 28.04.75 GABA AG B03 D21 = GB 1555-106
Plaque inhibiting oral and dental prepn. - 86346X/46
- GABA 28.04.75 GABA AG B03 D21 = GB 1555-107
Plaque inhibiting oral and dental prepn. - 86346X/46
- GABA 28.04.75 GABA AG B03 D21 = GB 1555-108
Plaque inhibiting oral and dental prepn. - 86346X/46
- GELS 10.06.75 GELSENBERG MANNESMA D15 = CH -613-677
Lorry-mounted purification plant for waste waters - 81253X/44
- GENE= 29.06.76 GENETICS & IND MICR B02 D16 = HU T017-210
Inosine prepn. - B/09
- GIAM/ 27.04.78 GIAMMARCO G D15 J01 *GB 2019-737
Steam desorption of gases from liq. - 81176B/45
- GIVA 03.05.75 GIVAUDAN L & CIE SA D17 E13 (D16) = CH -613-722
Fructose prepn. by glucose isomerisation - 87284X/47
- GIVA 00.00.78 GIVAUDAN L & CIE SA D23 E13 (D13) = CH -613-699
Perfumes and flavours contg. theaspiran - 74357X/40
- GLAX 26.04.78 GLAXO GROUP LTD A97 B04 D16 *BE -875-844
Acremonium chrysogenum strains for cephalosporin prodn. - 80819B/45
- GLED/ 18.04.78 GLEDITZSCH I D23 = GB 2019-879
Sepn. of untreated animal fat into water grease, and tissue - 64727B/36
- GLED/ 18.04.78 GLEDITZSCH I D23 = NL 7902-876
Sepn. of untreated animal fat into water grease, and tissue - 64727B/36
- *GOLD/ 07.08.74 GOLDENFON A K A97 D15 (A25) *SU -648-527
Removal of petroleum prods. or vegetable oil from waste water - 82081B/45
- GOTZ- 03.05.77 GOTZELMANN KG D15 M11 = US 4172-780
Recovery of metal from effluent in electrolytic process - 85247A/47
- GOUP/ 25.01.78 GOUPIL J J D21 E13 = BE -877-463
8-Hydroxy quinoline deodorising agent - 81122B/45
- *GOUP/ 25.01.78 GOUPIL J J D21 E13 *FR 2415-457
8-Hydroxy quinoline deodorising agent - 81122B/45
- *GPOL= 25.04.77 GEOR POLY D16 (D14) *SU -648-606
Vegetable food material e.g. grapes, crusher - 82156B/45
- *GREC 20.03.78 GREEN CROSS CORP A96 B04 D16 *J5 4126-788
Human lysozyme prepn. - 81730B/45
- *GUAR/ 04.08.77 GUARNIERI M B05 D15 E19 K08 *US 4172-706
Detection and measurement of carbonyl cpds. in aq. solns. - 82385B/45
- HAAR 30.11.73 HAARMANN & REIMER GMBH D23 E15 = DT 2366-306
4-Tricyclo-decyl-8-butanal perfume - 39566W/24
- *HART/ 22.03.78 HARTMANN K D12 *DT 2844-003
Deep frozen food block slicing - 81056B/45
- HAUN 07.04.78 HAUNI-WERKE KORBER KG A88 D18 F07 (A11) = GB 2019-709
Cigarette filter tip strand machine - 77506B/43
- HAYB 14.10.71 HAYASHIHARA SEIBUTS B02 D16 = J7 9032-073
Water-sol derivs of vitamin p prepd from rutin - 55317U/38
- *HEBD/ 20.03.78 HEBDING H D15 J01 *DT 2812-042
Separator to break oil-water emulsions - 80926B/45
- HELV- 15.02.74 HELVISOL AG A60 D15 (D16) = CH -613-920
Filler prepn from composted refuse - 60596W/37
- *HENE/ 19.05.78 HENEBRY J P D12 *US 4172-305
Pork belly hanger for bacon mfr. - 82345B/45
- HENK 06.10.70 HENKEL KG AUF AKTIEN D15 E11 = DS 2048-912
Prepn of 1-amino alkane-1,1-diphosphonic acids - 25409T/16
- HENK 06.10.70 HENKEL KG AUF AKTIEN D25 E11 F06 = DS 2048-913
1-aminoalkane-1,1-diphosphonic acid prodn - 25868T/17
- HENK 27.08.73 HENKEL KG AUF AKTIEN B03 C01 D13 E11 (D15 D21 D25) = CH -613-979
Azacycloalkane-2,2-diphosphonic acids - 17441W/11
- HENK 28.06.74 HENKEL KG AUF AKTIEN D24 = CH -613-721
Marbled toilet soap mfr. - 04073X/03
- HENK 04.07.74 HENKEL KG AUF AKTIEN D25 = CH -613-989
Phosphate-deficient detergents and cleansers - 05882X/04
- HENK 29.08.74 HENKEL KG AUF AKTIEN D25 E36 = CH -613-990
Conc fluid detergent compsn - 18824X/11
- HENK 23.07.76 HENKEL KG AUF AKTIEN B05 C03 D13 (B04 C01 D16) = HU T017-113
Growth promoting animal feed - 08537A/05
- HENK 23.03.78 HENKEL KG AUF AKTIEN D21 E23 = DK 7900-912
Hair dyeing compsns. - 72134B/40
- HENK 25.03.78 HENKEL KG AUF AKTIEN D21 E13 = DK 7900-911
Hair dyeing compsns. - 72133B/40
- HENK 17.04.78 HENKEL KG AUF AKTIEN B01 D16 = BR 7902-322
17-C-Steroid alpha-propionic acid derivs. prodn. - 79388B/44
- HENK 24.04.78 HENKEL KG AUF AKTIEN A97 D25 E19 F06 (A25) = DT 2817-834
Liquid washing product for hand or machine washing - 79104B/44
- HENK 24.04.78 HENKEL KG AUF AKTIEN A97 D25 E19 F06 (A25) = NL 7902-609
Liquid washing product for hand or machine washing - 79104B/44
- HIGA- 25.12.75 HIGASHIKOMA GIJUTSU D16 = J7 9032-077
Seishu rice liquor prepn. - 58417Y/33
- *HITA 22.03.78 HITACHI KK D15 K07 *J5 4125-400
Treatment of drained laundry liq., esp. from nuclear plants - 81464B/45
- *HITG 22.03.78 BABCOCK-HITACHI KK D15 J09 *J5 4124-553
Incineration of e.g. urban sewage sludge - 81254B/45
- *HITG 22.03.78 BABCOCK-HITACHI KK D15 J01 *J5 4124-554
Dehydration of sludge - 81255B/45
- *HITK 22.03.78 HITACHI METAL KK D15 E31 *J5 4124-871
Treating calcined ash by/produced in calcining waste sludge - 81315B/45
- HOFF 02.10.75 HOFFMANN-LA ROCHE SA D13 = CH -613-609
Protecting food additives e.g. vitamins and carotenoids - 25594Y/15
- HOFF 27.02.78 HOFFMANN-LA ROCHE AG A96 B04 D16 J04 = J5 4124-797
Immunochemical assay of LDH-1 isoenzyme in serum - 65128B/36
- *HOFF/ 19.04.78 HOFFGEN G A82 D11 (A26) *DT 2817-001
Yle pastry baking tin - 80944B/45
- *HOHN 25.03.78 HOHNEN OIL KK B04 D23 *J5 4126-206
Preventing brownish discolouration of phospholipid during heating - 81594B/45
- *HOHN 27.03.78 HOHNEN OIL KK D23 E12 (D13) *J5 4127-408
Heating phospholipid dissolved or dispersed in fatty oil - 81771B/45
- *HOLT/ 19.04.78 HOLTER H D15 J01 *DT 2816-979
Deodorisation of waste gas e.g. from sewage treatment plants - 80940B/45
- *HOLZ- 12.10.78 MASCH HOLZ GMBH D15 *DT 2844-379
Liquid manure agitator - 81057B/45
- *HOPK/ 19.04.78 HOPKINS C H D12 *US 4172-306
Crab leg opening utensil - 82346B/45
- ICIL 19.05.76 IMPERIAL CHEM INDS LTD B04 C03 D16 = HU T017-115
Aureolic acid type cpds. used as animal growth promoters - 82986Y/47
- ICIL 21.02.78 IMPERIAL CHEM INDS LTD A31 D16 J04 = J5 4126-675
Chemical processes using thin-film reactor - 65015B/36
- ICIL 21.02.78 IMPERIAL CHEM INDS LTD A31 D16 J04 = J5 4126-676
Chemical processes using thin-film reactor - 65015B/36
- *ICIL 16.03.78 ICI AUSTRALIA LTD A91 D15 *J5 4125-185
Purificn. of brine water using amphoteric ion exchange resin - 81382B/45
- ICIL 23.03.78 IMPERIAL CHEM INDS LTD A25 D15 H03 (A97 H08) = DK 7901-118
Surfactant compsn. for emulsifying oils in aq. media - 72160B/40
- *IHLE- 27.04.78 IHLE ING GMBH D15 *DT 2818-412
Disinfecting and/or removing algae from water - 81000B/45
- *IIDA/ 20.03.78 IIDA K D15 *J5 4124-558
Reducing COD and BOD of water - 81256B/45
- INFL 07.08.73 INT FLAVORS & FRAGR INC D13 E13 = SU -648-100
Thiafuran and furanthiol flavouring agents for food - 14727W/09
- INFL 23.10.73 INT FLAVORS & FRAGR INC D23 E17 (D13 D18) = CH -613-847
Cis-2-methyl-3-pentenoic acid from methyl acetylene - 30925W/19
- INFL 17.04.74 INT FLAVORS & FRAGR INC D14 E15 = CH -613-926
2-(4-Hydroxy-4-methylpentyl) norbornadiene - 39157W/23
- *INFL 01.12.78 INT FLAVORS & FRAGR INC D23 E15 (D13) *US 4172-850
Organoleptic 2,6,6-tri:methyl-1-acetyl-2 cyclohexene prepn. - 82451B/45
- *INOZ 23.03.78 INOUE JAPAX RES INC D15 E17 *J5 4125-865
Sepn. of metal powder, cuttings, etc. from metal working waste water - 81568B/45
- INSP 13.04.78 INST PASTEUR B04 D16 J04 = DT 2915-082
Identification of nucleic acid fragments - 77171B/43
- INVA- 02.06.76 INVAP ETAB INVENT B04 D21 (D22) = CH -613-618
(Derma)-pharmaceutical and cosmetic elastin compsns. - 86570Y/49
- IONI 19.04.78 IONICS INC D13 = DT 2846-502
Concn. of whey protein - 29388B/15
- IONI 19.04.78 IONICS INC D13 = NL 7812-251
Concn. of whey protein - 29388B/15
- *ISHI/ 23.03.78 ISHIZUKA H A88 D15 J01 *J5 4124-874
Sepn. of solute from solvent - 81318B/45
- *IVAN/ 28.03.77 IVANKIN M T D18 *SU -648-613
Preserving fresh hides e.g. pig skins - 82163B/45

- * JAEG- 30.01.78 JAEGER D15 J01 M11 *FR 2415-832
Detector and electronic circuit to control redox reaction - 81145B/45
- * JAOR 24.03.78 JAPAN ORGANO KK D15 E37 *J5 4125-170
Deodorising gas contg. e.g. ammonia, hydrogen sulphide, mercaptan etc. - 81367B/45
- JOBB 19.06.75 SOC JOB ANC ETAB BARDOU D18 F07 =GB 1555-252
Cigarette filter manufacturing process - 70476X/38
- JOHJ 16.01.75 DEVRO INC A97 D12 (A11 A32) =CH -613-844
Edible sausage skins - 58111X/31
- JOHJ 27.01.78 JOHNSON & JOHNSON D22 =FR 2415-433
Disposable diaper with reinforced corners - 70356B/39
- JOHJ 22.03.78 JOHNSON & JOHNSON A94 D22 F04 (A96) #SW 7803-315
Water absorbent and retentive matted fibre material - 75430B/42
- JOHJ 11.04.78 JOHNSON & JOHNSON A97 D12 (A11) =BR 7902-237
Stabilising collagen films esp. sausage skins against fungi - 77664B/43
- * JOHJ 05.05.78 JOHNSON & JOHNSON A97 D21 E11 (D25) *BE -876-055
Novel phospho-betaine(s) and phosphitane(s) - 80842B/45
- * JOHJ 30.11.78 JOHNSON & JOHNSON A97 D21 E11 (D25) *BE -876-056
Detergent and cleaning compsns. esp. shampoos - 80843B/45
- * JOHJ 30.11.78 JOHNSON & JOHNSON A97 D21 E11 (D25) *BE -876-057
Detergent compsns. contg. phospho-betaine(s) or phosphitane(s) - 80844B/45
- JOHS 26.01.78 JOHNSON S C & SONS INC D21 E33 (E32) =FR 2415-458
Deodorant and/or antiperspirant stick compsn. - 58550B/32
- * KABI/ 20.08.74 KABIROVE G D18 *SU -648-610
Skin or fur stretching frame - 82160B/45
- * KANF 15.03.78 KANEGAFUCHI KAGAKU B03 D16 *GB 2019-835
N-carbamoyl-D-thienylglycine prepn. - 81190B/45
- KAOS 06.03.75 KAO SOAP KK D11 =J5 1125-769
Harusame prodn. from extruded cords of starch compsn. - 81860B/45
- * KAOS 06.03.75 KAO SOAP KK D11 *J7 9032-059
Harusame prodn. from extruded cords of starch compsn. - 81860B/45
- KAOS 04.06.75 KAO SOAP KK D25 E13 (E34) =J7 9032-644
Stabilising bleaching compsn. contg. inorganic peroxide cpd. - 96565X/52
- KAOS 04.06.75 KAO SOAP KK D25 E14 (E37) =J7 9032-645
Storage stable bleaching detergent powder compsns. - 06563Y/04
- KAOS 04.06.75 KAO SOAP KK D25 E14 (E37) =J7 9032-646
Storage stable bleaching detergent powder compsns. - 06564Y/04
- KAOS 06.06.75 KAO SOAP KK A97 D25 (A13) =J7 9032-647
Bleaching detergent of excellent storage stability - 06798Y/04
- KAOS 14.07.75 KAO SOAP KK D25 E12 (E34) =J7 9032-648
Liq. bleaching detergent compsn. - 17004Y/10
- KAOS 25.01.78 KAO SOAP KK A97 D25 E33 =FR 2415-660
Detergent compsn. for washing textiles - 56577B/31
- * KAOS 20.03.78 KAO SOAP KK D25 E34 F06 (E11 E12) *J5 4125-775
Bleaching agent compsn. - 81550B/45
- KAOS 20.03.78 KAO SOAP KK D25 E19 F06 =J5 4125-776
Bleaching compsn. for patterned or coloured clothes - 72077B/40
- * KAOS 20.03.78 KAO SOAP KK D25 E34 F06 (E11) *J5 4125-777
Bleaching agent for textiles - 81551B/45
- * KAOS 28.04.78 KAO SOAP KK D25 E34 *GB 2019-825
Stabilising sodium percarbonate - 81188B/45
- * KAOS 28.04.78 KAO SOAP KK D23 E15 *GB 2019-841
8-Exo-hydroxymethyl-endo-tri:cyclo(5.2.1.02,6) decane(s) - 81193B/45
- * KASI/ 05.10.76 THAMBAIAH KASINATHAN D23 *GB 1555-128
Palm oil prodn. - 81154B/45
- KATA- 12.12.75 KATAYAMA KAGAKU KOG A97 C03 D22 F09 =J7 9032-042
Protecting wood from teredo in sea water - 54649Y/31
- * KIEN= 10.03.77 KIEV ENG CON INST D15 *SU -648-525
Regeneration of water purificn. coagulant from hydroxide based slime - 82079B/45
- * KIFO= 18.07.77 KIEV FOOD IND INST D16 *SU -649-744
Beer prodn. mash separator - 82330B/45
- * KIFO= 21.11.77 KIEV FOOD IND TECHN D17 *SU -648-602
Microbiological nutrient medium prodn. - 82153B/45
- * KIGE= 23.03.77 KIEV GEN COMM HYGIE D15 *SU -648-526
Destroying blue-green algal metabolites in water detoxication - 82080B/45
- * KIME= 07.07.77 KIEV MEAT COMBINE D12 *SU -649-391
Appts. for filling sausage casings - 82250B/45
- * KIMM/ 12.10.76 KIM M P D15 E17 *SU -648-532
Purification of acidic mine water - 82086B/45
- * KINZ- 22.03.78 KINZOKU KOGYO JIGYO D15 E31 K05 M25 *J5 4124-883
Regeneration of uranium adsorbing agent - 81326B/45
- * KIPL= 06.07.77 KIEV PLAN DES TECHN D14 (D17) *SU -648-608
Root vegetable test-sample pulper - 82158B/45
- * KIRI- 27.03.78 KIRIN SEAGRAM KK D16 E17 J01 *J5 4126-670
Preventing alcohol pollution - 81683B/45
- * KIRO 15.09.76 LENG D TEXT LIGHT KIROV D16 E17 *SU -648-604
Microbiological citric acid prodn. - 82154B/45
- KNVS 23.01.78 GES KERNENERGIEV SC D15 =DK 7900-172
Water desalination and purification - 54635B/30
- * KOKA- 27.03.78 KOBAYASHI NOKO A92 D23 *J5 4127-469
Packaging fragile moulded prods., e.g. perfume releasing articles - 81807B/45
- KOJK 17.08.73 KOJIN KK D16 E37 =J7 9032-075
Extracting protein from microbial cell - 57813W/35
- * KRFT 06.01.72 KRAFT INC D13 (D16) *US 4172-900
American type cheese having intense flavour - 82484B/45
- * KUBI 10.03.78 KUBOTA KK D15 *J5 4125-860
Treatment of waste water contg. COD and colouring material - 81566B/45
- * KUPO= 03.11.77 KAUN POLY D13 E19 (E34) *SU -648-196
Dietetic salt substitute for use in meat prods. - 81982B/45
- * KURK 22.03.78 KURITA KASEN KK D15 E37 (E17) *J5 4124-870
Treatment of waste neutralising and rust preventing soln. - 81314B/45
- * KURK 23.03.78 KURITA WATER IND KK D15 E35 *J5 4125-864
Treating waste water contg. ammonia nitrogen - 81567B/45
- KURS 23.03.78 KURARAY KK A97 D22 J01 (A14) =J5 4125-896
Absorbent for aq. e.g. body fluids - 72048B/40
- KYOW 18.12.74 KYOWA HAKKO KOGYO K B05 D13 E16 (D16) =J7 9032-070
L-Isoleucine fermentation prodn. - 60740X/32
- KYOW 20.04.78 KYOWA HAKKO KOGYO K B04 D16 =DT 2916-155
Antibiotic DC-11 from Micromonospora sp. NRRL 11289 - 79569B/44
- * KZZA= 01.08.76 KAZAN ZARYA CONFECT D13 *SU -649-395
Confectionery compsn. evaporator - 82252B/45
- LABA 17.04.78 LABATT J LTD D11 =GB 2019-849
Film-forming lipoprotein complex for baking - 79337B/44
- LABO- 20.03.76 LABOR MUSZERIPARI D22 =CH -613-864
Automatically venting steam steriliser - 69198Y/39
- LAND- 24.04.78 INST LANDBOUWPROD D14 =DT 2915-893
Separator tank having two longitudinal compartments - 79533B/44
- LAND- 24.04.78 INST LANDBOUWPROD D14 =NL 7804-344
Separator tank having two longitudinal compartments - 79533B/44
- * LEAT= 19.08.76 LEATHER FOOTWRE IND A97 D18 *SU -648-585
Synthetic tanning compsn. for chrome upper leather - 82136B/45
- * LEEP 06.05.77 LEE PHARMACEUTICALS A96 D21 G03 (A14 A23) *US 4172-323
Adhesively attaching pontic tooth or fixed bridge to adjacent teeth - 82350B/45
- * LEFO= 15.09.76 LENG D FOOD IND D16 E17 *SU -648-604
Microbiological citric acid prodn. - 82154B/45
- * LEHF 27.04.78 LEHMANN F B MASCH GMBH D13 J04 *DT 2818-563
Melter for cocoa bean mass, cocoa butter, paraffin or fats - 81017B/45
- * LENT- 24.04.78 LENTJES F DAMPFKESS C03 D17 (D13) *DT 2817-884
Shredded sugar-beet drying - 80983B/45
- * LENU= 11.05.77 LENG D NUCLEAR PHYS B04 D16 *SU -648-607
detection of toxic chemicals damaging genetic cell materials - 82157B/45
- LEVA/ 30.03.77 LEVATIM R D13 #HU T017-116
Continuous skinning machine for tomafoes after scalding - 54376Y/31
- * LILD- 22.03.78 LILDAL J A/S D13 *DK 7801-317
Protein extraction system for bone - B/45
- LIND/ 10.06.75 LINDSTROM R E D15 =CA 1065-067
Sewage disposal tank - 02335Y/02
- * LIND/ 31.03.78 LINDBLOM H G D15 J02 *WP 7900-864
Apparatus for dissolving gases in liquid - 82521B/45
- LINM 22.02.75 LINDE AG D15 =CH -613-871
Gas treatment appts. for oxygenating water - 54235X/29
- LISH/ 21.03.78 LISHMAN P D18 F07 =DK 7901-127
Fabric made of twisted fur strip - 72169B/40
- LISH/ 21.03.78 LISHMAN P D18 F07 =NO 7900-939
Fabric made of twisted fur strip - 72169B/40
- LITT 04.10.74 LITTLE A D INC D15 J01 =CA 1064-891
Adsorber regenerated by dissolving sorbate in supercritical fluid - 28691X/16
- LONZ 11.06.75 LONZA AG C03 D13 =CH -613-607
Silage additive favouring lactic bacteria - 16711Y/10
- * MACH- 17.03.78 MACHIDA SHIGYO KK D13 *J5 4126-767
Frozen custard pudding prepn. - 81729B/45
- * MAIL/ 26.01.78 MAILLOLS M D13 *FR 2415-432
Substitute or complementary food equiv. to mothers milk - 81120B/45
- MARK/ 30.05.78 MARKOV V F D12 #US 4172-304
Filleting machine for fish of different sizes - 77267B/43
- * MARM 28.04.78 MARTIN MARIETTA CORP D15 E36 J01 L02 *DT 2916-975
Chalk or lime based compsn. for desulphurisation of gas - 81115B/45
- MARM 28.04.78 MARTIN MARIETTA CORP D15 E36 J01 L02 =GB 2019-826
Chalk or lime based compsn. for desulphurisation of gas - 81115B/45
- * MART/ 03.04.78 MARTENSSON K B B04 D16 *WP 7900-875
Modification of enzyme characteristics - 82524B/45
- MATS/ 17.03.71 MATSUMOTO S D13 =J4 7029-551
Refrigerating milk without risk of viscosity increase on thawing - 81862B/45

- MATS/ 17.03.71 MATSUMOTO S D13 *J7 9032-062
Refrigerating milk without risk of viscosity increase on thawing - 81862B/45
- MATU 20.03.78 MATSUSHITA ELEC IND KK D15 E37 *J5 4124-559
Treating waste water contg. emulsified oil - 81257B/45
- MCCA- 30.03.76 MCCAIN FOODS LTD D13 =CA 1064-764
Frozen chips with a layer of fat on the surface - 75404Y/42
- MCCO/ 20.04.78 MCCOLLESTER D L B04 D16 =DT 2822-731
Antitumour vaccine - 86122A/48
- MCCO/ 20.04.78 MCCOLLESTER D L B04 D16 =NL 7805-501
Antitumour vaccine - 86122A/48
- MEAT= 22.10.73 MEAT IND RES INST D18 *SU -648-611
Preserving hides e.g. ox hides - 82161B/45
- MEDI= 27.01.77 MEDICAL BIOLOG PROB A91 D15 J03 *SU -649-443
Electrodialysis unit for water desalination - 82256B/45
- MERE 21.04.78 MERCK PATENT GMBH D16 =DT 2817-503
Testing for microorganisms on surfaces - 79580B/44
- MERE 21.04.78 MERCK PATENT GMBH D16 =NL 7903-139
Testing for microorganisms on surfaces - 79580B/44
- MERI 03.10.77 MERCK & CO INC B02 D16 *US 4172-940
Isolation and purificn. of C-076 - 82501B/45
- MERI 28.11.77 MERCK & CO INC B02 C02 D22 E13 (D13) *US 4172-837
Subsid. 3-oxo-6-thia-2-aza:bi:cyclo(2.2.0)hexane cpds. - 82443B/45
- MERI 28.12.77 MERCK & CO INC B02 C03 D13 *US 4172-895
Oxapenem carboxylic acid - 82483B/45
- MERI 25.01.78 MERCK & CO INC B04 C03 D16 =FR 2415-661
Cultivating cells or virus using Koch Static Mixing System - 54513B/30
- META- 28.04.78 METALL & PLASTIC GM D14 *DT 2818-895
Non-contaminating fodder transfer - 81038B/45
- METG 17.04.78 METALLGESELLSCHAFT AG A88 D15 =BR 7902-285
Appts. for treating cooling water with hypochlorite - 79418B/44
- METG 17.04.78 METALLGESELLSCHAFT AG A88 D15 =DT 2816-522
Appts. for treating cooling water with hypochlorite - 79418B/44
- METT 26.04.78 M & T CHEMICALS INC A41 D15 E11 F06 =GB 2019-862
Tri:alkoxy-silane cpds. - 75330B/42
- MICR- 09.12.75 MICROLIFE TECHNIQS D13 (D16) =US 4172-899
Using Streptococcus diacetilactis mutant - 21807A/12
- MILE 06.01.75 MILES LABORATORIES INC D13 F01 (D12) =CA 1064-762
Prepn of intermittently fused fibrous protein product - 35897X/19
- MILE 17.05.76 MILES LABORATORIES INC D13 E16 =J7 9032-060
Fortification of deficient protein foodstuffs - 38035Y/21
- MILE 01.05.78 MILES LABORATORIES INC A96 B04 D16 J04 (A11 A14) *GB 2020-017
Deoxyribonuclease determination device - 81227B/45
- MIME= 27.12.76 MINSK MEAT DAIRY IN D12 *SU -649-390
Appts. for cleaning legs and head of a pig carcass - 82249B/45
- MINN 11.03.76 MINNESOTA MINING CO A96 D21 =GB 1555-070
Abrasive discs for polishing of tooth fillings - 67244Y/38
- MINN 19.04.78 MINNESOTA MINING CO A81 D22 G03 (A14 A96) =BR 7902-373
Tacky, pressure-sensitive adhesive tape - 79544B/44
- MINN 19.04.78 MINNESOTA MINING CO A81 D22 G03 (A14 A96) =DT 2916-053
Tacky, pressure-sensitive adhesive tape - 79544B/44
- MINN 19.04.78 MINNESOTA MINING CO A81 D22 G03 (A14 A96) =NL 7902-903
Tacky, pressure-sensitive adhesive tape - 79544B/44
- MITC 22.03.78 MITSUI PETROCHEM IND KK A97 D23 (A17) *J5 4124-569
Transparent candle forming no soot or bad smells on burning - 81258B/45
- MITK 13.06.73 MITSUI TOATSU CHEM INC D15 =J7 9032-552
Waste water scum treatment with peat prods - 54720X/29
- MITK 23.03.78 MITSUI TOATSU CHEM INC D15 *J5 4124-875
Concentrating solns. by reverse osmosis - 81319B/45
- MOBA- 07.04.76 APPARATENBOUW MOBA D12 =GB 1555-414
Mould for arranging poultry - 54167Y/31
- MOBA- 07.04.76 MOBA HOLDING BARNEV D12 =HU T017-109
Mould for arranging poultry - 54167Y/31
- MOFO= 27.10.77 MOSC FOOD IND INST D21 *SU -648-226
Cosmetic hair dying tablets prodn. - 81985B/45
- MOFO= 27.10.77 MOSC FOOD IND TECHN D17 *SU -648-609
Clarification of sugar-contg. soln. e.g. sugar beet extract - 82159B/45
- MOGI= 22.10.73 MOGILEV MEAT COMBNE D18 *SU -648-611
Preserving hides e.g. ox hides - 82161B/45
- MOLI- 21.04.78 MOLINIER SA A96 D22 *DT 2915-781
Composite surgical bandage of tubular stretchable fabric - 81092B/45
- MOLI- 21.04.78 MOLINIER SA A96 D22 =GB 2019-726
Composite surgical bandage of tubular stretchable fabric - 81092B/45
- MOLI- 21.04.78 MOLINIER SA A96 D22 =NL 7903-150
Composite surgical bandage of tubular stretchable fabric - 81092B/45
- MOLI- 21.04.78 MOLINIER SA A96 D22 =NL 7903-150
Composite surgical bandage of tubular stretchable fabric - 81092B/45
- MOLN 03.04.78 MOLNLYCKE AB B06 D22 E34 (E32) *WP 7900-871
Sterile solid compress for application to discharging wounds - 82522B/45
- MOMD 30.09.77 MOSCOW MEAT DAIRY INST D12 (D13) *SU -648-193
Prod. of meat-bone flour and technical fat - 81979B/45
- MONA- 05.05.78 MONA INDUSTRIES INC A97 D21 E11 (D25) *BE -876-055
Novel phospho-betaine(s) and phosphitane(s) - 80842B/45
- MONS 27.07.70 MONSANTO CO A32 D15 F01 (A11 A88) =J7 9032-850
Hollow cellulose ester filaments - 09413T/06
- MONS 17.05.74 MONSANTO CO D25 E19 *US 4172-954
Poly:carboxylic acid salts and their acids and ester(s) - 82508B/45
- MORI- 28.03.72 MORIROKU SHOJI KK D13 =J4 8098-057
Preservation of fresh vegetables in poorly ventilated conditions - 81861B/45
- *MORI- 28.03.72 MORIROKU SHOJI KK D13 *J7 9032-061
Preservation of fresh vegetables in poorly ventilated conditions - 81861B/45
- *MORI/ 24.03.78 MORIOKA E C01 D21 *J5 4126-734
Compsn. for treating dermatitis in humans - 81721B/45
- *MOST 12.07.76 MOSCOW STEEL ALLOYS INST D15 H09 M24 *SU -648-531
Organic impurities removal from effluents - 82085B/45
- MOUN- 14.08.75 MT SINAI SCHOOL MED B04 D16 =GB 1555-142
Blood group determination - 11160Y/07
- MRSC 24.04.78 MARS LTD C03 D13 =DT 2916-266
Frozen animal and human food prod. - 79531B/44
- MRSC 24.04.78 MARS LTD C03 D13 =NL 7903-222
Frozen animal and human food prod. - 79531B/44
- MULL/ 29.04.76 MULLER H C03 D13 =CH -613-604
Feeding artificially grown fish - 72772Y/41
- NAGA 27.01.78 VEB KOMBINAT NAGEMA D12 =FR 2415-575
Sausage filling machine - 58327B/32
- NANS- 21.10.75 NANSEI TOGYO KK D17 =J7 9032-054
Clarifying raw sugar soln. - 44406Y/25
- NATT 13.09.72 NAT STARCH & CHEM CORP A96 D21 (A13) =DS 2340-590
Hair setting compsns. - 23268V/13
- NATU= 21.09.76 NAT & SYNTH FIBRES A60 D22 E23 F06 #CH -613-987
Bactericidal mono:chloro:triazine dyes prodn. - 12719A/07
- *NCPO= 11.01.77 NOVCH POLY D15 M14 *SU -648-534
Removal of dissolved aluminium from effluent - 82088B/45
- NEST 25.01.78 SOC PROD NESTLE SA D12 E17 =FR 2415-431
Aromatising material imparting pork flavour - 56529B/31
- *NIOF 17.03.78 NIPPON OILS & FATS KK D13 E17 *J5 4126-759
Conc. cream - 81727B/45
- *NIRA 24.03.78 UNITIKA KK B04 D16 *J5 4127-194
Antithrombotic material prodn. - 81754B/45
- *NISC 20.03.78 NISSAN CHEM IND KK B05 D23 E16 *J5 4125-607
Linalool prodn. from O-linalyl N,N di:methyl:hydroxylamine - 81490B/45
- NISC 22.03.78 NISSAN CHEM IND KK D17 E12 F09 M12 (D16) =J5 4124-552
Removal of calcium oxalate encrustations - 49436B/27
- *NISO 24.03.78 NIPPON SHOKUHN KAK KK D13 *J5 4126-760
Rice cake prepn. - 81728B/45
- *NISO- 27.03.78 NIPPON SOLID KK D15 E19 *J5 4127-149
Treatment of waste water contg. lignin, tannin, foamable material etc. - 81751B/45
- NISW 03.12.71 NISSHIN OIL MILLS KK D13 (D16) =J4 8061-660
Lactic acid beverage prodn. - 81863B/45
- *NISW 03.12.71 NISSHIN OIL MILLS KK D13 (D16) *J7 9032-078
Lactic acid beverage prodn. - 81863B/45
- *NISW 22.03.78 NISSHIN OIL MILLS KK A96 D21 E17 (A25) *J5 4125-608
Hydrophilic ester(s) useful in hair dressings - 81491B/45
- *NISW 22.03.78 NISSHIN OIL MILLS KK A96 D21 E17 (A25) *J5 4125-609
Hydrophilic ester(s) useful in hair dressings - 81492B/45
- NITP 18.07.75 NIPPON TERPENE KAGA KK B05 D23 E15 (D16) =J7 9032-072
Biochemical sepn. of L:menthol from its isomers - 18812Y/11
- NIZH= 18.10.76 NIZHNETAGILSK URAL A21 D15 =J7 9032-836
Phenol-formaldehyde resin waste water purification - 38749A/22
- NOGU/ 28.04.76 DIAZ NOGUEIRA E D15 E36 J03 =DS 2718-457
Treating aq. effluent to remove mercury - 61260Y/35
- NORD- 13.02.76 NORDA INC D22 E16 =CA 1064-827
Controlled fragrance release particulate compsn. - 32653Y/18
- NORD- 17.03.78 NORDBRAU INGOLSTADT D16 =NO 7900-611
Beer of low alcohol content - 63165B/35
- NORD- 17.03.78 NORDBRAU INGOLSTADT D16 =SW 7902-251
Beer of low alcohol content - 63165B/35
- *NORD/ 03.04.78 NORDQVIST P B06 D22 E34 (E32) *WP 7900-871
Sterile solid compress for application to discharging wounds - 82522B/45
- NORM- 29.09.76 NORM AMC AG D15 =CH -613-918
Sludge aeration vessel subdivided by perforated plates - 25582A/14
- NOVO 28.08.74 NOVO IND A/S D16 (D17) =CH -613-980
Immobilised glucose isomerase preps - 21159X/12
- NOVO 19.04.78 NOVO INDUSTRI A/S A96 B04 D16 =DT 2915-135
Immobilising glutaraldehyde-sensitive enzymes - 77179B/43
- NOVO 19.04.78 NOVO INDUSTRI A/S A96 B04 D16 =NL 7902-860
Immobilising glutaraldehyde-sensitive enzymes - 77179B/43
- *ODFO= 02.08.77 ODESS FOOD MACH CON D13 *SU -646-957
Liquid e.g. milk homogeniser - 81962B/45
- OLYU 22.07.75 OLYMPUS OPTICAL KK D16 =DS 2633-085
Automatic living tissue culture growing - 08029Y/05
- *OMNI 02.08.78 OMNIUM DASSAINISSE D15 *BE -877-495
Biological denitrification of surface or effluent water - 80868B/45
- *ONoy 22.03.78 ONO PHARMACEUTICAL KK B04 D16 *J5 4126-789
Glutamic acid dehydrogenase prepn. - 81731B/45

OREA

- OREA 30.11.73 L'OREAL SA A96 D21 =US 4172-887
Hair-conditioning agents - 39724W/24
- *ORI 22.03.78 ORIENTAL YEAST KK B04 D16 *J5 4126-790
Pyridoxamine-5'-phosphate oxidase prodn. - 81732B/45
- *ORON- 11.05.78 ORONZIO DE NORA IMP D15 E36 J03 *US 4172-773
Halogenation of water - 82412B/45
- *OSAK- 24.03.78 OSAKA SANZO KOGYO K D22 E34 *J5 4125-172
Deodorisation of gas contg. basic and acidic organic cpds. - 81369B/45
- PACI- 28.10.75 PACIFIC KENYON CORP C03 D13 =GB 1555-008
Solid animal feed supplement contg. molasses - 41616Y/23
- PASE 30.01.78 PASSAVANTW MICHELbacher D15 J01 =FR 2415-604
High rate overflow assembly for purified water from gravity separator - 33410B/18
- *PASE 19.04.78 PASSAVANTW MICHELbacher D15 *DT 2817-060
Sewage aeration tank supply pipe - 80947B/45
- PERM- 24.03.78 PERMELEC DENKYOKU K D15 E36 J03 M13 =J5 4125-197
Electrode for aq. metal halide soln. electrolysis - 72055B/40
- PERS 09.12.74 PERSONAL PRODUCTS CO A96 D22 F07 =CA 1065-075
Grafted cellulose particles of specified size - 46464X/25
- PERS 28.04.78 PERSONAL PRODUCTS CO D22 =GB 2019-727
Catamenial tampon with increased absorptive capacity - 79123B/44
- *PERU 12.01.77 PERMUTIT LTD D15 *US 4172-783
Regenerating condensate demineralisation resin - 82417B/45
- PETR- 19.03.76 VEB PETROLCHEMISCHE C03 D16 H04 (D13) =SU -648-603
Biogenic material and residual hydrocarbons removal from biomasses - 36376Y/21
- *PETR= 12.05.77 PETROLEUM DRILLING D15 *SU -649-660
Pressure flotation control system for effluent purificn. - 82323B/45
- PFIZ 17.10.73 PFIZER INC B02 C02 D22 E13 =HU T017-188
6-Amino-2,2-dimethyl-3-(tetrazol-5-yl)-penam derivs. - 29076W/18
- *PHIM 24.04.78 PHILIP MORRIS INC D18 E24 F09 *DT 2916-032
Humate-dyed, tobacco paper - 81097B/45
- PHIP 20.03.78 PHILLIPS PETROLEUM CO C03 D16 (D13) #J5 4126-787
Single cell protein prodn. from mixed thermophilic culture - 44073A/25
- *PHYS= 13.06.77 PHYSICS INST KIRENS D16 *SU -649-753
Regulator of pH for culture liquids and perfusates in medicine - 82334B/45
- *PLAC 27.04.78 MAX PLANCK GES WISSENSCH D18 E11 J01 *DT 2818-608
Filter absorbing apolar organic cpds. from gases - 81021B/45
- *PLOT/ 26.01.76 PLOTNIKOV NI D18 E31 (D15) *SU -648-522
Prodn. of chromium sulphate for aq. waste and skin treatment - 82077B/45
- POLA 19.08.75 POLAK'S FRUTAL WORKS INC D13 =CH -613-610
Non-dusting free-flowing hydrolysed protein - 18493B/101
- *POLA= 28.12.76 POLAR SEA FISH OCEA D12 *SU -649-392
Fish processing machine carrier cassette - 82251B/45
- *POTI/ 05.04.78 POTIRON A P L D15 J01 K07 *WP 7900-884
Regenerating liq. filters by automatically initiated program - 82528B/45
- PRIN 26.01.78 PRINCETON APPL RES D15 J04 =FR 2415-805
Effluent stream analysis appts. using mercury drop electrode - 21891B/11
- PROC 25.02.74 PROCTER & GAMBLE CO D13 =CH -613-919
Beverage carbonator - 59128W/36
- PROC 03.04.75 PROCTER & GAMBLE CO A97 D25 E19 =CA 1064-797
Unbuilt detergent compsns contg a bleach photoactivator - 77572X/42
- PROC 01.06.77 PROCTER & GAMBLE CO D25 E37 =DT 2857-001
Detergent tablet esp. for automatic dishwashing machine - 88222A/49
- *PROC 02.11.77 PROCTER & GAMBLE CO D25 E33 *J5 4108-813
Detergent compsn. produced by atomising drying process - 81243B/45
- *PROC 18.04.78 PROCTER & GAMBLE CO D22 *BR 7902-367
Solid compact deodorant compsn. - B/45
- *PURD 28.04.78 PURDUE RESEARCH FOUNDATI D14 *GB 2019-731
Appts. for macerating cut forage crops e.g. hay - 81173B/45
- *QPPP 20.03.78 Q.P. CORP D13 *J5 4126-749
Treating potatoes to increase preservative properties - 81724B/45
- QUAD- 20.03.78 QUAD CORP D22 J01 #J5 4125-169
Odorous and offensive vapour treatment - 86022A/47
- *QUAK 14.04.75 QUAKER OATS CO C03 D13 *CA 1064-758
Semi-moist imitation sausage pet food - 80889B/45
- QUAK 20.05.75 QUAKER OATS CO C03 D13 =CA 1064-760
Sugar replacement compsn. for moist animal feeds - 84972X/46
- *QUAK 21.04.76 QUAKER OATS CO D22 *CA 1064-757
Sterilising food and medical supplies in sealed flexible pouches - 80888B/45
- *RARE= 16.05.75 RARE METALS IND RES D15 E36 M28 *SU -648-538
Removal of fluoride from industrial aq. effluent - 82092B/45
- REGC 19.03.71 UNIV OF CALIFORNIA B04 D16 =J4 7033-692
D-vanillylmandelic acid determination in biological sample - 62235T/39
- REGC 19.03.71 UNIV OF CALIFORNIA B04 D16 =J7 9032-358
D-vanillylmandelic acid determination in biological sample - 62235T/39
- RHON 30.10.70 RHONE POULENC SA D16 (D11 D25) =J7 9032-069
Proteolytic enzyme 25048 rp - 31257T/20
- RHON 13.03.75 RHONE-POULENC INDUSTRIES B02 D16 =HU T017-196
Antitumour naphthacene deriv - 74379X/40
- RHON 10.02.77 RHONE-POULENC INDUSTRIES D13 F01 (D12) =FR 2415-674
Meat-like, spun protein filaments - 62885A/35
- *RHON 03.05.78 RHONE-POULENC INDUSTRIES A88 D15 J01 (A25) *BE -875-998
Semipermeable membrane partic. for ultrafiltration - 80832B/45
- *RHON 03.05.78 RHONE-POULENC INDUSTRIES A88 D15 J01 (A25) *BE -875-999
Poly(aryl ether)sulphone(s) mixt. compsns. - 80833B/45
- RICH 07.11.73 RICHARDSON-MERRELL INC B02 C02 D13 (D22) =CH -613-970
Penicillins and cephalosporins used as antibacterials - 22539W/14
- ROGG 28.08.74 ROGER & GALLET A97 B07 D16 =HU T017-205
Formation of aerosol prods - 85013W/52
- *ROHE= 11.01.77 ROST HELICOPTER WKS D15 M14 *SU -648-534
Removal of dissolved aluminium from effluent - 82088B/45
- *ROHE= 11.01.77 ROST HELICOPTER WKS D15 M14 *SU -648-534
Removal of dissolved aluminium from effluent - 82088B/45
- *ROKH/ 20.09.76 ROKHVARGER O D D18 *SU -648-612
Preservation of Persian lamb pelts - 82162B/45
- *ROME= 20.07.77 ROST MEDICAL INST D22 *SU -648-187
Human cornea transplant preservation compsn. - 81975B/45
- *ROST- 05.07.78 VU ROST LINNE ROBY C03 D16 *BE -877-474
Protecting sugar beet against damping off - 80863B/45
- RYDE- 04.08.76 RYDER INT CORP D22 #CA 1064-668
Sterilising contact lenses with hydrogen peroxide soln. - 23410Y/13
- *SALA- 31.03.78 SALA INT AB D15 J02 *WP 7900-864
Apparatus for dissolving gases in liquid - 82521B/45
- *SANK- 22.03.78 SANKYO YUKI KK D15 *J5 4124-899
Solid waste, e.g. sludge, treatment - 81337B/45
- *SASN 23.03.78 SANSHIN SEISAKUSHO D15 J01 *J5 4124-873
Filtering and purifying soln. contg. oil and suspended solids - 81317B/45
- SCGR 24.02.78 SOC CHIM GRANDE PAROISSE D15 E16 F09 H01 (D22) =J5 4126-724
Bactericidal treatment of polluted media - 68498B/38
- SCHC 14.07.72 SCHERICO LTD B03 D16 (B04) =HU T017-209
Aminoglycoside antibiotic G-52 - 07676V/05
- SCHC 11.03.74 SCHERICO LTD B04 D16 =HU T017-208
Polyene antibiotic complex 67-121 - 64227W/39
- *SCHI- 18.04.78 MAJA-MASCH SCHILL H D12 *DT 2816-744
Bacon rind peeling machine - 80932B/45
- *SCHM/ 28.04.78 SCHMITT G D15 J01 *DT 2818-699
Cylindrical liquid filter - 81032B/45
- SCHU 11.11.76 SCHULKE & MAYR GMBH D22 E19 H01 (D21 H07) =DS 2651-465
Anti-microbial condensates of sec. amine and formaldehyde - 36754A/21
- SCMZ 28.09.76 SCM CORP D13 (D23) #CA 1064-921
Hydrated products prepn. from hydratable lipid particulates - 92238X/49
- *SCNE- 15.04.78 SCOTTISH & NEWCASTL D16 J01 *GB 2019-733
Extn. appts., e.g. mash tun used in brewing - 81175B/45
- *SCSO- 10.06.75 SCHWEIZERISCHE SODA D15 E37 *CH -613-917
Purifying waste water by flocculation - 80900B/45
- *SDEM- 22.04.78 SUDDEUTSCHE METALLW D22 J01 *DT 2817-772
Air conditioning filter with radiation steriliser - 80980B/45
- SEAR 14.08.75 GD SEARLE AND CO B05 D13 E14 =CH -613-687
Deformylation of (N)-formyl amino acid or peptide esters - 15844Y/09
- *SEAR/ 26.07.76 SEAR W E D15 *US 4172-767
Appts. for purifying impure water source - 82410B/45
- SEFC- 22.07.75 SEFCAL SOC ETUD FAB COMM D13 E23 =GB 1555-239
Anthocyanin recovery and fractionation by treating aq. extracts - 12267Y/07
- SEIS 14.04.75 RES INST PRODN DEV D15 =J7 9032-639
Glycoside contg. material mfr. for use as cohesion precipitating agent - 91377X/49
- SHEL 22.03.74 SHELL INT RES MIJ BV D13 E14 =CH -613-931
Beta-aryl subst. ketones prepn - 65967W/40
- *SHIR- 20.03.78 SHIROBANA SHUZO KK D13 (D12 D16) *J5 4126-795
Prodn. of deodorant for fish shell - 81736B/45
- SHIS 17.03.78 SHISEIDO KK D21 =J5 4126-739
Gel compsn. for cosmetics - 70301B/39
- SHIS 17.03.78 SHISEIDO KK D21 =J5 4126-740
Gel compsn. for cosmetics - 70301B/39
- SHOH- 28.01.75 SHOHU TOSHI SEIZO D21 M26 =J7 9032-611
Dental amalgam alloy prodn - 69606X/37
- *SHOX 23.03.78 SHOWA ELEC WIRE KK D15 *J5 4125-174
Evapn. appts. for thickening waste liq. - 81371B/45
- *SHOX 23.03.78 SHOWA ELEC WIRE KK D15 *J5 4125-175
Evapn. appts. for concentrating waste liq. - 81372B/45
- SIGE 02.02.74 SIGRI ELEKTROGRAPHI GMBH D15 E36 J03 =CH -613-995
Passive metal electrode for electrochemical cells - 40967W/25
- SIMP- 21.04.78 SIMPSON J P & CO AL D16 =DT 2904-382
Mechanised germination plant for malting cereal grain esp. barley - 42444B/23

- SISE= 19.11.76 SIMF SEVASTOPOL APP D14 (D16) *SU -649-600
Plant juice extraction press - 82316B/45
- SNKM 05.04.78 SANKIN IND CO LTD D21 M26 =GB 2019-885
Cast alloys with low m.pt. for mfg. dental prostheses - 75605B/42
- SNOW 23.07.75 SNOW BRAND MILK PRODUCTS D12 =CA 1064-763
Fish meat powder prodn. - 63010Y/35
- SOFR- 05.05.77 SOFRANCE SA D15 J04 =US 4172-428
Active surface protection of optical impurity monitor - 84345A/47
- SPIT/ 19.07.76 SPITZER JG A97 B07 D21 G04 =GB 1555-044
Compressed gas propellant aerosol spray - 16055B/09
- STAD 15.06.77 STANDARD OIL CO (IND) D15 H05 *US 4172-781
Strong waste water treatment by activated sludge - 82416B/45
- STAH/ 28.02.75 STAHLERT D15 =CH -613-676
Biological converter for faecal matter in water - 56085X/30
- STAL 26.08.68 STALEY A E MFG CO D16 =DS 1942-748
Enzymic saccharification of starch hydrolysate - 12826R/08
- SUDC 08.10.75 SUD-CHEMIE AG D17 E13 (D13) =DS 2545-111
Xylose recovery from nutshells - 12796Y/08
- SULA- 24.02.78 SUOMEN LARKETEDAS B06 D13 =J5 4126-778
Compsns. contg. desired sodium potassium magnesium calcium ratios - 49035B/27
- SULZ 12.09.75 SULZER BROS LTD D15 K08 =CA 1065-064
Radioactive treatment of sewage sludge - 18166Y/11
- SULZ 26.04.78 GEBRUDER SULZER AG D15 J01 *DT 2818-729
Fixed bed filter for water purificn. - 81033B/45
- SUMO 25.04.78 SUMITOMO CHEMICAL KK A96 B04 D16 *DT 2818-086
Carriers for enzyme immobilisation - 80990B/45
- SUPE- 12.07.78 SUPER IRIDE SPA A96 D22 *BE -877-509
Absorbant pads or tampons dissipating aq. fluids in core - 80871B/45
- SVFL 19.04.78 SVENSKA FLAKTFAB AB D22 =DT 2915-659
Disinfection of hospital equipment with hot damp air - 64720B/36
- SVFL 19.04.78 SVENSKA FLAKTFAB AB D22 =NL 7903-085
Disinfection of hospital equipment with hot damp air - 64720B/36
- SVME- 25.01.78 SVENSKA MEJERIERNAS D13 =FR 2415-429
Continuous prodn. of buttery prod. spreadable at low temps. - 37197B/20
- SVSO 03.04.78 SVENSKA SOCKERFAB AB B04 D16 *WP 7900-875
Modification of enzyme characteristics - 82524B/45
- SWIF 21.06.76 SWIFT & CO D13 =GB 1555-426
Rapid prodn. of ripened flavour cheese - 76171A/42
- SYNT 05.04.78 SYVA CO A96 B04 D16 J04 =WP 7900-882
Direct immunoassay method for ligand or receptor determ. - 78496B/43
- SYNT 03.08.78 SYNTEX (USA) INC D21 E24 *US 4172-703
Oxidative hair dye compsn. devoid of mutagenic components - 82383B/45
- TAKA- 23.03.78 TAKAHASHI SEITAI KK A97 D13 *J5 4126-751
Konjak compsn. - 81725B/45
- TAKE 23.03.78 TAKEDA CHEMICAL IND KK D12 E17 *J5 4126-758
Quality improving method for frozen ground fish meat - 81726B/45
- TAKE 24.03.78 TAKEDA CHEMICAL IND KK B02 C02 D16 =DK 7901-212
20-Demethyl-maytansinoid derivs. - 72173B/40
- TAKS 06.04.73 TAKASAGO PERFUMERY KK D23 E17 =J7 9032-761
2,6-Dimethyl-2,7-octadien-1-ol prepn - 21658W/13
- TAKS 17.03.78 TAKASAGO PERFUMERY KK D23 E15 *J5 4125-645
Tri:methyl-cyclopentenyl-hydroxy-cyclopentyl idene)-ethane - 81512B/45
- TAMM/ 24.12.75 TAMM W D12 =DS 2558-726
Ripening and refrigerating layout for abattoirs - 47231Y/27
- TATL 29.04.75 TATE & LYLE LTD D13 (D17) =DS 2618-146
Powerful natural sweetener from fruit of Thaumatooccus Daniellii - 84985X/46
- TDCO 29.09.75 TELEDYNE INDUSTRIES D15 *US 4172-796
Tap mounted domestic water purifier with filter cartridges - 82421B/45
- TECD 14.09.77 TECHNICON INSTRUMEN B04 D16 J04 *US 4172-765
Rapid determ. of pancreatic and salivary alpha-amylase - 82409B/45
- TECN- 05.08.76 TECNICO SPA A88 D15 J01 =GB 1555-395
Asymmetric modified fluorocarbon polymer membrane prodn. - 12649A/07
- TEEP 22.06.76 TEE PAK INC A97 D12 #CH -613-606
Manufacture of artificial skin for sausages - 77507X/42
- TEEP 18.04.78 TEE PAK INC A32 D12 (A11 A97) =DT 2900-564
Forming fibrous tube for sausages - 64645B/35
- TEEP 21.04.78 TEE PAK INC A97 D12 (A11) =DT 2900-563
Tough, artificial casings of fibrous structure - 64701B/36
- TEIJ- 07.03.78 TEIJIN ENG KK D15 E36 *J5 4125-868
Activated sludge treatment of waste water - 81569B/45
- TEKH= 06.06.75 TEKHRYBPROM COMBINE D14 *SU -649-402
Chain conveyor for heat treating cans - 82253B/45
- THEU/ 29.04.78 THEURER K B04 D16 *DT 2819-110
Biologically active peptide(s) prodn. - 81045B/45
- TOKA- 07.03.78 TOKAWA ENG KK D15 E36 *J5 4125-868
Activated sludge treatment of waste water - 81569B/45
- TOKE 02.07.73 TOKYO SHIBAURA ELEC LTD D15 J01 =J5 0022-466
Treatment appts. for waste liq. contg. heavy metals - 81890B/45
- TOKE 02.07.73 TOKYO SHIBAURA ELEC LTD D15 J01 *J7 9032-433
Treatment appts. for waste liq. contg. heavy metals - 81890B/45
- *TOKU 24.03.78 TOKUYAMA SODA KK D15 J01 M11 (J03) *J5 4125-188
Concn. or desalting of electrolyte soln. by electrodialysis - 81385B/45
- *TOXF 27.03.78 TOHO BESLON KK D16 E17 J01 *J5 4126-670
Preventing alcohol pollution - 81683B/45
- TOXN 13.05.72 TOYO JOZO KK A97 D16 =J7 9032-436
Semipermeable pharmaceutical microcapsules - 74819V/43
- TOXN 25.03.78 TOYO JOZO KK B04 D16 J04 =DK 7901-196
Reagent for assay of pyruvate - 73838B/41
- TOXN 25.03.78 TOYO JOZO KK B04 D16 J04 =GB 2020-018
Reagent for assay of pyruvate - 73838B/41
- TOXN 25.03.78 TOYO JOZO KK B04 D16 J04 =J5 4126-791
Reagent for assay of pyruvate - 73838B/41
- *TOYJ 20.04.78 TOYO SODA MFG KK D17 (D13 D15 D16) *DT 2915-872
Allose-contg. polysaccharide produced by pseudomonas viscogena - 81095B/45
- TOYJ 20.04.78 TOYO SODA MFG KK D17 (D13 D15 D16) =GB 2019-863
Allose-contg. polysaccharide produced by pseudomonas viscogena - 81095B/45
- *TOYO- 24.03.78 TOYOTAMA KORYO KK D13 *J5 4126-760
Rice cake prepn. - 81728B/45
- *TSIN= 11.02.77 TSHK BR IND WATER A97 D15 *SU -648-539
Consolidation, dehydration and sterilisation of town effluent solids - 82093B/45
- TSUB 14.09.73 KUMIAI CHEM IND KK D17 (D16) =J7 9032-076
High viscosity polysaccharides prepn. - 66303W/40
- TURA/ 08.01.76 TURATTIA D16 =CH -613-849
Automatic cultured mushroom trimmer and sorter - 31039Y/18
- UENO 04.11.77 UENO SEIYAKU OYO D13 E17 #US 4172-897
Powder or granular sorbic acid food preservative compsn. - 36607A/21
- UGIN 27.01.78 UGINE KUHLMANN A97 C03 D13 (A21) =FR 2415-430
Animal feed blocks and agglomerates - 54510B/30
- UNIC 27.01.78 UNION CARBIDE CORP D12 =FR 2415-588
Wrapping for food products esp. sausages - 56294B/31
- UNIC 27.04.78 UNION CARBIDE CORP B02 D16 E17 #DT 2818-668
Glutaraldehyde sterilisation of fermentation media - 76297A/43
- UNIL 11.06.70 UNILEVER NV D13 =J7 9032-754
Fluidised bed flow control - providing different residence - 80715S/51
- UNIL 17.02.78 UNILEVER NV D13 =J5 4126-766
Emulsifier mixt. for artificial cream - 63487B/35
- UNIL 20.03.78 UNILEVER NV D21 E19 =DK 7901-124
Deodorant non-germicidal toilet soap tablet - 69929B/39
- UNIL 20.03.78 UNILEVER NV D21 E19 =NO 7900-924
Deodorant non-germicidal toilet soap tablet - 69929B/39
- UNIL 24.04.78 UNILEVER NV D13 =DT 2916-395
Hardened stabilised ice cream similar to soft serve type - 79529B/44
- UNIL 24.04.78 UNILEVER NV D13 =NL 7903-236
Hardened stabilised ice cream similar to soft serve type - 79529B/44
- UNTC 03.03.76 ECODYNE CORP D15 J01 =GB 1555-067
Removal of solid impurities from ion-exchange resin bed - 67159Y/38
- *UPLA= 10.03.77 UKR CHIEF PLAN INVESTIGT D15 *SU -648-525
Regeneration of water purificn. coagulant from hydroxide based slime - 82079B/45
- *UPOL= 27.12.76 UKR POLY A97 D15 J01 (A14) *SU -648-533
Clarification of fine mineral particle-loaded aq. effluent - 82087B/45
- *UPOU= 09.11.77 UKR POULTRY RES INS C03 D13 E34 *SU -648-194
Mineral additive for fowl feed prodn. - 81980B/45
- *URFO 03.02.77 URALS FORESTRY INST A21 D15 E14 (A35 E17) *SU -648-537
Resin industry aq. effluent purificn. - 82091B/45
- *URFO 01.03.77 URALS FORESTRY INST A21 D15 E14 (A35 E17) *SU -648-536
Phenol-formaldehyde resin aq. effluent treatment - 82090B/45
- *USAS 29.09.78 NAT AERO & SPACE ADMIN D15 E36 *US 4172-786
Prevention of scale, corrosion and algal growth - 82418B/45
- *USDA 26.05.78 US SEC OF AGRICULTURE D13 E23 *US 4172-902
Stable coloured food and beverage compsn. - 82486B/45
- *USDA 17.08.78 US SEC OF AGRICULTURE A60 D22 E12 F06 *US 4172-841
Water insoluble zinc acetate-peroxide complexes - 82446B/45
- *USNA 09.02.78 US SEC OF NAVY D33 J01 K05 M25 (E31) *US 4172-775
Sepn. of metals in soln. by photochemical redox reaction - 82414B/45
- *USPI= 01.09.76 UKR SPIRIT LIQUOR D16 *SU -649-747
Rectified spirit prodn. unit - 82331B/45
- *UYDE- 15.06.77 UNIV OF DELAWARE B04 D16 *US 4172-763
Bovine milk xanthine oxidase isolation and purification - 82408B/45
- VEPE- 30.06.76 VEPEX FOVALLALKOZAS C03 D13 =HU T017-112
Protein recovery from green plants - 07743A/04
- VEST/ 12.03.74 VESTERBERG O A Y B04 D16 =CH -613-994
Studying the action of agents on microbiological cultures - 64253W/39
- *VINN= 11.01.77 VINNITSA OIL FAT D23 *SU -648-600
Vegetable oil primary cleaner - 82151B/45
- *VLRO= 21.06.76 VOLG ROSMYASOMOLREM D12 *SU -649-389
Sawing appts. for front legs of sheep and goats - 82248B/45

VOIJ 28.01.78 VOITH J M GMBH D15 E12 F09 =FR 2415-606

Purifying waste water from old paper processing - 58253B/32

*VOSY= 23.02.77 VORON BR SYN RUBBER A35 D15 (A12 A14) *SU -648-535

Removal of non-coagulated polymers from latex industry effluent - 82089B/45

WADL 25.08.77 WADLEY RES INST BLOOD BK B04 D16 =GB 1555-449

Fungal growth medium containing purified saponin - 23813B/12

*WAKA/ 12.09.67 WAKAMATSU K A88 D22 J01 (A25) *J7 9032-758

Deodorant material mfr. - 81926B/45

WAND 25.02.75 WANDER AG D13 =CH -613-608

Acid, milk protein contg. mayonnaise compsns - 69083X/37

WATA/ 27.02.76 WATABET D13 E34 (E17) =J7 9032-057

Synergistic food preservative with low toxicity - 73621Y/41

WILL/ 21.10.75 WILLISCH H D16 =DS 2547-134

Compost heap for household refuse and industrial waste - 25210Y/15

*WIMM/ 20.04.78 WIMMER O D15 J01 *DT 2817-392

Sludge thickening tubular cone centrifuge - 80964B/45

WINK- 03.04.76 WINKLER FR KG D11 =GB 1555-195

Automatic bakery machine giving crack-free prods. - 74294Y/42

*WITT/ 26.04.78 WITTENBORG P E D13 *GB 2019-813

Prepn. of beverages in vending machines - 81185B/45

YAMS 14.04.78 YAMASA SHOYU KK B03 D13 E13 =DT 2915-160

Periandrin I,II,III and IV from Periandra roots - 79572B/44

*YAWH 24.03.78 NIPPON STEEL CHEM KK D15 E33 *J5 4125-196

Basic aluminium chloride soln. prodn. - 81390B/45

2826-R D CH -543-240 V03 DT 2462-673 A09+ NO 7404-593 W33 SW 7502-535 X10 CH -604-725 A41 CA 1050-454 B15 OE 7509-276 B13
BE -737-923 R08 DT 2329-172 V06 CH -602-022 A33+ SW 7416-079 W33 GB 1474-879 Y21 CS 7503-097 B42 CA -613-980 B45 CA 1065-075 B45
DT 1942-748 R10 FR 2188-961 V12 SU -583-133 A43 J5 0095-224 W39 HU T017-208 B45 HU T017-211 B45
NL 6912-964 R10 GB 1402-224 W32 CA 1045-891 B05 DK 7406-606 W39
FR 2016-403 R35 CA -985-961 X15 CA 1048-516 B09 ZA 7407-894 X06
US 3630-844 T05 US 3958-024 X22 CH -611-288 B23+ FR 2324-623 Y25
GB 1268-081 T12 DS 2329-172 B45 CA 1056-837 B27 GB 1481-187 Y30
CA -910-829 T41 SU -648-100 B45+ CA 1024-161 A05 FR 2264-089 X01
DS 1942-748 B45 DT 2334-923 V05 17441-W BCDE BE -819-189 W11 39157-W DE US 3886-289 W23 65967-W DE DT 2512-295 W40
CA -878-421 S34+ BE -802-185 V05 NL 7410-369 W11 US 7504-552 W45 DT 2512-295 W40
DS 1695-505 B19+ NL 7309-610 V05 OE 7406-895 W15 NL 7503-384 W41
J7 9012-552 B24+ ZA 7304-694 V27 DT 2343-196 W15 J5 0151-855 X03
DS 1793-844 B45+ DL -107-483 V42 DK 7404-117 W22 J5 0050-366 W27 FR 2267-712 X06
DS 1793-845 B45+ DL -113-169 W28 J5 0050-366 W27 FR 2267-712 X06
FR 2247-220 W29 FR 2245-372 W27 GB 1449-110 X38
GB 1424-114 X07 OE 7409-122 X07 CH -613-926 B45
CA -984-774 X12 US 3941-772 X11 US 39566-W DE 66303-W D J5 0052-285 W40
NL 7008-485 T01 IL -42-700 X34 GB 1451-865 X41 DT 2359-659 W24 J7 9032-076 B45
J4 7000-763 T05 CH -584-754 Y16 US 3988-443 X45 NL 7415-481 W25
FR 2096-204 T19 OE 7306-079 Y48 DK 7704-243 A04 J5 0084-558 W36
CA -901-283 T24 HU T017-209 B45 IT 1020-069 A14 FR 2256-136 W42
GB 1356-849 V25 14257-V CDH US B524-849 X14 BE -829-514 W44
CH -551-212 V36 J4 8091-277 V08 DT 1442-020 X28 DT 2436-044 X08
J7 9032-754 B45 J7 9032-071 B45 GB 1442-019 X28 FR 2279-472 X20
FR 2287-433 X30
US 4014-938 Y14
US 4083-878 A22
IT 1023-419 A31
CH -610-581 B20
DT 2366-306 B45+
39724-W AD DT 2456-638 W24
BE -822-796 W24
NL 7415-582 W25
FR 2252-840 W38
GB 1494-916 Y50
GB 1494-915 Y50
US 4172-887 B45
40967-W DEJ BE -824-754 W25+
DT 2405-010 W33
NL 7417-054 W34+
DT 2412-828 W39
SW 7501-094 W39+
NO 7404-435 W40+
J5 0109-176 W43+
FR 2259-921 W47+
DT 2420-011 W47+
ZA 7500-399 X13
DS 2405-010 X28
GB 1443-502 X30+
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ABSTRACTS

INDEXES

II - PATENTEE

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Section D:

FOOD
DETERGENTS

COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	6 NOV - 12 NOV 79	876,067 - 876,211
-Non Delayed	5 NOV 79	877,557 - 877,711
BRAZIL	4 SEP 79 + 18 SEP 79	7,800,930 - 7,903,939
	30 OCT 79	7,900,531 - 7,904,259
CANADA	30 OCT 79	1,065,101 - 1,065,550
DENMARK	22 OCT 79	7,801,338 - 7,901,361
W. GERMANY		
-DAS	8 NOV 79	1,470,065 - 2,902,079
-OLS	8 NOV 79	2,660,308 - 2,918,683
FRANCE*	31 AUG 79	2,415,947 - 2,416,631
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UNITED KINGDOM	14 NOV 79	1,555,461 - 1,556,030
		2,020,141 - 2,020,520
JAPAN		
-Unexamined	—	46,006,085 - 54,090,899
	4 OCT - 11 OCT 79	54,127,801 - 54,130,648
-Examined	18 OCT - 24 OCT 79	79,033,001 - 79,034,120
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NORWAY	22 OCT 79	7,704,160 - 7,901,013
SOVIET UNION	—	220,242 - 651,118
SWEDEN	29 OCT 79	7,713,688 - 7,909,775
UNITED STATES		
-Reissues	6 NOV 79	Re30,135 - Re30,142
-Defensives	6 NOV 79	T988,001 - T988,010
-Patents	6 NOV 79	4,173,042 - 4,173,791
SOUTH AFRICA	OCTOBER 79	7,705,395 - 7,806,877

*Printed patents actually published late October - early November, 1979

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Main CPI Class for Section	Patent No
	Other Classes	Latest Priority	Earliest Priority
	Publication Date	Earliest Disclosure Basic Patent	IPC
		Accession No	
MEDA-		A89	69369W/42 =US 3964-992
Chamber and process for 2-way electrophoresis - for seph. of very small samples of body fluids (SW28.7.75)			
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)			
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26			

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		£	\$	Yen 000's		From	To
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EUROPE (EPO)	50	250	585	125	Jan 79		
FRANCE—new law	100	820	1,885	394	Dec 69		
EAST GERMANY	15	215	495	103	Oct 70		
WEST GERMANY OLS—new law	180	1,600	3,680	768	Mar 70		
DAS	30	240	550	115	Mar 70		
PS	27	210	485	100	Mar 70		
NETHERLANDS—new law	40	390	895	187	Mar 70		
PCT	25(100')	80	175	38	Jan 79		
SOVIET UNION	35	230	530	110	Jan 70		
SWITZERLAND	14	145	335	69	Mar 70		
UNITED KINGDOM New Law	30	250	575	125	Jan 79		
Old Law	30	340	780	163	Jul 69		

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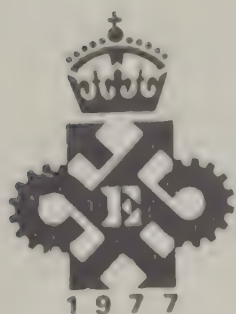
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WEST GERMANY	2 weeks	per patent £1.70, \$4.00 or Y1,040	1p, 2c or 8Y per page if more than 20 pages	Printed copies. Delay reduced to 4 days for double the normal cost.
CANADA SWITZERLAND EAST GERMANY SOVIET UNION	4 days	per page £0.19, \$0.50 or Y120	Minimum charge equivalent to 5 pages	Photocopies
 Copies of specifications can now be supplied for Austria, Brazil, Denmark, Finland, Hungary, Israel, Italy, Norway, Rumania and Sweden. Prices comprise actual costs plus a nominal handling fee. 				

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D1: FOOD; FERMENTATION

D11: BAKING

DEBA- ★ D11 82626B/46 ★DS 2836-118
 Hot air circulation baking oven - with slots on baking space top compensating door and rear wall heat losses
 DEBAG DEUT BACKOFEN 17.08.78-DT-836118
 (08.11.79) A21b-01/26

A baking oven is equipped with two cross flow blowers circulating hot air from a heater across the oven space with the dough trolley. The top cover which separates the oven space from the hot air producer has slots along the edges above the oven door and above the oven rear wall.

This compensates for the greater flow resistance in these areas and for their greater heat losses. The result is a more uniform heat distribution and a better quality of the baked product.

Specifically the oven space with the dough trolley is surmounted by a hot air producer with a burner and two cross flow blowers. The hot air is circulated down perforated partitions along the side walls between the door and the rear wall. The heat input to the oven space is supplemented by slots along the top of door and rear wall which give direct access to the hot air producer. The slots have a width of 5-30 mm (10-15 mm). 17.8.78 as 836118
 Div in 2857125,2857126(8pp39).

HAFE/ ★ D11 82641B/46 ★DT 2818-001
 Pastry baking tin - with turned up rims and silicone coated silicon layer

HAFELE J 25.04.78-DT-818001
 A82 (A26) (08.11.79) A21b-03/13

A baking tin for pastry is a rectangular plate with turned-up rims on three sides. The tin has no perforations and is coated at least on top and on the insides of the rims with a heat resistant and pastry non-stick layer. The preferred material for the layer is silicon which may also carry a coating of silicone.

This facilitates the baking operations of the pastry and saves the application of fat to the baking tin. 25.4.78 as 818001 (7pp39)

DURA/ ★ D11 82785B/46 ★DT 2910-502
 Dumpling preparation - by enclosing dough with liquid in impermeable foil bags before dough raising treatment
 DURAN V 16.03.79-DT-910502 (03.05.78-OE-003219)
 (08.11.79) A231-01

Dumplings are prepared by enclosing the dough together with a liquid (water, milk, fat) in a not perforated foil which is impermeable to liquid and compatible with food. The dough raising process can be carried out in boiling water, steam or in an oven or grill.

This protects the dumplings through all process stages right up to their consumption. The foil bag protects against loss of substance if the boiling time is exceeded. Power is saved because the dumplings need not merely float but can now fill up the whole water bath. 16.3.79 as 910502 (9pp39)

NATY ★ D11 82918B/46 ★GB 2020-160
 Prod'n. of whole wheat food esp. breakfast cereal - includes a chilling step to reduce tempering period required
 NABISCO INC 03.05.78-US-902448
 (14.11.79) A231-01/16

A whole wheat food prod. is prepd. by (a) cooking a mixt. of water and whole wheat to produce cooked wheat contg. 28-55 wt. % moisture; (b) holding the cooked wheat for 0-12 hrs. under ambient temp. and pressure; (c) chilling the cooked wheat to 1-12 °C, the temp. being selected according to the holding time, i.e. as the holding time is increased from 0 to 12 hrs. the chilling temp. required is raised proportionately from 1-12 °C, (d) shaping the tempered wheat and (e) baking or toasting.
 Chilling enables the tempering step to be carried out in

a much shorter time, so the process requires less storage space, is shorter, simpler and less labour intensive.
 26.4.79 as 014552 (5pp955)

UNIL ★ D11 83626B/46 ★NL 7804-577
 Dutch pastries prodn. - with ageing of dough in package, e.g. during transport, before baking
 UNILEVER NV 28.04.78-NL-004577
 Q31 (30.10.79) A21d-08 B65b-29

Prod'n. of Dutch pastries, is carried out by mixing flour with a warm aq. soln. of sweeteners and opt. stale cake, spices and preservatives to form a base dough, ageing the dough, and then adding baking powder and baking in conventional manner. The improvement comprises packaging the base dough and ageing it in the package.

Ageing can take place during transport to the baker or consumer. The base dough pref. contains lactic, propionic or acetic acid as preservative. Ageing times can range from >3 (pref. >5) days to 6-8 weeks. 28.4.78 as 004577 (5pp367)

VOTE= ★ D11 83826B/46 ★SU -650-596
 Bread baking dough proving unit - with dough admitted from mixing unit and using exit pipes at top using valves to control dough level

VORON TECHNOL INST 05.10.77-SU-532734
 (07.03.79) A21c-13

Device for 'proving' dough, comprising a vertical cylindrical container with a conical bottom, loading pipe connected to the bottom of the container, attachment for removing the dough, and pipes with gate-valves located in the top part of the container.

Quality is improved and dough yield increased by installing a shaft inside the container vertically with mixing blades distributed symmetrically. Each of these blades has a scraper for cleaning the internal surfaces of the container. The pipes at the top with the gate valves are disposed in rising stages.

Gavrilencov, A. M., Avdeev, A. S., Bul. 9/5.3.79.5.10.77. as 532734 (3pp29).

GODB- ★ D11 B/46 ★SW 7803-568
 Cake icing machine with rotating nozzle - through which icing is extruded while cake remains stationary
 GODBITEN KONDITOR 30.03.78-SW-003568
 (29.10.79) A21c-16

The icing is extruded through a rotating nozzle while the cake remains fixed on a flat surface. 30.3.78 as 003568 (-pp1407)

MSCA- ★ D11 83971B/46 ★US 4173-215
 Steam chamber for foods - has steam generating, circulating and condensing chambers
 MSCAN METAL CANADA 28.07.78-US-928906 (05.12.77-US-857683)
 P28 (06.11.79) A21b-01/08 A47j-27/04

Appts. for steaming foods comprises a steam chamber which communicates with a source of liq. and a heater for producing steam from the liq. The steam chamber is connected to a condensing chamber for the escaping steam which sprays liq. on the steam. The steam is allowed to escape from the steam chamber to maintain atmospheric conditions in the chamber. A fan is used to circulate the steam. The liq. and condensed steam is drained from the condensing chamber.

The appts. operates either manually or automatically at atmospheric pressure and therefore need not be specifically constructed to withstand high pressure differentials. It can be used for cooking or heating foods and minimises overcooking of the food. 28.7.78 as 928906 (8pp1044)

See Also

D16 J5 4129181

D12: MEAT; FISH PROCESSING

UNIC ★ D12 82544B/46 ★BE-876-120
 Conc. aq. smoke flavour compsn. for coating tubular food wrapping
 -contg. solubilising agent to prevent sepn. of flavour cpds.
 UNION CARBIDE CORP 09.05.78-US-904283
 A97 (08.11.79) A22c A23p

The compsn. pref. in soln. form, comprises > 15% of a uni-form mixt. of cpds. giving a smoke colour and flavour, the cpds. partic. comprising constituents derived from a liq. smoke compsn. or from smoke tans. The compsn. also contains sufficient of a water soluble solubilising agent to prevent the smoke flavour cpds. sepg. from the compsn. The compsn. has a pH > 4, esp. 6-8, and it can also contain a salt of a alkaline neutralising agent.

The compsn. is prepd. e.g. by concn. of a liq. smoke flavour soln. partic. by boiling, in the presence of the solubilising agent to remove acid cpds. and raise the pH above 4 and opt. followed by neutralisation to pH 6-8.

The compsns. are used to coat tubular wrappings for foods with ≥ 0.08 mg, esp. > 0.46 mg, per cm^2 of smoke flavour cpds. A particular wrapping is selected from cellulosic fibres, collagen and PVA. The wrappings are esp. used for meat prods. such as sausage, beef roll and ham. The solubilising agents enables a conc. neutral application of the smoke flavour avoiding excess water and deterioration on storage, with better flavouring results. 8.5.79 as 876120 (29pp597)

UNIC ★ D12 82545B/46 ★BE-876-121
 Wrapping for food products esp. sausages - coated with an albumin and a modified smoke flavour liquid
 UNION CARBIDE CORP 09.05.78-US-904284
 A97 (08.11.79) A22c-13 A23I-01/23

The wrapping has at least a part of its surface coated with an albumin and smoke colour and flavour cpds. derived from a modified smoke liquid chosen from a neutralised smoke liquid, a concentrated smoke liquid, a neutralised concentrated smoke liquid and a smoke liquid from smoke tans. The coating is partic. applied to the inner surface of the wrapping which can be cellulosic, partic. fibre reinforced, or made of collagen or polyvinyl alcohol opt. with fibres. A particular food product comprises a meat based sausage having a surface coating comprising ovalbumin and smoke flavour cpds. derived from a modified smoke liquid. The novel albumin/modified smoke liquid compsn. pref. also contains a cellulose ether, esp. carboxymethyl cellulose.

The mixture enables a coating, giving a better smoke flavour and deeper brown colour, which is resistant to rubbing and forming spots. 8.5.79 as 876121 (36pp597)

FARH D12 38646U/28 = DS 2163-764
 Synthetic sausage casing prodn - giving varying wall thickness for black puddings etc

HOECHST AG (KALL) 22.12.71-DT-163764
 A97 (A23 A32) (08.11.79) *DT2163-764 A22c-13
 Mfr. of a plastics straight tube adapted to be shaped into annular form often required for sausage "ring" casings, employs a molecularly oriented thermoplastics extrudate of uneven wall thickness where sites of max. wall thickness face diametrically opposite sites of min. wall thickness; these maxima gradually passing into minima, and again, from min. to max.

A tube is used whose max. wall thickness is 1.3-3 times the min. The tube is biaxially drawn, and subsequently longitudinally post-drawn at non-uniform temp. in such a way that half of the tube of comparatively greater wall thickness is at a high temp. than the thinner wall section. Post-drawing is effected at 80-150°C. 22.12.71 as 163764 (6pp267).

BECK- D12 47957A/27 = DS 2657-833
 Polyurethane casings for boiled sausages - based on linear aliphatic 6 carbon units and smaller amts. of higher poly:ol(s) or diisocyanate(s)
 NATURIN-WERKBECKER 21.12.76-DT-657833
 A97 (A25) (08.11.79) *DT2657-833 A22c-13

Elastic polyurethanes of mol. wt. $> 2,000$ are composed of high mol polyols, diisocyanates and low mol chain extender pref. glycols. The base units, esp. the polyols and diisocyanate units, are mainly built up of linear, aliphatic 6C units. The equiv. ratio of lower molecular chain extender to high molecular polyols is 50-70:1. The equiv. ratio NCO:OH is 0.95-1.00. The chain extenders contain ≤ 50 mol% aliphatic 6C units.

Biaxially oriented films made from the polyurethanes are highly suitable for the prodn. of sausage skins for boiling or frying sausages. Sausages with smoothly adhering skins can be produced. The polyurethanes are cheap to produce and can be readily extruded, and have superior mechanical properties, appearance and handle. 21.12.76 as 657833 (10pp260).

NMHB ★ D12 82625B/46 ★DS 2833-366
 Pig's head clamping fixture - with rotating spring-loaded jaws in fixed and moving arms
 NORDISCHER MASCHINE 29.07.78-DT-833366
 (08.11.79) A22c-17/02

A clamping device with jaws for positioning and holding a pigs head during trimming operations consists of two rotatable clamping elements, located in a fixed and a moving arm. The element on the fixed arm can be shifted outward against the force of a compression spring and can be blocked against rotation during this movement. The moving arm is urged towards closing the jaws by a spring which produces less force than the compression spring, when the power cylinder is not activated.

The facilitates the clamping operations and the re-positioning of the pigs head so that the operator always has both hands free. 29.7.78 as 833366 (5pp39).

SEIB/ ★ D12 82632B/46 ★DT 2756-959
 Dehydrated air-dried meat mfr. - on trolley by multistage pressing and drying operations
 SEIBOLD A 21.12.77-DT-756959
 (08.11.79) A23b-04/04

Dehydrated air-dried meat is prepared by pickling for several days and dehydrating in several stages. Each stage consists of a press operation to push the fluid from the centre outward, and a drying operation where air in slight motion dries its surface a few millimetres deep.

This produces meat of more uniform high quality with a lower nitrite content in a shorter time. 21.12.77 as 756959 (9pp39)

MAGU- ★ D12 82660B/46 ★DT 2818-348
 Meat band saw machine - with thrust strip for carriage convertible to flat extension table
 MAGURIT GUSTAV RITT 26.04.78-DT-818348
 P54 (08.11.79) A22b-05 B23d-53/06

A band saw machine for food, esp. fresh and frozen meat has a carriage with a thrust strip by which the food can be urged against the saw blade up to a stop. The thrust strip can be turned from the vertical to a horizontal position so that it acts as an extension to the sliding carriage.

This is a simple way of providing a flat unobstructed worktable if the user prefers to do without the thrust strip or larger pieces have to be handled. It saves having to exchange the whole carriage. 26.4.78 as 818348 (16pp39)

GLAS/ ★ D12 82678B/46 ★DT 2818-71
 Meat tenderising machine - has two work rolls with radial and axial cutters and two corrugated back-up rolls
 GLASS H 28.04.78-DT-818710
 (08.11.79) A22c-09

A machine to tenderise meat by performing crosscuts in is fitted with two tool rolls, one with radial blades parallel to its axis of rotation and the other with serrated radial disc plates. Each roll is faced by a back-up roll with a corrugated surface. The two tool rolls are revolved in the same direction; the two back-up rolls are also revolved in the same direction, opposite to that of the tool rolls.

This machine can process lumps of meat of any size

shape. It provides a simple quick and reliable way of performing the cruciform incisions. 28.4.78 as 818710 (18pp39)

CHM/ ★ D12 82680B/46 ★DT 2818-722
Carcass rib scraping tool - with steel wire loop pushed by power cylinder

SCHMIDT G 28.04.78-DT-818722
(08.11.79) A22b-03/10 A22c-17

A scraping hand tool to remove the meat adhering to ribs in the thorax of a carcass consists of a power cylinder with a scraping device such as a wire loop at the end of the piston rod. The cylinder is extended at the forward end by two guide rods with teeth for anchoring the end before the piston rod is pushed out.

This saves time and all manual labour in the operations to extract the bare bones from the thorax of an animal carcass. The tool is simple and requires no manual effort. 28.4.78 as 818722 (11pp39)

VISA ★ D12 82912B/46 ★GB 1555-801
Method of forming sausage without separate casing - by contacting surface of sausage paste with protein-precipitating agent to form skin

VISKASE LTD 26.01.76-GB-002835 (18.07.72-GB-033549)
A97 (A14) (14.11.79) A22c-11

A sausage is formed from a paste containing extd. salt-soluble protein. The paste is extruded into a permeable casing whose outer surface is contacted with a protein-precipitating agent which reacts chemically with the protein present at the surface of the paste to form a skin.

The filled casing is washed and the casing subsequently removed. The skin is capable of holding the sausage together after removal of the casing. Residual protein-precipitating agent is removed so that deep penetration of the agent into the produce is prevented. The contacting of the filled casing with the agent occurs in a first channel, the agent conveying the filled casing through this channel.

The method is used to produce sausages without a separate outer casing. 25.1.77 Add to 1422344 (7pp295)

KINJ- ★ D12 83616B/46 ★J7 9034-060
Food mfr. from animal or fish bones - by removing oil and fat, freezing, finely dividing, thawing to give a paste, and refreezing
KINJIRUSHI WASABI 27.06.77-JA-076397
(24.10.79) A231-01/34

The method comprises removing oil and fat from fish or animal bones; rapidly freezing the bones to $\leq 40^{\circ}\text{C}$; finely dividing the frozen bones; thawing the powder to give a paste, and refreezing the paste.

The removal of oil and fat can be carried out by steaming or solvent extraction. 27.6.77 as 076397 A231-1/34 (24.10.79) KINJIRUSHI WASABI KK (3pp83)
(J4 9011274)

KLEP/ ★ D12 B/46 ★NO 7800-095
Processing shrimps or prawns - to facilitate removal of shell and retard deterioration
KLEPPE E 11.01.78-NO-000095
(22.10.79) A22c

UDAI= ★ D12 83641B/46 ★SU -443-529
Domestic animal electric stunner - has generator for beam of quanta and light beam device intersecting at point where animal's head is positioned

UKR DAIRY IND INST 26.07.71-SU-679584
(28.06.79) A22b-03/06

Device comprises a box for the animals and a platform for the operator and the working unit.

The labour involved in the stunning is reduced and the reliability is increased by making the working unit as an optical quanta generator, disposed on a carrier mounted on the box, so that it is capable of moving both along and across it. A mechanism is mounted on the carrier which

ensures that the generator can be positioned in two mutually-perpendicular planes. The rays from the generator are aimed accurately by fitting it with bias lighting comprising incandescent lamps and focussing optics.

Minarskii, L. A., Mikhailik, S. S., Bul. 23/25.6.79.26.7. - 71. as 679584 (5pp29).

FARE= ★ D12 83644B/46 ★SU -475-143
Industrial fish-filleting machine - has carousel, carriers, centering cones, and disc knife to remove head with plate on which liver and roe are removed

FAR EAST DALTEKHRYB 03.01.73-SU-869044
(28.06.79) A22c-25/14

The machine comprises carousel bearing carriers for the fish, knife to cut off the heads, and weight attachment to determine the length of the cut, made as a vertical spring-loaded rod.

Quality removal of the liver and roes from the fish is increased by positioning another knife in front of the decapitating knife. This cuts part of the head up to the diaphragm. There is also a shaped plate used to extract the liver, with a circular template, part of the surface of which is made with projections. The carriers have slits in their side surfaces, with grippers in the slits, kinematically connected to the template, to impart a vibrating motion as the liver and roes are being removed. Each of the carriers has a centering cone for the head hinged to it.

Ermolin, P. M., Sedov, V. B., Bul. 23/25.6.79.3.1.73. as 869044 (13pp29).

UMEA= ★ D12 83827B/46 ★SU -650-597
Small animals e.g. rabbits electrical stunning device - has conveyor belt supporting vertical partitions forming cells and crescent-shaped electrodes in rows

UKR MEAI DAIRY IND 17.10.77-SU-531225
(07.03.79) A22b-03/06

The device comprises a belt conveyor bearing transverse partitions, systems of electrodes and power supply unit.

The quality and reliability of the electrical stunning is increased, by giving the electrodes a crescent shape with sharp lower edges and arranged in two rows. On the conveyor are additional lengthwise partitions forming cells into which the animals are placed.

Tkach, N. V., Vitrovchak, B. N., Bunke, E. K., et al Bul. 9/5.3.79.17.10.77. as 531225 (2pp29).

RAIS ★ D12 84087B/46 ★US 4173-657
Gelled fish prod. contg. vegetable protein - with polysaccharide to improve colour

RALSTON PURINA CO 21.02.78-US-879190
A97 (06.11.79) A23j-03 A231-01/32

A gelled fish prod. contains fish and up to 90 wt. % based on the fish of a muxt. soy protein isolate and a polysaccharide which is either 0.1-0.5% alginate or alginate salt, 0.2-0.8% locust bean gum, 0.0125-0.5% xanthan gum, 0.125-0.5% carrageenan or a carrageenate, 0.075-0.5% guar gum, 0.0225-0.5% methyl cellulose, 0.3-6.5% pectin or 0.1-0.5% CMC.

The compsn. is esp. useful in prepn. of 'Kamaboko' Japanese food. The presence of the polysaccharide imparts a good white colour to the prod. overcoming the problem of poor colour associated with the use of vegetables protein as a fish substitute. 21.2.78 as 879190 (6pp955)

COLP- ★ D12 84128B/46 ★ZA 7804-217
Sausage skin - comprising synthetic plastics web with alternating printed and unprinted areas

COLPAK PTY LTD 25.07.78-ZA-004217
A97 (02.07.79) A22c A23b

D13: OTHER FOODSTUFFS

MORG D13 69190T/43 = DS 2220-769
Casein protein concentrate - contg. a casein soln and potassium salt of an organic acid
MORINAGA MILK KK (MOMI) 29.00.72-JA-002838 (30.08.71-JA-065863)
E17 (08.11.79) *BE-782-080 A23c-11

A casein contg food concentrate or powder, e.g. baby food is prepd. Acid casein is dissolved in alkali to obtain a soln contg. 5-12% protein and the potassium salts of lactic acid, tartaric acid, succinic acid, citric acids and/or pyro-, meta-, polymeta- or tetra- phosphoric acid are added in an amt according to the equation $\log y = 0.0384x + (0.80 \pm 0.35)$ (where y is the amt. of salt and/or phosphate in mg. per g. casein protein and x is the amt. of calcium ions in mg. per g. casein protein).

A calcium salt soln with 10-30 mg Ca ions per ml. is added at below 50°C in an amt is adjusted so that after heating it is 6.2-6.8 and an emulsifier is added. The soln is heated gradually to $\geq 65^\circ\text{C}$ with stirring to form casein micella, pasteurised, concentrated and opt. dried.

Vegetable fat, carbohydrates, vitamins and other foods additives may also be added. The food concentrate has a low concn. of sodium. 27.4.72 as 220769(13pp068).

CARL- D13 83769V/48 = DS 2421-145
Continuous cooling and working of caramel - for making hard, soft or filled bonbons, with greatly reduced working times
CARLE & MONTANARI 08.05.73-IT-012609
(08.11.79) *NL7406-055 A23g-03/02

The inner wall of a vessel for processing masses of sugar and caramel into hard, soft and/or filled bonbons, encloses two parallel rotors, the mixing vanes of which overlap each other, in the manner of a worm pump housing. The cavity between the inner wall of the vessel and its outer wall is divided by ribs into a number of compartments which can be heated or cooled as required. The outlet for the treated mass is fitted with ≥ 1 calibrating or extruding head. This is interchangeable and has nozzles, and there are covers by which the separate nozzles can be sealed.

The arrangement overcomes the prior art problems and ensures that all the normal operations carried out on the plasticised mass of sugar and its additives, between the boiler and the calibrator, are effected with air, gases and steam completely excluded from them. 2.5.74 as 421145 (8pp1045).

TODA/ ★ D13 82717B/46 ★DT 2819-323
Packaged hard boiled egg - mfd. by poaching raw egg in egg-shaped foil, closing it and boiling
TODAS 03.05.78-DT-819323
A92 (08.11.79) A23b-05

A packaged hard boiled egg is produced by poaching a raw egg into a shaped bag, resembling three quarters of an egg, and made of a retort pouch film or of high-density polyester or polyethylene, taking care not to damage the egg pellicles. This container is then sealed and boiled with the egg inside it.

This hard boiled egg has excellent keeping properties and cannot be broken in transit or storage like natural eggs. The good taste of the egg is preserved. 3.5.78 as 819323 (19pp39)

WIEN/ ★ D13 82721B/46 ★DT 2819-363
Straw processing and dehydration - in impact rotor with contra-rotating stator and following centrifuge
WIENEKE F 03.05.78-DT-819363 (00.00.78-DT-810944)
C03 P12 P41 (08.11.79) A01d-43/10 A01d-91/04 A23n-17 B02c-13/06 B02c-19/12

A machine for the processing and dehydration of damp material, esp. straw and stalks, consists of a rotor, which carries impact and/or ripping tools, and of a housing enclosing it. The housing which rotates together with the following centrifuge opposite to the rotor also carries impact and/or ripping strips on its inside.

This produces a centrifuging effect on the juice ahead of the centrifuge and raises the centrifuging efficiency without

requiring any extra space. 3.5.78 as 819363 Add to 281094 (6pp 39)

TUCH- ★ D13 82739B/46 ★DT 2819-554
Milk sampler - adds preservative in exact proportion to sample volume
FA TUCHENHAGEN O 05.05.78-DT-819554
P13 R16 (08.11.79) A01j-07 G01n-01 G01n-33/04

A milk sampling device adds a chemical preservative to the sample in exact proportion to the volume of the extracted sample. The sampling operation produces a pressure differential which effects the dosage or the piston for the preservative is mechanically coupled to that of the sampler.

This reduces errors in the rate of preservative admixture to a minimum. 5.5.78 as 819554 (9pp39)

WARN ★ D13 82842B/46 ★DT 2917-722
Prepn. of chewing gum base compsns. - from elastomers by two-stage intensive mixing under high shear
WARNER-LAMBERT CO 01.05.78-US-901371
A97 (08.11.79) A23g-03/30

Chewing gum base compsns. are made in two stages, by (A) mixing solid elastomer, solvent and oily plasticiser with high intensity under high shear, the elastomer being first reduced to a molten lump-free mass, the solvent gradually added and then the plasticiser added stepwise with continued mixing, and (B) incorporating hydrophobic plasticiser, oily plasticiser, non-toxic vinyl polymer and emulsifier into the molten mass, with continued high-shear mixing until a uniform compsn. is obtd.

Time required for the usual 3-stage mixing, with only the first stage under high-shear conditions is much reduced, and a single mixer can be used. The process is flexible and can be carried out as a batch or continuous process. 2.5.79 as 917722 (26pp195)

ORIO/ ★ D13 82853B/46 ★FR 2415-966
Thin wall plastic moulds for cast frozen ice foodstuffs - comprising simple hollow shapes which shatter as the crystallising ice expands
ORIO L J R 06.02.78-FR-003925
A88 (05.10.79) A23g-09/22

Moulds for cast frozen goods, e.g. 'water ice' desserts, are made as a monolithic shell with a restricted entrance and provided with integral seams of weakness so that as the frozen contents expand, the shell is shattered to permit its removal.

Used esp. for accepting ice concoctions which expand 7-8% when frozen at approx. -40°C . The moulds may be made by casting, blow-moulding, injection moulding etc. more simply than split moulds which require some form of catch to keep them closed and manipulation in order to release the contents. No specific plastics materials quoted. 6.2.78 as 003925 (6pp515).

RAMB/ ★ D13 82854B/46 ★FR 2415-970
Sterilising and packing food prod. into plastic sack - using single autoclave for simultaneous but separate sterilisation of prod. and sack
RAMBAUD M E M 06.02.78-FR-003234
Q31 (05.10.79) A23l-03/16 B65b-55/02

A portion of prod. and a container are sterilised simultaneously but separately in the same sealed autoclave. The prod. is filled into the container which is closed and sealed while still in the autoclave. Filling is pref. carried out under vacuum after sterilisation. The closing and sealing carried out inside the autoclave may be of a temporary nature, a permanent seal being completed after the container has been removed from the autoclave.

Used for sterilising and packing food prod. into large containers, e.g. 5 to 30 kg. capacity. Complete sterilisation is ensured without requiring heavy, expensive containers which are necessary for sterilising after canning. There is no risk of contamination during filling and no need for supplementary sterilising after the container has been sealed. 6.2.78 as 003234 (16pp448).

VINC/★ D13 82855B/46 ★FR 2415-972
 Mixing milk powder with hot water to feed calves etc. - using recycling pump for completely homogeneous mixt.
 VINCENT M 03.02.78-FR-003600
 C03 (05.10.79) A23n-17 B01f-01 B01f-05
 The installation comprises a tank in which milk powder is poured into hot water. A pump, fitted under the tank, recycles the mixt. against the inside of the tank wall and causes the contents of the tank to swirl around fixed mixing blades. At this stage the recycling valve is open and the outlet valve closed. After about six minutes the mixt. can be drained via a flexible pipe to feed individual calves.
 The installation ensures excellent homogeneity of the mixt. and obviates man-handling buckets of the mixt., which leads to spillage and deterioration of the prod.
 8.2.78 as 003600 (4pp448).

SATA/ D13 65267Y/37 =GB 1555-579
 Rice husking and polishing unit with humidification - has accurately calculated perforated wall ratio at humidifying point
 SATAKET 02.03.76-JA-022424
 P41 + P12 (14.11.79) *DT2706-837 B02b-03

Rice pearling apparatus comprises friction-type chambers and has a humidifying line communicating with one chamber. There are perforated walls for debranning-pearling cylinders in the pearling units before and after the humidifying section so that the total perforated wall surface of the chambers after the section divided by the product of the pearling ratio multiplied by rice flow rate is not less than the total perforated wall area before the section divided by the same product.

The pearling ratio is the ratio of the weight of brown rice lost on pearling or the weight of bran collected to the original weight, and the flow rate is directly proportional to percentage yield at the particular point. 1.3.77 as 008616 (6pp1358)

FARB D13 65294A/37 =GB 1555-647
 Treating extracted sugar beet husks to give good colour - by treating with hydrogen peroxide in aq. alkaline suspension to give prod. used in milk, chocolate, flour, bread, sweets, etc.
 BAYER AG 08.03.77-DT-709965
 (14.11.79) *BE-864-630 A23l-01/21

The colour of beet chips is improved by oxidising them with H_2O_2 in an aq. alkaline suspension. The beet chips contain < 5 (< 1) wt. % sugar, and the hydrogen peroxide concn. used is 0.025-0.2 wt. %. Pref. an oxidation temp. of 50-80 °C is used, and the pH of the alkaline suspension is 8-11. The mixt. used is rendered alkaline by alkali(ne earth) metal hydroxides.

Oxidn. of beet chips to a pleasant, golden yellow colour is achieved in a short time. Prods. are used as foodstuffs or their constituents, such as in milk, chocolate, marzipan, flour, bread, fruit puree, jams, jellies and potato preps. 2.3.78 as 008325 (2pp931)

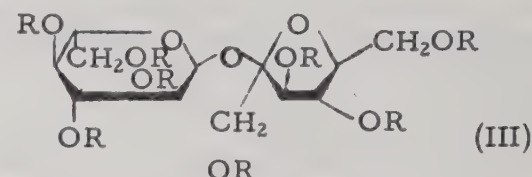
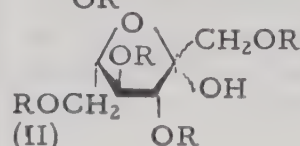
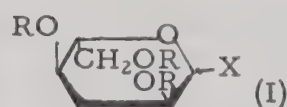
KURE D13 41469A/23 =GB 1555-827
 Preserving konjak flour - by e.g. vacuum packing using laminate of polyolefin and vinylidene chloride resin

KUREHA KAGAKU KK 08.10.76-JA-120303
 A92 + Q34 (14.11.79) *J53047-556 + B65d-81/20
 Powdered roots of devil's tongue are preserved by packing the powder under vacuum or in a purging gas with a packaging material. The packaging material has a barrier-property with an O_2 -permeability of ≤ 100 ml/m². 24 hr. atmos. 30 °C dry, and a moisture permeability of ≤ 5.0 g/m². 24 hr. 40 °C. 90% RH.

Pref. the packaging material is a 3-layer film of polyolefin/vinylidene chloride resin/polyolefin. The purging gas used is N_2 and/or CO_2 .

The food prod. "konnyaku", which is a coagulated prod. of the powdered roots of devil's tongue is prepd. as a fine powder, contg. glucomannane. The raw material is preserved over a long period of time in a stable condition, serving to stabilise the market price. 5.10.77 as 041360 (6pp931)

TOOH D13 61925A/35 =GB 1556-007
 L-Sucrose useful as non-nutritive sweetener - prepd. from protected L-fructofuranose and L-glucopyranosyl halide derivs.
 QUEENS UNIV KINGSTON ONT 22.04.77-CA-276796
 B03 E13 (14.11.79) *BE-866-171 C07d-307/20 C07d-309/10
 C07d-321/06 + C07c-43/04 C07c-79/16 C13k-13
 B-L-Fructofuranosyl- α -L-glucopyranoside is new. It is prepd. by condensing a cpd. of formula (I) with a cpd. of



formula (II) to produce a cpd. of formula (II), and replacing all the R gps. by H to give the final prod. In the formulae X is Cl, Br or I and R is aralkyl, 1-4C alkyl or 2-4 C alkenyl.

The prod. is used as a sweetener, esp. for foodstuffs, and is sweet and non-nutritive. 7.4.78 as 013645 (16pp997)

HOHN ★ D13 83045B/46 ★J5 4127-907
 Vegetable cooking oil - contg. phosphatide, succinic acid or sodium succinate and opt. oleophilic surfactant
 HOHNEN OIL KK 29.03.78-JA-036216
 (04.10.79) A23d-05/02

Oil is prepd. by adding (a) phosphatide, as > 0.5 wt. % on liq. vegetable oil, (b) succinic acid or Na succinate as > 1 wt. % on the phosphatide and opt. (c) oleophilic surfactant to the liq. vegetable oil, and heating with stirring. Insolubles are removed by filtration, then the content of phosphatide is adjusted to become 0.5-5 wt. % by the addn. of liq. vegetable oil.

Oil which is useful for cooking using a hot plate is prepd. The oil does not suffer from colouration, (i.e. colouration (browning) of phosphatide by heating at > 150 °C) or spattering.

Suitable phosphatides are those contained in bean oil, corn oil, cotton seed oil, rape seed oil, etc. Suitable oils include bean-, corn-, rapeseed-, cotton seed-, sesame-, olive-, safflower-, sunflower- and peanut oils.
 29.3.78 as 036216 (3pp170)

SANB ★ D13 83177B/46 ★J5 4128-515
 Prodn. of L-malate for medicines and foods - by treating DL-malic acid with L-(plus)-threo-1 para-nitrophenyl-2-amino-1,3-propane:diol and isolating resulting salt from aq. soln.

SANKYO CHEM IND KK 24.03.78-JA-033764
 B05 E17 (05.10.79) C07c-51/42 C07c-59/12
 Prodn. of L-malate comprises treating DL-malic acid with L-(+)-threo-1-p-nitrophenyl-2-amino-1,3-propanediol (I) (d-base) in an aq. medium to give the corresponding salt, and isolating bis(L-(+)-threo-1-p-nitrophenyl-2-amino-1,3-propanediol) L-malate (II) (2:1 salt) from the aq. soln. (II) on treatment with an acid or base gives L-malic acid. (II) is a new salt of malic acid.

Solubility of (II) in water is lower than that of d-base. L-malate (1:1 salt) or d-base. D-malate (1:1 or 2:1 salt). The solubility of (II) is further decreased by addn. of hydrophilic organic solvents, e.g. MeOH, EtOH, Me_2CO , MeCOEt. DL-Malic acid can be resolved into the optically active acid on this property of (II). L-Malic has been used in fields of medicines and foods.

(I) may be used as free base of HCl salt in amt. 1.0-2.0 mole, pref. more than 1-2 mole, to 1 mole of DL-malic acid. If required, the soln. may be adjusted at pH 7-8. The solubility to the solvents depends on temp.
 24.3.78 as 033764 (4pp52)

MITU ★ D13 83350B/46 ★J5 4129-130
 Acceleration of fibrous material digestion in animals - by administering substance, obtd. by coating methionine, chlorine, betaine, tri:methylamine etc. with water soluble substance
 MITSUBISHI CHEM IND KK 27.03.78-JA-035110
 A96 C03 (06.10.79) A61k-31/13 A61k-35 A61k-37/22
 Method comprises administering to animal a substance obtd. by coating one or more cpds. selected from methionine, choline, betaine, lecithin, carnitine, trimethylam-

ine and N,N-dimethyl-2-hydroxy-ethylamine, with water-soluble substance, in an amt. of 0.04-1.94 g/kg daily in the case of ruminant, and in an amt. of 0.18-5.7 g/kg daily in the case of monogastric animal. The dosage is the wt. as active cpd. alone.

Administration of the active cpd. accelerates the propagation of cellulose-decomposing bacteria living in stomach and intestine, and as a result accelerates the digestion of fibrous material.

Water-soluble substances used for coating the active cpd., include, e.g., gelatin, mixt. of gelatin and glycerine, PVA, vinylpyridine, copolymer of maleic anhydride and vinyl monomer. 27.3.78 as 035110 (4pp108)

EISA ★ D13 83357B/46 ★ J5 4129-141
Increasing viscosity of, or solidifying, hydrous liq. foods - by adding acylated fish meat protein and divalent metal ions, esp. magnesium or calcium

EISA KK 31.03.78-JA-036876

(06.10.79) A231-01/04

Acylated fish meat protein is water-soluble and by combining divalent metal ion in the aq. soln. it can be solidified without heating or cooling. Thus, it can be used instead of agar and the method can be adapted for liq. compsns. contg. sweetener, flavour and pigment, fruit juice, soup, sauce, drinks, an emulsion composed of water and oil, etc. By changing the amt. of acylated fish meat protein, foods having various hardness ranging from paste to curd can be obtd. The obtd. foods have a different texture from those obtd. with agar, gelatin, etc.

Acylated fish meat protein can be obtd. by acylating fish meat protein with acetic acid, succinic acid, propionic acid, etc. Usually the acylated fish meat protein is used in an amt. of 0.1-10% and the divalent metal ion in an amt. of 0.01-0.0001 mol. depending on the hardness of the food required. 31.3.78 as 036876 (3pp5)

MITU ★ D13 83359B/46 ★ J5 4129-179
Decomposition of lignin-contg. waste - using suitable microorganisms, to give prod. useful as ruminant feedstuff or for glucose prodn.

MITSUBISHI CHEM IND KK 28.02.78-JA-022230

C03 E13 (D16 D17) (06.10.79) C07a-01 C12b-01

Decompsn. of lignin comprises culturing lignin-decomposing microorganisms belonging to the genus of Hypoxylon, Rosellinia, Ustulina or Xylaria, in the presence of lignin.

Sawdust, wood chip, wood flour etc. can be converted into a crude feedstuff for ruminants such as cows and sheep. Further, the prod. obtd. can be readily decomposed by cellulase or cellulase-producing bacteria to give glucose. Obtd. glucose is used for cultivation of microorganisms such as yeast and the obtd. microorganism cells having high content of protein can be used as feedstuff.

Examples of microorganisms are Hypoxylon (Sec. Anulata) sp. D. 2449 A (FERM-P No. 4404), Rosellinia sp. D. 2623 (FERM-P No. 4407), Ustulina sp. D. 2566 (FERM-P No. 4408), Xylaria sp. D. 2783 (FERM-P No. 4409). 28.2.78 as 022230 (7pp108)

TANB ★ D13 83451B/46 ★ J5 4130-393
Feedstuff for crustacea, e.g. shrimps, lobsters, crabs, etc. - contains (dehydro)cholic acid, its metal salt, its inclusion cpd. with amino acid, etc., to accelerate growth

TOKYO TANABE KK 25.03.78-JA-033632

C03 (09.10.79) A23k-01/18

The cholic acid cpd. is incorporated into natural or artificial feedstuff compsns. in an amt. of 0.01-0.2 wt. %, pref. 0.05 wt. %. The feedstuff is then shaped into a suitable form, such as pellets of 0.5-5 mm dia. and 3-10 mm length using a binder. 25.3.78 as 033632 (7pp22)

NISS ★ D13 83452B/46 ★ J5 4130-394
Feedstuff for cultivation of fish - comprises alpha-starch as binding agent, and a polyvalent carboxylic acid

NISSHIN FLOUR MILL KK 27.03.78-JA-034203

C03 (09.10.79) A23k-01/18

Feedstuff for cultivation of fish comprises α -starch as binding agent and other conventional nutrient ingredients is further mixed with 0.5-5 wt. % of polyvalent carboxylic acid. The binding effect of α -starch is accelerated by the use of polyvalent carboxylic acid without damage of other

properties.

The polyvalent carboxylic acid includes oxalic acid, citric acid, malonic acid, succinic acid, glutaric acid, malic acid, tartaric acid and the like, among which oxalic acid, citric acid and tartaric acid are pref. For instance, 68 pts. of fish meal, 23 pts. of α -starch, 5 pts. of beer yeast, 4 pts. of minerals and 5.0 wt. % of citric acid and 120 cc of water are mixed to give wet feedstuff compsn. 27.3.78 as 034203 (4pp22)

NISS ★ D13 83453B/46 ★ J5 4130-395
Feedstuff for cultivation of fish - contains alpha-starch as binding agent, and inorganic acid

NISSHIN FLOUR MILL KK 27.03.78-JA-034204

C03 (09.10.79) A23k-01/18

In feedstuff for cultivation of fish using α -starch as binding agent, 0.001-0.2 g of inorganic acid is incorporated into 100 g of the feedstuff. The binding effect of α -starch is accelerated by the inorganic acid without damage of other properties of the compsn.

The inorganic acid includes hydrochloric acid, orthophosphoric acid, metaphosphoric acid, polymetaphosphoric acid and the like. For instance, when hydrochloric acid (35%) is used, its amt. is 1-5 ml per 100 g of the feedstuff and when orthophosphoric acid is used, its amt. is 0.5-10 ml per 100 g of the feedstuff. For example, 68 pts. of fish meal, 23 pts. of α -starch, 5 pts. of beer yeast, 4 pts. of minerals and vitamins, and 120 cc of aq. soln. of 1 N hydrochloric acid are mixed to give wet feedstuff compsn. 27.3.78 as 034204 (4pp22)

LIOC ★ D13 83493B/46 ★ J5 4130-48
Octyl-phenone deriv. antioxidant for food - is prepd. by washing mace or oranges in non-polar solvent, extracting with ethanol and diluting with water

LION DENTIFRICE KK 02.04.78-JA-038546

E14 (09.10.79) A23d-05/04 C07c-49/82 C09k-15/34

The antioxidant is produced by washing orange, treated with a polar solvent or mace powder with a non-polar solvent, extracting the residue with 60-90 wt. % of EtOH to obtain an extracted portion and a pptd. portion, diluting the extract with water to reduce the ethanol concn. to 20-40 wt. %, giving a ppte contg. 5-50 wt. % of 2',6'-dihydroxy-9-(2,5-dihydroxyphenyl) octylphenone.

In an example, mace powder was washed with n-hexane to obtain a residue. The residue was extracted with EtOH at room temp. The EtOH concn. was diluted to 30 wt. %. The antioxidant was pptd from the diluted soln. 2.4.78 as 038546 (9pp51)

LIOC ★ D13 83494B/46 ★ J5 4130-48
Prod. of antioxidant for foods - by distilling mace with water vapour extracting residue with ethanol and diluting extracted residue with water

LION DENTIFRICE KK 02.04.78-JA-038547

E14 (09.10.79) A23d-05/04 C07c-49/82 C09k-15/34

Antioxidant is prepd. by (a) distilling mace with water vapour to obtain pure oil and an extracted residue; (b) extracting the residue with ethanol of concn. 60-90 wt. % to obtain an extracted portion and a pptd. portion; and (c) diluting the extracted residue with water to reduce the ethanol concn. to 20-40 wt. %, and thereby obtg. a ppte. contg. 5-50 wt. % of 2',6'-dihydroxy-9-(2,5-dihydroxyphenyl) octylphenone from the diluted soln.

In an example, mace was distilled with water vapour to extract pure oil and by-produce an extracted residue. The residue was dried, divided to 48 mesh, and extracted with ethanol to obtain an extracted portion. The extracted portion was diluted with water to reduce ethanol concn. down to 35%. Pptes. were obtd. from the resulting diluted portion, filtered out and dried in air to obtain an antioxidant. 2.4.78 as 038547 (9pp51)

RIKA ★ D13 83506B/46 ★ J5 4130-5
Selectively benzylated sugar derivs. prodn. - from lower all glucopyranoside, mannopyranoside or galactopyranoside

RIKAGAKU KENKYUSHO 30.03.78-JA-037970

B03 E13 (09.10.79) C07h-15/04

Method comprises treating a lower alkylglucopyranoside with a bis(tri lower alkyl-stannous) oxide to give a lower alkyl tri-lower alkyl-stannous alkoxy deriv., subjecting

the resultant deriv. to benzylation with a benzyl halide in the presence of a hydrogen halide collector to give a lower alkyl 2, 6-di-O-aryl-3, 4-di-O-benzylglucopyranoside in good yield and subjecting the resultant substance to dearylation to give a lower alkyl 3, 4-di-O-benzyl-glucopyranoside.

Also claimed is the prodn. of a benzylated sugar deriv. which comprises treating a lower alkylmannopyranoside or lower alkyl galactopyranoside with a bis(trilower alkyl stannous) oxide to give a lower alkyl 3, 6-di(tri-lower alkyl stannous) mannopyranoside or lower alkyl 3, 6-di(tri-lower alkylstannous)galactopyranoside, treating the substance with an aryl halide with heating to give a lower alkyl 3, 6-di-O-aryl-mannopyranoside or lower alkyl 3, 6-di-O-aryl galactopyranoside, subjecting the substance to benzylation with a benzyl halide in the presence of a hydrogen halide collector to give a lower alkyl 3, 6-di-O-aryl-2, 4-di-O-benzyl-mannopyranoside or lower alkyl 3, 6-di-O-aryl-2, 4-di-O-benzyl-galactopyranoside in good yield, and dearylating to give a lower alkyl 2, 4-di-O-benzyl-mannopyranoside or lower alkyl 2, 4-di-O-benzyl-galactopyranoside.

The sugar derivs. are useful as intermediates for the synthesis of branched oligosaccharides, food additives as sugar esters, intermediates for synthesis of various antibiotics or intermediates for the synthesis of macrolide cpds. 30.3.78 as 037970 (6pp69)

JNIL D13 67921V/39 = J7 9034-002
Margarine fat-phase of specified dilatation - prepd. from mixed and partly alcoholysed liq. and solid fats
UNILEVER NV 28.02.68-DT-692539
(24.10.79) *CH-552-345

TANA D13 69892Y/39 = J7 9034-063
Antioxidants for oils, fats and foodstuffs - are based on gelatin hydrolysate, tocopherol and organic acid
TANABE SEIYAKU KK 12.02.76-JA-014666
E13 (E17) (24.10.79) *J52099-242 A231-03/34
Antioxidant is composed of partial hydrolysate of gelatin, tocopherol and organic acid. The partial hydrolysate of gelatin:tocopherol:organic acid (wt. ratio) is 100:10-1000:1-200. The av. mol. wt. of partial hydrolysate of gelatin is 150-5000. The tocopherol is natural tocopherol (the mixt. of α -, β -, γ - and δ -tocopherol), α -tocopherol, β -tocopherol, γ -tocopherol, δ -tocopherol or their mixt. The organic acid is malic acid, citric acid or ascorbic acid.

The synergic antioxidation effect can be attained by combining above three components, and safe, inexpensive and powerful antioxidant can be obtd. 12.2.76 as 014666 A231-3/34 (24.10.79) TANABE SEIYAKU KK (5pp) (J5 2099242)

DAUC ★ D13 83617B/46 ★ J7 9034-068
Preventing discolouration of fresh vegetables - by dipping in aq. soln. of organic acid, e.g. citric or lactic acid, and phytic acid
DAIICHI SEIYAKU KK 12.12.70-JA-111034
E19 (24.10.79) A23b-07/10

Method comprises dipping fresh vegetables into an aq. soln. of an organic acid (I) and phytic acid (II). The concn. of (II) is 0.01-0.05 wt. %. (I) is e.g. citric acid or lactic acid.

The treatment prevents discolouration and degradation of vegetables, esp. peeled or sliced burdock tuber, yam, lotus root, taro, etc.

In an example, peeled taro was immersed for 30 mins. in an aq. soln. contg. 0.05% phytic acid and 0.01% citric acid, and allowed to stand for 4 days in air. The taro only slightly discoloured, cf. an untreated sample which severely discoloured. 12.12.70 as 111034 A23b-7/10 (24.10.79) DAIICHI PHARM KK (4pp83)

KAME- D13 37660A/21 = J7 9034-070
Crispy glossy rice cake formation - by spreading soln. contg. dextrin or sugar on the surface, adhering granular food to it and heating to foam dry the soln.

KAMEDA SEIKA KK 27.09.76-JA-114615
(24.10.79) *J53041-458 A23g-03
As the adhering soln. the viscous soln. obtd. by dissolving dextrin, sugar, e.g. millet jelly, invert sugar, etc. in water to a concn. of 70-80 w/w%, can be applied. Butter, salt, seasoning, etc. may opt. be combined in the soln. and the viscosity of the soln. is adjusted. The soln. is then

spread on the surface of rice cakes and granular foods are adhered to it. Then surplus granular foods are omitted and the rice cakes are directly heated. The adhering soln. is heated to 85-95°C and is boiled with foaming. The granular foods can thus be covered with foam and the soln. is evapd. to dryness.

Granular foods (e.g. cut peel, cut nuts, sesame, etc.) can be adhered firmly on rice, cakes in a short time.
27.9.76 as 114615 A23g-3/00 (24.10.79) KAMEDA SEIKA KK (3pp) (J5 3041458)

RUYS/ ★ D13 83621B/46 ★ NL 7804-456
Cheese making with addn. of powdered cheese - improved by homogenisation before or after cheese addn.

RUYS JJ 26.04.78-NL-004456
(30.10.79) A23c-19/02

Cheese-making process in which finely divided ripe cheese is added to the milk before adding the rennet is improved by homogenising the milk before or pref. after adding the ripe cheese. Homogenisation increases the cheese yield (e.g. to 7-8 kg. per 100 kg.). The cheese ripens more rapidly than conventional cheese.

The ripe cheese pref. has a particle size of <0.1 mm. and is added in an amt. of 6-50 wt.% based on the solids content of the milk. The ripe cheese is pref. homogenised with part of the milk (>10% of total) and then mixed with the rest of the milk. Homogenisation is pref. effected at 30-40°C., 26.4.78 as 004456 (6pp367)

MILK= ★ D13 83724B/46 ★ SU -649-393
Full cream curd cheese contg. curd and fat emulsion base - with addn. of conc. whey for high organoleptic and biological properties, and for utilisation of all milk components
MILK IND RES INST 10.09.76-SU-407002
(28.02.79) A23c-19/02

Cream cheese contg. a curd and a fat emulsion is improved by the addn. of concentrated whey (60-65% solids), whereby the quality of the cheese is improved, and milk components are more fully utilised. The cheese contains (in wt. %) curd 30-50, fat emulsion 25-40 and conc. whey 20-35.

Cream cheese is usually produced by preparing a fat emulsion based on cream, mixing the emulsion with curd and mechanically working the mixt. This method is modified by introducing conc. whey before the curd; pasteurising the whole mixt. at 90-95°C; cooling to 55-60°C and passing through a colloidal mill.

Shchedushnov, E. V., Kutilina, S. V., Ryabova, N. Ya., Bul. 8/28.2.79.10.9.76.as407002(4pp70).

FODD= ★ D13 83725B/46 ★ SU -649-396
Preserving biological activity of components of fodder premixes - by introducing antioxidants e.g. dihydro pyridine derivs. with synergistic additives, pref. choline bromide or monoethanol-amine phosphate

FODDER IND RES INST 03.02.75-SU-102824
C03 (28.02.79) A23k-01/14

Biologically active cpds. in fodder premixes can be stabilised by introduction of antioxidants in combination with synergistic additives.

Highly effective synergists are choline bromide and monoethanolamine phosphate. The pref. antioxidants are diludin and santoquine.

Choline bormide is pref. added in an amt. of 0.95-1.6 pts. wt. per 1 pt.wt. of the antioxidant or 1.2-2.0 wt. % w.r.t. the premix. Monoethanolamine phosphate is pref. added in an amt. of 0.8-2.4 pts. wt. per 1 pt.wt. of the antioxidant or 1.0-3.0 wt. % w.r.t. the premix. Apart from the stabilising synergistic effect choline bromide and monoethanolamine phosphate serve as structural components of organs and tissues of animals.

Pelevin, A. D., Ivanov, B. V., Bul. 8/28.2.79.3.2.75.as 102824(3pp70).

NRAN= ★ D13 83726B/46 ★ SU -649-397
Fodder blend for young ruminants e.g. calves - enriched in symbiotic microorganisms by addn. of rumen content of slaughtered adult ruminants to promote digestive activity
N RANCHES RES INST 02.03.77-SU-460203
C03 (28.02.79) A23k-01/18

The fodder compsn. contains(in wt. %) dry return 15-20,

dried rumen content(as defined above)10-15, oat flour 15-20, pea flour 8-10, sunflower press cake 10-15, flax seed press cake 5-10, ground cottonseeds 1.5-2.0, meal-bone flour 3-5, fodder yeasts 2-4, vitaminised biomyacin 0.5-1.0, fluorine-free phosphate 0.5-1.0, common salt 0.5-1.0; the balance is barley flour.

This compsn. may opt. contain microelements(in g per 100kg) cobalt salts 1.0-1.5, copper salts 5.0-7.0, zinc salts 2.5-3.0 and iron salts 3.5-4.0.

Kozlov, A. S., Bul. 8/28.2.79.2.3.77. as460203(3pp70).

SHMA/ ★ D13 83727B/46 ★SU -649-398
Combined fodder for lactating cows - contg. addn. of urea and yeasts grown on liquid petroleum hydrocarbons for increased milk prodn. and fat content

SHMANENKOV N A 11.10.76-SU-410305

C03 (28.02.79) A23k-01/22

The fodder contg. urea as a source of nitrogen, is improved by addn. of fodder yeasts grown on hydrocarbons.

The ratio of the nitrogenous components w. r. t. the proteins(N x 6.25) is(in wt. %) combined fodder 60-70, carbamide 15-20, and yeasts 15-25. The milk prodn. is increased by 18%; the fat content by 15.2-20.5%.

The optimal ratio of protein nitrogen yeasts) to nonprotein nitrogen(carbamide) is 1:1(w. r. t. protein N x 6.25) or 5.5:1 by wt. The whole fodder contains 2.5-3.5 wt. % of the yeasts and 0.5-0.7 wt. % of carbamide.

Shmanenkov, N. A., Sokolov, Y. A., Aliiev, A. A., et al Bul. 8/28.2.79.11.10.76. as410305(4pp70).

POTA= ★ D13 83728B/46 ★SU -649-399
Prepn. of dry potato products - by dividing pulped potatoes into two phases, partly evaporating liquid phase, mixing it with dense phase, and evaporating mixt.

POTATO FOODSTUFFS 05.07.77-SU-503767

(28.02.79) A23I-01/21

Prepn. of a dry potatoe prod. is simplified by dividing pulped potatoes into a liquid phase and a more dense phase. The liquid phase is evaporated until its moisture content reaches the equilibrium state. This phase is mixed with the originally more dense phase(contg. 45-65% moisture) in such a ratio that the mixt. does not contain more than 20-30% moisture. The mixt. is then dried at 110°C to a residual moisture content of 12%.

The liquid phase is the natural potatoe juice. The more dense phase contains insoluble starch and cellular tissue. The potatoes are first comminuted and treated with 0.1% sulphate soln. to prevent fermentation. Then the phases are sepd. by filtration under pressure. Further processing proceeds as described above. By this method the necessity of drying the prod. twice is eliminated. The dry prod. contains more than 80% of starch; the other components include sugar, proteins and cellulosic substances. Suboch, F. I., Bul. 8/28.2.79.5.7.77. as503767(2pp70).

MOEC= ★ D13 83729B/46 ★SU -649-400
Storage stable mayonnaise prepn. - with addn. of aq. and alcoholic extracts from juniper berries and/or spruce seeds to corresp. aq. protein and fatty phases

MOSC ECONOMIC ACAD 11.07.77-SU-506961

(28.02.79) A23I-01/24

Mayonnaise is prepd. by mixing an aq. proteinaceous phase with a fat phase and introducing spicy aroma and taste components in the form of extracts from vegetable materials.

This compsn. is improved by addn. of an extract from juniper berries or spruce seeds. An aq. extract is used for addn. to the aq. proteinaceous phase and/or an alcoholic extract is introduced into the fatty phase.

The resistance of the mayonnaise to the oxidative degradation is enhanced and, hence, the storage stability is improved(≤ 20 days, compared with the usual 6-7 days).

Kastornykh, M. S., Kudryashova, T. A., Khomutov, B. I., Bul. 8/28.2.79.11.7.77. as506961(2pp70).

MOCA= ★ D13 83730B/46 ★SU -649-401
Prophylactic pectin contg. drink - prepd. from apple pectin, sugar and apple juice with use of high frequency acoustic vibrations to facilitate dissolution of pectin

MOSC CANNING WKS (MOFA=) 16.08.76-SU-397295

(28.02.79) A23I-02

Apple-pectin drink is prepd. by dissolving pectin and sugar in water; blending the soln. with apple juice; and partly evaporating the mixt.

By dissolving pectin and sugar in water at 20-30°C while applying acoustic vibrations(frequency 50-100 Hz; phase shift 180°) for 45-50 min, the mfr. process is accelerated. The evapn. of the mixt. is carried out at 60-70°C until the solids content increase to 16-18%. By this method the profilactic and organoleptic properties of the drink are improved.

The prodn. time is reduced from 6h. to 1h.

Obodovskaya, D. A., Kislenko, I. I., Tepper, R. Ya., et al Bul. 8/28.2.79.16.8.76. as397295(2pp70).

FOOD= ★ D13 83824B/46 ★SU -650-57
Homogeniser for milk (and other emulsions) - has pressure chamber with coaxial electrodes, to produce a discharge which raises pressure and forces milk through homogeniser

FOOD SUPPLY EQUIP 19.09.77-SU-529351

P13 (08.03.79) A01j-11/16

Device is used for homogenising milk(as well as other emulsions). It comprises an intake pipe, homogenising head and mechanism for creating a working press. Power consumption is reduced and the operational reliability is increased by providing a chamber, electrical energy accumulator and control unit. The chamber is placed between the intake pipe and the homogenising head, while the press.-creating mechanism consists of electrodes placed coaxially inside the chamber. These electrodes are connected to the power accumulator and the control unit.

Prozopovskii, V. V., Karamzin, V. A., Borisovets, E. M., et al Bul. 9/5.3.79.19.9.77. as529351(2pp29).

ALTA= ★ D13 83825B/46 ★SU -650-57
Block-shaped cheese press - has plates and mould with removable front wall connected to perforated insert with flange

ALTA DAIRY CHEESE 01.09.77-SU-527209

P13 (08.03.79) A01j-25/15

The press comprises multistage plates and mould, each of which has a body, removable front wall, bottom and lid as well as a perforated insert.

Operational conditions are improved by rigidly fastening the lid and body of each mould to adjacent plates, and connecting the front wall to the perforated insert, with the latter having a flange inside it for mounting the bottom.

The insert with the perforated bottom is filled with shaped raw material and is placed into the body of the mould. The perforated insert is placed on the top surface of the cheese and the front wall of the body is locked in posn. The pressing of the cheese is carried out. The front wall is let down, and the pressed cheese together with the perforated insert is taken out of the mould and placed on a table, where the two are separated.

Dobrovolskii, I. S., Aleshko, S. I., Mikheev, V. G., et al Bul. 9/5.3.79.1.9.77. as527209(3pp29).

WIEL/ D13 27139A/15 =US 4173-17
Carbon dioxide injector for carbonated drinks - applies high quantities to side stream before return to main stream

WIELAND D (FULL-) 01.10.76-DT-644378

(06.11.79) *DT2644-378 +B01f-03/04

Appts. for introducing CO₂ into a liq. partic. beer, comprises a bypass line connected at both ends to a main flow line, and driving jet nozzle connected to the bypass, which has a low-pressure chamber connected to a CO₂ source.

The cross-sectional ratios in the jet system are $f_1:f_2:f_m = 1:(0.2-0.45):(1.3-2.6)$, where f_1 is jet nozzle outlet area, f_2 is the induction channel inlet area in the plane of the nozzle outlet, and f_m is the bore area of a mixing tube which is cylindrical and has a length of 24.5-30 times the tube i. d. 21.9.77 as 835255 (7pp1358)

MONS ★ D13 84052B/46 ★US 4173-5
Alpha-L-aspartyl-L-phenylalanine methyl ester hydrohalide prepn in good yield, by esterification in aq. methanol

MONSANTO CO 31.03.78-US-892358 (27.12.76-US-754297)

B05 E14 (06.11.79) C07c-103/52

α-L-Aspartyl-L-phenylalanine Me ester (I), as hydrohalide

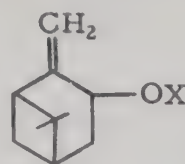
side salt, is obtd. by contacting α -L-aspartyl-L-phenylalanine (II) with a reaction medium comprising 0.1-0.8 mole hydrogen halide and 0.1-1.1 moles MeOH per 100g. reaction medium and water.

The (II) is suitably formed in situ e.g. by adding its N-protected deriv. to the reaction medium esp. its N-formyl deriv. Such a medium would contain ≥ 1 mole hydrogen halide and ≥ 1 mole MeOH.

Used as improved procedure for esterification to give after hydrohalide removal, larger yields of isolated (I), which is a known sweetening agent. 31.3.78 as 892358 (5pp)

INFL ★ D13 84112B/46 ★US 4173-711
3-(2-Chloroallyloxy)-2(10)-pinene - useful for improving flavour and/or aroma of foodstuffs medicines, perfume, etc.
INT FLAVORS & FRAGR INC 05.09.78-US-939895 (27.01.78-US-872937)
B07 E15 (B05) (06.11.79) C07c-43/18

3-(2-Chloroallyloxy)-2(10)-pinene of formula (I) (where X is $-\text{CH}_2\text{CCl}=\text{CH}_2$) is new. (I) is useful for augmenting or enhancing the flavour and/or aroma of foodstuffs, chewing gum, medicinal prods., toothpastes, perfumes, colognes and perfumed articles.



The Patent claimed method for augmenting or enhancing the aroma and taste of a foodstuff or

chewing gum by addn. of 0.5-100 ppm. of a pinocarvyl allyphatic ether of formula (I) where X is $\text{CH}_2\text{C}\equiv\text{CH}$, $\text{CH}_2\text{CMe}=\text{CH}_2$, $\text{CH}_2\text{CH}=\text{CH}_2$ or $\text{CH}_2\text{CCl}=\text{CH}_2$. 5.9.78 as 939895, Div. ex 4131687. (46pp927)

See Also

D16 J5 4129182

D23 J5 4130503

D23 J7 9034062

D23 US 4173572

D23 US 4173584

D14: FOODSTUFF MACHINERY

FANG/ ★ D14 B/46 ★BR 7904-259
Automatic orange juice extractor
CHENG SAUANG FANG 06.07.79-BR-004259
(30.10.79) A23n-01

SEEH/ ★ D14 82653B/46 ★DT 2818-230
Smoking basket for food, e.g. sausages - is raisable by power cylinder for engagement with rotary drive
SEE H 26.04.78-DT-818230
(08.11.79) A23b-04/04

A basket for food smoking chambers can be lifted by a hydraulic cylinder off the rails which support its wheels. A rotary drive above the chamber ceiling is connected to a cross arm with drive pins which can engage holes in the roof of the basket so that the latter can be revolved.

This produces a completely uniform smoking result of all food (such as sausages) which are suspended from bars in the basket, independent of the actual location within the basket. 26.4.78 as 818230 (16pp39)

FREN D14 37160X/20 =J7 9033-237
Granulating and coating apparatus - having suction air stream generator with damper for dust collection
FREUND INDUSTRY LTD 30.09.74-JA-113203
B07 J01 +P33 P42 (19.10.79) *J51039-575 B01j-02 +A61j-03/06

In the suction air stream type granulating and coating appts the bag filter for catching the flying raw materials is accommodated in the cylindrical container. The suction air stream generator and a suction stopping damper are disposed over the top of the container and the safe covers. are provided on the ceiling.

Method prevents contamination of granulating material with dust and allows easy cleaning of bag filter, useful for granulating food and pharmaceuticals. 30.9.74 as 113203 B01j-2/00, A61j-3/06 (19.10.79) FREUND INDUSTRY LTD (5pp) (J5 1039575)

KHPO ★ D14 83828B/46 ★SU -650-599
Animal feedstuffs mixer and granulator - has screws using straight and reverse flights and delivery holes to release gases having screws to prevent clogging
KHARKOV POLY 19.10.77-SU-536405
(07.03.79) A23k-01/10

The device claimed in Parent Cert. No. 549135, has a mixer provided with a granulating head, in the form of a container with loading aperture, inside which screws are placed in kinematic relationship and having straight-through and reverse flights alternating with one another. A device for removing the gases is connected by a pipe to an opening in the container, with extra holes in the body, located behind the reverse flights and connected by pipes with the means to exhaust the gases.
In order to eliminate clogging of the extra holes, in

each of them two screws are enclosed inside casings, and connected to the means to exhaust the gases.
Lozheshnik, V. K., Kudrin, Yu. P., Bul. 9/5. 3. 79. 19.10.77. as536405 Add to 549135(3pp29).

ABHE= ★ D14 83829B/46 ★SU -650-602
Device for roller dryer product removal - has curved plates fitted on springs, and a drive

AS BELO HEAT MASS (POTA = GANT =) 27.09.77-SU-528315
Q76 (29.03.79) A23l-01/21 F26b-17/28

The roller dryer prod. removal unit contains a pressing knife and an arrangement for prod. removal from the rolls. In order to increase the efficiency of the dryer and to reduce the energy consumed for the drying process, the arrangement for prod. removal from the rolls consists of a curved plate fitted on springs and a drive. The plate can oscillate. The drive is provided with at least one tooth which is fastened to the roll. Thus, contact between dried and drying material is prevented.

Larionov, B. A., Zimenko, N. I., Sheiman, V. A., et al
Bul. 9/5. 3. 79. 27. 9. 77. as528315(2pp110).

CHUV= ★ D14 83830B/46 ★SU -650-603
Fruit grading and gauging machine - using water container divided into sections with sloping rotary drum having calibrating openings through which fruit rise

CHUVASH AGRIC INST 03.10.77-SU-532112
P43 (08.03.79) A23n-15 B07b-13/04

Device for calibrating fruit during grading, claimed in Parent Patent 563958, has a container with exit apertures filled with water, a rotating drum with calibrated holes and a drive, positioned at an angle inside the container. The drum is divided into sections by means of partitions and the top end of the container has outlet channels to increase the grading accuracy.

Productivity is increased by including a storage space in the shape of a truncated cone, the smaller base of which pressed against the exit aperture. A slide valve is located between the aperture and the storage space.

Khuzin, V. Kh., Bul. 9/5. 3. 79. 3. 10. 77. as532112 Add to 563958(2pp29).

KDPO= ★ D14 83844B/46 ★SU -650-660
Food suspension centrifugal separator - uses disc from soft material to prevent moisture from entering upper section of filtering rotor
KRASD POLY 05.01.78-SU-565464
P41 (09.03.79) B04b-03

Prevention of crystalline or fibrous solid phase sepd. out of suspensions of foodstuffs in continuous action inertial centrifugal separator from being moistened by aerosol formed at the edges of accelerating cone, and thus improved quality of the prod., is ensured by the following features of the design.
On the outer surface of the accelerating cone is fixed

a disc made from soft material whose peripheral edge, during operation of the centrifugal separator, fits to the filtering screen of the rotor.

Ilin, M. I., Morozova, L. A., Avetisyan, G. Ts., et al Bul. 9/5.3.79.5.1.78.as565464(2pp135).

APUK/ ★ D14 83884B/46 ★SU -650-826
Plastic material, e.g. animal feed extruder - has disc at exit end which forms gap through which product passes and is cut/off by knife blade

APUKHTIN B A 22.01.76-SU-317717
(09.03.79) A23n-17 B29f-03

Extruder for thermoplastic materials, such as animal feed, is used on stock-breeding farms, during prodn. of nutritive additives in cattle feed from crushed grain, urea, clay and other ingredients.

It consists of a loading device, drive, and body with fins on its inside wall surfaces and contg. a pressing screw at the exit end of which is a disc with channels, and a knife.

Productivity is increased by positioning a rotating collar with holes between the disc and the knife so that a gap is left. Part of the holes coincides with the disc channels and, on the side facing towards the collar, the disc is fitted with a circular channel. At the point when the fin connects to the body a flexible packing strip is inserted.

Apukhtin, B. A., Zinin, A. I., Korotov, M. V., et al Bul. 9/5.3.79.22.1.76.as317717(4pp29).

REID/ ★ D14 83954B/46 ★US 4173-051
Food article washing device - comprises container with cooperating agitation, washing and discharge systems

REID J P 26.06.78-US-919074
(06.11.79) A23n-13

Appts. for washing and cleaning food articles includes a housing having a removably attachable lid and contg. an impeller for agitating the food articles. Cleaning fluid is used to generate a turbine which drives the impeller and is sprayed onto the food articles being agitated and washed. A conduit communicates with the turbine and extends along the wall of the housing. The fluid is discharged onto the food articles through a plurality of apertures in the conduits.

Used for washing and cleaning fruits and vegetables. The appts. is inexpensive and can be used as a household appliance for treating a wide variety of food articles. It does not bruise or damage the articles being washed yet adequately removes undesirable foreign material. The appts. is usable with domestic kitchen water faucets. 26.6.78 as 919074 (7pp1044)

VIRT- ★ D14 83958B/46 ★US 4173-078
Shelf arrangement for freeze dryer - comprises shelves suspended by stops on wires stretched between upper and lower brackets for slidable motion

VIRTIS CO INC 16.05.78-US-906679
B07 J08 Q76 (06.11.79) F26b-13/30

A shelf arrangement for use in a freeze dryer comprises a rigid frame assembly having a multiplicity of elongated

wire members stretched vertically between upper and lower brackets. Shelves for supporting items to be dried include flanges which slidably engage respective stops on respective wires in order to take up a predetermined position between the brackets. Threaded screw members are used to adjust the vertical posn. of the shelves and are driven externally of the drying chamber.

Used for freeze drying of biological specimens, medicine and food prods. Certain shelves may be locked in position so that remaining shelves can be reoriented with respect to one another between the upper and lower brackets. The use of thin wire supports reduces frictional resistance against sliding. A microswitch is provided to turn off the drive motor when a predetermined torque is sensed. 16.5.78 as 906679 (18pp1044)

WETR- D14 30547A/17 =US 4173-120
Whipped cream dispensing cabinet - with emulsifier-homogeniser, air compressor and refrigeration compressor below cooling cell

WETRIFIN AG 15.10.76-IT-028401
P13 + Q39 (06.11.79) *DT2746-375 B01f-03/04

A machine for continuously producing whipped cream comprises a refrigerating cell in the top of a cabinet and holding a tank with a food mixture, a texturiser mounted on a cabinet door closing the cell, piping linking tank and texturiser, and a pressurised gas feeder in a cell bottom compartment.

A motor and compressor unit is located in the bottom compartment, forming a refrigerating loop of the cell. The feeder is pref. an air compressor, and a dispensing chamber includes a mixer and a dispensing slide valve. The pressurised gas is fed to the tank and mixer and delivers the mixture to the dispensing chamber. 17.10.77 as 842805 (7pp1358)

FORM- ★ D14 83964B/46 ★US 4173-127
Frost removal appts. for cryogenic freezing tunnel - uses brushes having widely spaced bristles for scrubbing frost from conveyor
FORMAX INC 02.11.77-US-847720
A88 Q75 (06.11.79) F25d-03/10 F25d-25/04

Frost removal appts. for a cryogenic freezing tunnel comprises a brush for engaging a conveyor which passes through the tunnel. The conveyor includes an open-mesh endless belt and is contacted by the brush on its lower pass to remove accumulated frost from the interstices of the conveyor. The frost is collected in a pan and a heater is provided to melt the collected frost.

Tunnel is used for freezing comestibles, such as hamburger patties. The conveyor is continuously scoured by the brushes which are not formed with closely packed bristles and so can be easily inspected. 2.11.77 as 847720 (4pp1044)

FREI/ ★ D14 84140B/46 ★ZA 7805-26
Fruit and vegetable preservation - by picking naturally and covering with sulphur dioxide-releasing paper
FREIJM 15.09.78-ZA-005263
E36 (19.07.79) A23I

See Also

D23 SU 650661

D15: WATER TREATMENT

BAUM- ★ D15 82566B/46 ★BE -877-562
Submersible mat for air injection into bubble bath - comprises inexpensive plastic elements which split open for descaling passages

BAUMANN-BELTRON 07.07.78-DT-829835
(05.11.79) B01f-B01j C02b

A submersible air mat comprises a set of connected, hollow elements through which air can be blown into a bath of water to produce bubbles. Each element is made up of a pair of half-casings joined on a horizontal plane. The air outlet holes of the element lie on the joint faces of the two half-casings, each hole being bounded by opposing casing faces. Air inlet and distribution passages pref. also split at the joint between the two half-casings.

Air outlet holes can be channeled into both faces at the

joint or into only one face, the being flat. Air outlet hole can be of normal size for prodn. of a bubbling bath or much smaller to produce a sparkling effervescent bath. Different hole sizes can be provided in a single element. Elements with different hole sizes can be mixed in a composite mat. Holes of each size are pref. colour coded.

Cost of mfr. is reduced as air injection holes do not require machining. All holes are easily descaled by splitting element at joint faces. Elements can be made up into mats to fit any size and shape of bath. Individual element can be used for bubble massage. Air outlet holes are not blocked by a bather sitting on the mat. 6.7.79 as 877562 (27pp448)

RPE ★ D15 B/46 ★ BR 7900-531
 Sepn. of oil-water emulsion using oil-water streams
 BRITISH PETROLEUM LTD 05.04.78-GB-013233
 H05 J01 (30.10.79) B01d-17/02 C10g-01 29.1.79 as 000531

TON/ D15 17175T/11 =DS 1911-377
 Aeration apparatus - which provides mixing and circulation of gas and fluid

STONE JS (SAN-) 07.03.68-US-711453
 (08.11.79) *GB1266-572 +C02c-01/06

In a tank for the treatment of sewage, a wall in the form of a closed ring tapers inwards from close to the bottom, to a plane above the water level, and encloses part of the volume of the tank in a treatment zone. A second closed annular wall is positioned inside the first and runs parallel to it, but has its upper edge below the water level. The gas feeders open into the cavity between the two walls and the sewage inlet opens centrally from above into the treatment zone.

The guided flow sets up a circulation in the tank leading to a uniform oxygen requirement and a correspondingly uniform biological growth resulting in greatly improved operational efficiency. 6.3.69 as 911377 (7pp1045).

PATE- D15 25365V/14 =DS 2348-175
 Sludge separation tank - having sludge collection funnel discharge controlled depending on degree of filling

PATERSON CANDY INT 26.09.72-GB-044449
 J01 (08.11.79) *DT2348-175 B01d-21/24

The sludge funnel of a tank for separating solid matter from fluids using a fluid filtration layer, esp. of floating particles with which the solid matter coagulates and forms a sludge, which can be syphoned off via a drain, is arranged so that its upper edge coincides with the level of the filtration layer. The funnel is supported by floats in the liquid collected above the filtration layer, and the drain can be opened and closed dependent upon the vertical position of the funnel in the separating tank.

This results in a higher throughput of fluid and more economic operation. The emptying sequence is extended and the automatic emptying of the sludge funnel works reliably. 25.9.73 as 348175 (6pp1045).

BRPE D15 48087W/29 =DS 2461-727
 Oil-containing effluent purification - partic. oil refinery effluent using sand filters and trickling filter

BRITISH PETROLEUM LTD 03.01.74-GB-000264
 H05 (08.11.79) *DT2461-727 C02c-05/10

Purification of oil-contg. waste water, opt. contg. suspended solids, is effected using a filter material and a biological post-perifiction treatment.

The waste water is first passed through a sand-filter to remove the undissolved oil particles and solid impurities (if present). It is then passed through ≥ 1 biological trickling-filter plant. The sand filter is periodically purified by back-flushing. 28.12.74 as 461727(5pp549).

BADI D15 16080A/09 =DS 2637-108
 Lowering heat and odour evolution during effluent treatment - by incorporating a dome in the vicinity of the stirrer

BASF AG 18.08.76-DT-637108
 (08.11.79) *DT2637-108 C02c-01/10

The spray zone of an agitator on the surface of a sewage treatment tank, is protected by a cowl, the average diameter of which is 2-6 (2.5-4) times the diameter of the agitator. The partly submerged limiting wall of the hood or cowl forms a spiral with an outlet through which the larger proportion of the volume of water moved by the agitator can leave directly.

In the zone of the outlet, the limiting wall is submerged very little and is inclined sharply to the vertical. The arrangement ensures the maintenance of the capability of the plant to introduce the necessary oxygen into the effluent whilst reducing the amount of air sucked in.

At the same time, the turning moment imparted to the liquid is increased so that the activated sludge is kept in suspension. 18.8.76 as 637108(8pp1045).

MANS D15 86369A/48 =DS 2722-710
 Steelworks cooling water purificn. - comprises removing oil and iron dross by aeration and admitting recycled aerated effluent
 MANNESMANN AG 16.05.77-DT-722710
 M24 (08.11.79) *DT2722-710 C02c-05

For the far reaching removal of floating matter, such as oil, as well as the scale, from water in the cooling circuits of blast furnaces and steel plants, before the fine clearing operation, the direction of flow of the cooling water in the scale sump is diverted once or a number of times. Part of the pre-cleaned effluent drawn off from the sump is mixed with compressed air and before being returned to the sump, is put back into the cooling circuit.

This dispenses with the pre-cleaning installation which is expensive in space, energy and maintenance, and separates out, to a great extent, the floating matter as well as the scale in the sump. 16.5.77 as 722710(5pp1045).

HOLK ★ D15 82654B/46 ★DT 2818-236
 Saturation of drinks with carbon dioxide - having initial scrubbing stage to remove air before saturation step

HOLSTEIN & KAPPERT MASC 26.04.78-DT-818236
 (08.11.79) B01f-03/04

Bottling process for mineral waters and other sparkling drinks involves first scrubbing out the air from the liq. The CO₂/air mixt. is then used as the compression gas for the bottling operation. The quantity of CO₂ liberated during this operation is then used to neutralise the bath used for cleaning the returned bottles. The air scrubbing is in effect a further carbonisation stage.

For use on bottling plants using returnable bottles. The process avoids a vacuum de-aeration and allows surplus CO₂ to be used to neutralise the wash liquor used on returned bottles. 26.4.78 as 818236 (8pp1053)

METG ★ D15 82685B/46 ★DT 2818-803
 Oxidative slime combustion in fluidised bed furnace - with halogen-contg cpd. addn. to form volatile alkali halide with non-volatile alkali cpd.

METALLGESELLSCHAFT AG 28.04.78-DT-818803
 J09 (08.11.79) C02c-03

Slime burning in a fluidised layer furnace, with O₂-contg. turbulent gases at 850-1100°C, takes place in the presence of ≥ 1 halogen-contg. cpd., (I), which forms volatile alkali halides with the otherwise non-volatile alkali cpds., (II), during burning. (II), which might agglomerate or melt in turbulent bed, are expelled as volatile cpds. and sepd. in a gas purificn. step.

Quantity of (I) is at least stoichiometric, e.g. 1.3-3 x, w.r.t. (II)-content of slime in burning. (II) may be sulphates, carbonates and/or hydroxides. Pref. (I) are Cl₂, chlorides and/or Cl-contg. cpds. Turbulent bed material consists, at least partly, of corundum, basalt of Fe oxide. The use of quartz is avoided, to prevent the formation of alkali silicates. 28.4.78 as 818803 (15pp200)

GESL ★ D15 82744B/46 ★DT 2819-572
 Waste liquor purificn. using alumina doped with carbon dioxide - increases sorption of neutral and basic cpds. (SW 8.1.79)

KERNFORSCHUNGS KARLSRUHE 05.05.78-DT-819572 (00.00.77-DT-726192)
 (08.11.79) C02c-05/02

The sorbent is (1) Al oxide, doped during mfr. with cations or anions which can be incorporated in the crystal lattice and retard the crystallisation of the gamma-Al₂O₃ phase or (2) an Al₂O₃ treated with salt(s) of such ions on the surface after mfr., e.g. in DT 27 26 192, the Al₂O₃ used is doped with 0.05-2.5 wt. % CO₂.

In an example, 5 l aq. soln. contg. 1 kg Al nitrate were slowly adjusted to pH 9 with NH₄OH soln. and, at the same time, CO₂ was introduced for 6 hrs. The filtered and washed hydroxide gel was activated by calcining for 12-24 hrs. at 500°C. For Al₂O₃ doped with 0.13 (O) wt. % CO₂, using 0.5 g sorbent + 100 ml. NaH₂PO₄ soln. contg. 200/80 mg P/l, the % elimination was 50.7 (41.25/90.3 (65.25) and the loading 2.03 (1.65)/1.44 (1.04)% P. 5.5.78 as 819572 Add to 27 26 192 (5pp016)

NIAU-★ D15 82817B/46 ★DT 2917-123
Treatment of waste water contg. (in)organic impurities - with alkali metal oxide then drying to granulate, useful e.g. as fertiliser and building material

NIHON AUTOMATIC MAC 29.04.78-JA-051195 (28.04.78-JA-051916)

C04 L02 P35 (08.11.79) A62d-03 B01j-02 C05f-13

The process comprises (i) mixing the waste with alkaline earth oxide (I) to produce a preliminary dried mixt., then (ii) further drying this mixt. while simultaneously stirring to give a granulated prod. An appts. for this process comprises a mixer; a drier (granulator) and an oven in which malodorous gases from the mixer and drier and converted to odourless off-gases.

Prof. in the first stage 100 wt. pts. waste of 50-99 wt. % water content are mixed with 5-40 wt. pts. CaO. When inorganic impurities are present, the dried granulate may be further heated at 800-1450°C to give a cement-like material.

Used for treating waste contg. human or animal excrement, fish processing waste etc. Prods. derived from organic wastes are useful as fertiliser; those from inorganic waste as non-toxic cements, cement additives or building material. 27.4.79 as 917123 (16pp1251)

PYNN/★ D15 82823B/46 ★DT 2917-206
Water purification filter - with purifying material, filter elements and three-way valve for back flushing

PYNNONEN P 27.04.78-SF-001311

(08.11.79) B01d-35/02

An internal flow filter for use in domestic water purification systems uses a 3-way valve which directs the crude water in the filtering phase through a purifying material where iron is deposited. The deposits are removed in filter elements contg. quartz sand. In the backflushing phase, the 3-way valve reverses the flow through the filter so that the iron deposits are removed and can be drained off.

This is an inexpensive system which can be added to any pressurised water installation and provides drinking water, free from iron oxide, CO₂, manganese or other contaminants. 27.4.79 as 917206 (8pp39)

GERE★ D15 82831B/46 ★DT 2917-460
Synthetic crystalline analcime zeolite useful as water softener - in detergents, is produced by hydrothermal treatment of perlite in aq. sodium hydroxide soln.

GENERAL REFRACTORIE CO 01.05.78-US-901335

(D25) (08.11.79) B01j-01/04 C01b-33/26 C11d-03/12

Synthetic crystalline analcime zeolite material (I) is produced by (a) mixing particulate perlite and aq. NaOH soln., with a perlite:NaOH wt. ratio of 1:1.8-27 (1:3.6 or 1:5.4) and a solids:liquid wt. ratio of 1:10-30 (1:20) and (b) heating the mixt. at a suitable temp. (40-95, esp. 65°C) for long enough (24-100, esp. 50-100 h) for (I) formation.

(I) is specified for softening aq. liquids (in detergent preps.). It can be produced from readily available raw materials and has the advantages without the drawbacks (high variability of chemical and physical properties) of natural analcime. 30.4.79 as 917460 (19pp016)

DEGM★ D15 82861B/46 ★FR 2416-043
Band filter - has endless band which is vibrated before passage through pressing rollers, used for dil. aq. sludges and is continuously washable

DEGREMONT SA 06.02.78-FR-003176

J01 (05.10.79) B01d-33/04

A band filter incorporates a filter element consisting of an endless band which is vibrated, pref. by means of a vibrating frame over which its upper length passes. The vibrating frame is constituted by a rigid structure of elements leaving spaces between them and its edges are inclined so as to give the filter band the form of a trough.

The elements consist e.g. of bars, cylindrical or otherwise, a grid or a perforated plate. The band is vibrated pref. over a fraction of its length comprised between upstream and downstream parts which are not vibrated and constitute upstream a draining section and downstream a zone provided with pressing rollers.

The band filter is useful for thickening sludges, waste water and potable waters or for treating waters from e.g. beetroot washing, blast furnaces, paper-mills, fibre treat-

ment plants or towns' waste waters. The appts. can be used for dilute sludges and is continuously washable, whereas existing band filters cannot, clog easily and cannot be washed continuously. 6.2.78 as 03176 (9pp1192)

KONE D15 72825Y/41 =GB 1555-4
High purity water distillation plant - with Teflon (RTM) filters distilling, condensing and storage flasks

KONTES GLASS CO 29.03.76-US-671713

A88 + Q78 (14.11.79) *DT2713-620 B01d-03/02 + F28b-01/F28b-07

Apparatus for improving water purity, e.g. for laboratory or i.v. use, comprises a distillation flask, condenser and receiver, and a hydrophobic nonabsorbent filter communicating with the apparatus interior to remove airborne bacteria and dust while allowing air to enter or leave.

There is a separate filter communicating with the interior of flask, condenser and receiver, each pref. comprising a porous PTFE membrane. The connecting tubing is pref. of PTFE, the receiver has a PTFE plugged stopcock and the water feed valve is internally coated with PTFE. 24.3.77 as 012367 (10pp1358)

STAM D15 63415A/36 =GB 1555-4
Effluent water treatment to remove nitrogenous and organic materials - by passing successively through denitrification and nitrification zones

STAMICARBON BV 02.03.77-NL-002236

(D16) (14.11.79) *BE-864-340 C02c-01/17

Organic substances and nitrogen cpds. are continuously removed from waste water by their microbiological conversion. Waste water is supplied to a denitrification zone and the effluent passed to a nitrification zone.

Part of the effluent is recycled from the nitrification zone to the denitrification zone, and the remainder is discharged. Part of the waste water to be treated is fed directly to the nitrification zone. Pref. the ratio of the flow rate of the waste water to the denitrification and nitrification zones respectively, and also the degree of recycle of the effluent are controlled so that the effluent from the denitrification zone contains nitrate.

The process is esp. used to free domestic waste water from ammonium nitrogen by oxidn. to nitrate. 28.2.78 as 007911 (4pp931)

CARO D15 96600X/52 =GB 1555-8
Granular active carbon prepn. from black lignite granules - involving treatment with conc. inorganic acid but no addn. of binder containing carbon (BE101276)

CARBORUNDUM CO 11.06.75-US-585931

E36 J04 (14.11.79) *DT2624-779 C01b-31/14

Hard granular activated carbon is prepd. by forming granules from sub-bituminous coal, and mixing 1-10 wt. % of concd. inorganic acid with the granules without the addition of a carbonaceous binder.

The treated granules are then reduced to form a fine powder of moisture (including acid) content of 10-30 wt. and compressed. The compressed powder is reduced to reform granules, and devolatilised without charring by heating to and above a temp. > charring temp. in an O₂-free atmos. the devolatilised granules are then activated by heating to and above a temp. > devolatilising temp. in an atmos. contg. a gaseous activating agent.

The activated carbon so prepd. can be used in waste water treatment and other applications. 1.6.76 as 02253 (12pp931)

CARO D15 00303Y/01 =GB 1555-
Granular active carbon prepn. from low grade bituminous coal comprising leaching with inorganic acid, binding and carbonisation steps (BE161276)

CARBORUNDUM CO 17.06.75-US-587754

E36 (14.11.79) *DT2625-625 C01b-31/14

Hard granular activated carbon is prepd. by forming granules from low rank bituminous coal and treating them with a dil. soln. of an aq. inorganic acid. The acid is washed off, and the granules dried thoroughly and mixed with a carbonaceous binder.

The granules are reduced to a fine powder and compressed. The compressed powder is reduced to reform granules.

ules, which are charred by heating to and at a charring temp. in an O₂-contg. atmps. The charred granules are devolatilised by heating to and at a volatilising temp. > charring temp. in an O₂-free atmos. The devolatilised granules are activated by heating to and at an activating temp. > devolatilising temp. in an atmos. contg. a gaseous activating agent.

The activated carbon so prepd. may be used in waste water treatment and other applications. 7.6.76 as 023381 (11pp931)

SULZ D15 74614A/42 =GB 1556-005
Processing water using ozone in basic conditions - e.g. by adding calcium hydroxide, using basic filter, catalyst or anion exchanger
SULZER BROS LTD 04.04.77-CH-004185
E36 (14.11.79) *DT2715-543 C02b-01/38
Water is treated by adding ozone to it at a pH of ≥ 8.5 . Calcium hydroxide is added before ozonation; and a calcium carbonate/carbon dioxide equilibrium established after treatment by the addn. of CO₂.

Pref. the pH value of water is increased by passing it through a granular material contg. a surface having basicity-increasing properties, the material being a filter material contg. dolomite (CaCO₃-MgCO₃). ≥ 1 oxidation catalyst, such as manganese dioxide or zinc oxide, is used having basicity-increasing properties.

This process is esp. used in the treatment of surface and ground water substances in the water which experience little degradation at low pH in conventional plants, may be oxidised. 4.4.78 as 013137 (5pp931)

DEVE- ★ D15 82928B/46 ★GB 2020-189
Appts. for sepg. oil and water - having an anti-turbulence member of spirally wound corrugated strip sepd. by non-corrugated strip or wire mesh

MACH DEVENTER G BV 09.05.78-NL-004982
J01 (14.11.79) B01d-17/02

Appts. for sepg. a mixt. of liquids of different specific gravities e.g. oil and water consists of a settling chamber having an inlet for mixt. to be separated and separate discharges for light and heavy components of the mixt. respectively. To reduce turbulence in the chamber there is an arrangement of a spirally wound corrugated strip defining vertical chambers. Turns of the strip are sepd. by turns of non-corrugated strip or wire mesh.

The invention provides an antiturbulence member which acids sepn. and provides a certain mutual pressure compen-sation in a horizontal directions between the vertical passages. 19.4.79 as 013586 (6pp1345)

HOFF/ ★ D15 82940B/46 ★GB 2020-265
Removing oil from water surface - by intermixing with feathers which adsorb oil and can easily be removed

HOFF G 15.06.79-GB-020984 (13.04.78-GB-014545)
H03 J01 (14.11.79) C02b-09/02

Oil spilt on water is collected together by distributing bird feathers throughout the oil to create a coherent mass which may be picked up. Suitably the feathers are first distributed around the periphery of the oil slick to form a confining barrier. This barrier may be formed by a container holding compressed purified culled hen feathers. The walls of the container are soluble in water or oil.

Alternatively the feathers may be distributed over the entire area of the slick using an appts. which includes a chamber having a closed end and an open end. Air or gas under pressure is supplied near the open end and a mechanical rotor cuts feathers from a compressed bale held in the chamber. 15.6.79 as 020984 (6pp295)

KOBM ★ D15 83023B/46 ★J5 4127-868
Solidifying ash obtd. by burning sewage mud - by adding water and binder particulating and adding dried burned ash

KOBE STEEL KK 27.03.78-JA-035818
(04.10.79) B01j-01 C04b-29

A process for treating ash obtd. by burning sewage mud is claimed, in which the basicity of the burned ash expressed as CaO/SiO₂ is firstly measured so that water can be directly added to the burned ash having a basicity > 1.3 , and water is added to the burned ash having a basicity ≤ 1.3 , after a binder is added to the burned ash, then the treated ash is made into particles and dried burned ash is

added to the obtd. wet particles (of the treated burned ash) in order for the mixt. to be cured to form a lump. No heating is required. 27.3.78 as 035818 (5pp55)

SUMQ ★ D15 83025B/46 ★J5 4127-871
Water purificn. appts. regeneration - involves recycling effluent from anion or cation exchange column regeneration, to give improved chemical recovery

SUMITOMO METAL IND KK 28.03.78-JA-036227
(04.10.79) B01j-01/09 C02b-01/76

A process for recovering reagents in a water purificn. appts. regeneration is claimed. A cation exchange tower of the pure water producing appts. is regenerated with an acid, and an anion exchange tower of the appts. is regenerated with alkali. Effluent waste liq. where the anion (or cation) concn. of the effluent waste liq. falls sharply, (after passing the max.) where the regeneration is finished is stored and reused in the initial stage of the regeneration treatment in the next run.

The effluent waste liq. in the final stage of the regeneration process for a pure water producing appts., contains conc. reagents. In this method, after the appts. is regenerated for a certain period of time, the effluent waste liq. is stocked in order to be reused in the initial stage of the regeneration process in the next time. The cost for the regeneration process can be reduced, as well as the pollution caused by the waste water can be prevented. 28.3.78 as 036227 (5pp55)

SEKI ★ D15 83027B/46 ★J5 4127-873
Semipermeable membrane prodn. - by crosslinking an aminoalcohol modified epihalohydrin polymer using a di:basic carboxylic acid, an acid chloride or poly:isocyanate cpd.

SEKISUI CHEMI IND KK 27.03.78-JA-035786
(04.10.79) B01d-13/04 C08g-65/24

Semipermeable membrane material and its prodn. are claimed. The membrane material is made by bridging an aminoalcohol modified epihalohydrine polymer (average mol. wt. 1000-1,000,000) with a dibasic carboxylic acid, an acid chloride, or a cpd. contg. > 2 isocyanate gps. The membrane material is suitably provided on a porous support.

This semipermeable membrane can be used for (1) producing pure water from sea water or brine; (2) changing hard water into soft; (3) concn. of a liq. contg. inorganic salts; (4) filtration and concn. of a liq. contg. an organic liq. as its solvent; (5) purification and concn. of a waste water produced from food industry, dye works, metal treatment industry etc. This membrane is different from "Loeb membrane" and can be stored as in dry state. 27.3.78 as 035786 (6pp55)

HIEJ ★ D15 83028B/46 ★J5 4127-875
Reverse osmosis appts. for sepg. components in waste or sea water - comprises liq. container, support pipe with outlets and contg. membrane and supersonic oscillator

HITACHI PLANT ENG CONST 29.03.78-JA-035425
(04.10.79) B01d-13 C02b-01/82 C02c-05/02

Appts. comprises (a) a liq. container, (b) a support pipe arranged (partially) in the liq. container and formed with component outlet holes on the periphery of the support pipe placed in the liq. container; (c) reverse osmosis membrane mounted in the support pipe; and (d) a supersonic oscillator for applying ultrasonic waves through the support pipe to the membrane and secured to the wall of the liq. container.

The desired component permeating flux may be considerably increased to make the appts. more compact. 29.3.78 as 035425 (4pp35)

TAIK- ★ D15 83104B/46 ★J5 4128-157
Simultaneous treatment of waste acids and sludges - by forming iron-contg. acid soln., neutralising, oxidising, mixing with sludge and adding coagulant and thickener

TAIKO KOGYO KK 29.03.78-JA-037020
J01 M12 (04.10.79) C02c-03 C02c-05

Simultaneous treatment for waste acids and various sludges comprises adding waste iron powder, etc. to high concn. waste acid to dissolve the iron powder, or using rich waste acid, e.g., acid washing waste in steel industry, etc., as it is; neutralising the remaining acid content of the iron-dissolved acid soln. by the addn. of a caustic

soda soln. and oxidising by aeration, heating and electrolysis to convert the iron into ferrite of a spinel structure.

The ferrite formed is mixed with appropriate amts. of waste alkaline sludge contg. bentonite, cement sludge, etc., heavy metal sludge or organic sludge in a pipe mixer and then the mixed ferrite-sludge mixt. is mixed with a high polymer coagulant and sent to a thickener to perform coagulation, sedimentation and concn. simultaneously by means of a synergism of > 2 sludges.

Method treats concurrently waste acids and various sludges rapidly and efficiently without causing environmental pollution. 29.3.78 as 037020 (3pp117)

CHUI ★ D15 83105B/46 ★ J5 4128-158
Treating chromium-contg. sludge - by thermal decomposition, incineration by the solids, and redn. of the obtd. ash with gas contg. hydrocarbon(s) formed in the decomposition

CHUGAI RO KOGYO KAISHA 29.03.78-JA-037083

E31 J01 M14 Q73 (04.10.79) C02c-03 F23g-05

The method comprises a thermal decompn. step, in which Cr-contg. sludge is heated, to decompose combustible substances, at 600-900°C; an incineration step in which the combustible solids from the decompn. are burnt at 700-900°C in an incinerator with rotary agitating arms to drop sludge gradually while stirring, consisting of a thermal decompn. zone with burners with a combustion ratio < 1, a burning zone having an oxidising atmosphere, and a reducing zone with reduction burners having a combustion rate < 1; and a reducing step in which the ash from the incineration is reduced by a reductive gas contg. hydrocarbons formed in the thermal decompn.

This method is capable of treating Cr-contg. sludges with high efficiency, without generating ash contg. harmful hexavalent Cr or offensive odours. 29.3.78 as 037083 (3pp117)

OIKA/ ★ D15 83106B/46 ★ J5 4128-160
Removing malodorous components from night soil - by adding hypochlorite during night soil dipping operation and passing generate gas through hypochlorite soln.

OIKAWA S 28.03.78-JA-035670

(04.10.79) C02c-01/40 C02c-05/04

An appropriate amt. of hypochlorite is added to night soil during the night soil dipping-up operation and also waste gas generated during the dipping-up operation is passed through a hypochlorite soln. The addn. of the hypochlorite to night soil results in the reaction of the hypochlorite with hydrogen sulphide, ammonia, methane, methyl mercaptan, ammonium acetate, etc., which are the major sources of malodours of the night soil, where whitish solid powders are formed and sepd. from transparent and odourless liquor and thus malodours are completely eliminated.

The method can completely deodorise the night soil in addition to its sterilisation effect and thus contribution to the elimination of the environmental pollution due to the night soil dipping-up operation by vacuum cars, as well as an improvement in operational environment for workers. 28.3.78 as 035670 (2pp117)

MITO ★ D15 83107B/46 ★ J5 4128-161
Deodorising waste water from e.g. sea food processing - involves adjusting chloride ion concn. with sodium chloride and electrolysis to generate sodium hypochlorite

MITSUBISHI HEAVY IND KK 28.03.78-JA-035841

(04.10.79) C02c-05/12

The deodorisation of waste water, e.g. discharged from sea foods processing factories, etc., contg. e.g. mercaptan, ammonia, hydrogen sulphide, methyl sulphide, trimethylamine, etc., is described. The waste water is introduced into an electrolytic bath to electrolyse the waste water after or while adding NaCl until the amt. of chloride ion reaches 15,000 to 20,000 ppm, to generate NaOCl hypochlorite. The waste water contg. the NaOCl is put in a reactor to completely deodorise offensive odours. Method operates at low cost without use of Cl₂ gas. 28.3.78 as 035841 (3pp117)

EBAI ★ D15 83153B/46 ★ J5 4128-4
Incinerated waste residue treatment, including solidification - adding a calcium carbonate contg. substance, e.g. limestone, opt. solidifying accelerator, shaping and steam treating

EBARA INFILCO KK 29.03.78-JA-036410

J01 L02 (05.10.79) B01j-01 C02c-03

Wastes, e.g. municipal dust, sludge discharged from water-purifying stations, Hedoro etc. are subjected to an incinerating solidification treatment by adding a CaCO₃-bearing substance, e.g. limestone, calcium carbide wastes, shell and egg shell etc. in amts. > 10 wt.% calculated in terms of CaO, followed by incineration. The incinerated product, is then shaped e.g. by pressing extrusion moulding, etc., and is then treated with steam in an autoclave under elevated pressure.

A solidification accelerating agent, may opt. be added e.g. diatomaceous earth, silica stone, quartz, silica glass, water glass, kaolinite, perlite, zeolite, Al oxide etc. in an amt. of 5-30 wt.% to carry-out thoroughly the solidification. The calcined shaped prod. obtd. exhibits good handling properties and no dissolution of heavy metal ions. It is suitable for use in land reclamation, and for use as an aggregate in some cases. 29.3.78 as 036410 (5pp34)

EBAI ★ D15 83154B/46 ★ J5 4128-4
Incinerated waste residue treatment - includes solidification - adding calcium component e.g. calcium sulphate, opt. a solidifying accelerator, then shaping and steam treating

EBARA INFILCO KK 29.03.78-JA-036411

L02 (05.10.79) B01j-01 C04b-29

Finely powdered incinerated residue of wastes, e.g. municipal dust, sludge discharged from water-treating processes, Hedoro etc., from the incineration of the wastes are subjected to a solidification treatment by adding a Ca component, e.g. CaCO₃, CaO, CaSO₄, CaCl₂ and Ca(OH)₂ etc. in an amt. > 10 wt.% calculated in terms of CaO.

A solidification accelerating agent, e.g. diatomaceous earth, siliceous clay, silica stone, quartz, silica glass, water glass, kaolinite, perlite, zeolite, Al(OH)₃, AlCl₃, fly ash and red mud etc. can opt. be added in an amt. of 5-30 wt.%. The mass is then shaped, e.g. by pressing extrusion, moulding, etc., and the shaped prod. is then steam treated in an autoclave under an elevated pressure of 50-1000 kg/cm².

The prod. obtd. exhibits good handling properties and no dissolution of heavy metal ions. It is suitable for use in land reclamation, and for use as an aggregate in some cases. 29.3.78 as 036411 (5pp34)

ISHI ★ D15 83155B/46 ★ J5 4128-4
Fresh water prodn. from e.g. sea or waste water - using flash evaporator and gas-liquid contact tower, where crude water is used as coolant in radiator of evaporator

ISHIKAWAJIMA-HARIMA HEAV 29.03.78-JA-035562

(05.10.79) B01d-03/06 C02b-01/04

In producing fresh water from crude water, e.g. sea water and waste waters by transferring steam and thermal energy of combusted waste gas discharged from boiler or blast furnace etc. to the crude water by utilisation of enthalpy of the combusted waste gas as a heat source for the crude water in a combination of flash evaporator and gas-liquid contacting tower, the improvement comprises using all the crude water as the cooling medium in a heat-radiator of the flash evaporator, discarding a portion of the crude water and using the remaining crude water as recirculating brine after treating with chemical reagent at flash evapn.

The amt. of the crude water to be treated becomes about 25% of the total amt. of the recirculating water at chemicals-injecting position, the amt. of the chemical agent to be injected being largely decreased. It is possible to carry-out stable operation even in such case that the taken crude water suffers temp. variation, etc. 29.3.78 as 035562 (4pp34)

HUG ★ D15 83261B/46 ★ J5 4128-976
 Treatment of faeces and urine - by chemical or biochemical decomposition, evapn. to give odorous gases and deodorising gases with ozone and hydrogen peroxide
 CHUGOKU KOGYO KK 31.03.78-JA-036844
 (05.10.79) B01d-53/34 C02c-05
 Method comprises (a) chemical or biochemical decompsn. of faeces or urea, (b) evapn. of odorous components and (c) stepwise treatment of the odorous gas with ozone and H_2O_2 .

By combination of ozone-treatment and H_2O_2 treatment the efficiency of deodorisation is increased remarkably.

Specifically, the chemical treatment comprises formation of floc by addition of iron sulphate and lime to (I) and sepn. of precipitate. The biochemical treatment includes bacterial decompsn. 31.3.78 as 036844 (3pp42)

CIL ★ D15 B/46 ★ J5 4128-980
 Drain water treatment process
 ICI AUSTRALIA (CSIR) 13.02.78-AU-003356
 (05.10.79)
 23.2.79 as 014439.

JAPG ★ D15 83265B/46 ★ J5 4128-984
 Fluid sepn. appts. e.g. for blood dialysis - has communicating cells extending along the length of bundles of hollow fibres
 NIPPON ZEON KK 30.03.78-JA-037338
 J01 P34 (05.10.79) A61m-01/03 B01d-13
 A device for passing a substance in one direction through a membrane in an osmosis, dialysis, ultrafiltration or reverse osmosis, process and useful in blood dialysers, artificial lungs and water purificn. and desalting comprises a bundle of hollow fibres housed in a casing. The object is to improve the dialysing capability and reduce the dispersion of prods.

In the novel structure, a space to be charged with the bundle is partitioned into several cells, each extending along the length of the bundle; adjacent cells are communicated through holes with each other, all the cells communicate with one another through common spaces formed around the bundle at an inlet and outlet of the casing for feeding a fluid containing said substance into and out of the casing. 30.3.78 as 037338 (8pp26)

HITA ★ D15 83392B/46 ★ J5 4129-744
 Estimation of pH of mixed water in mixing chamber - includes measuring temp., alkalinity and pH of incoming water before coagulant addn., and obtaining carbon dioxide discharge rate
 HITACHI KK 31.03.78-JA-036612
 (08.10.79) B01d-21/* C02b-01/20

The pH of mixed water in a mixing chamber in a filtration plant is estimated where the temp., alkalinity, and pH of the water coming into the mixing chamber are measured by a thermometer, an alkalinity meter and pH meter at the upstream side of the mixing chamber, prior to the addition of coagulant, e.g., aluminium sulphate, polyaluminium chloride, etc. The pH of the water is measured by a pH meter provided between the mixing chamber and the flocculation basin, and the discharge rate of carbon dioxide generated when coagulant is added to the mixed water, into the atmosphere is obtd. The pH of the mixed water is estimated on the basis of this data and adjusted to 7.0.

The method can estimate exactly the pH of a water mixt. with allowance for the discharge rate of carbon dioxide generated upon addition of coagulant into the atmos. while correcting in succession the CO_2 discharge rate varying with various conditions, e.g., mixing, weather, pH buffering ability, etc., thus assuring stable purificn. of water. 31.3.78 as 036612 (5pp117)

KANK- ★ D15 83393B/46 ★ J5 4129-749
 Treating waste water from waste reclamation - by two-stage addn. of ferric salt to form flocs which are treated for regeneration as coagulant

KANKYO ENG KK 27.02.78-JA-020868
 (08.10.79) C02c-05/02

In the treatment of polluted water from waste reclamation, a substance composed mainly of a ferric salt, e.g. ferric sulphate or ferric chloride, is added to adjust the pH to 3 to 5.5 to coagulate and separate organics and colouring matters with ferric hydroxide flocs.

Then, a ferric salt is again added to adjust the pH to > 4 to coagulate and separate remaining organics and colouring matters with the ferric hydroxide flocs. Lastly, the ferric hydroxide flocs thus sepd. are recovered and then dissolved in an inorganic acid, e.g. sulphuric acid or hydrochloric acid, for regeneration for recycling of the acid soln. of ferric hydroxide flocs to the first process as coagulant. 27.2.78 as 020868 (4pp117)

KANK- ★ D15 83394B/46 ★ J5 4129-750
 Treating waste water from waste reclamation - by adding ferric salt and then ferrous salt to form flocs which are treated for regeneration as coagulant

KANKYO ENG KK 27.02.78-JA-020869
 (08.10.79) C02c-05/02

In the treatment of polluted water discharged from waste reclamation, a substance composed mainly of a ferric salt, e.g. ferric sulphate or ferric chloride, is added to adjust the pH to 3 to 5.5 to coagulate and separate organics and colouring matters present with ferric hydroxide flocs.

Then, a ferrous salt, e.g. ferrous sulphate or ferrous chloride, is added to coagulate and separate remaining organics and colouring matters with ferric hydroxide flocs by oxidising Fe (II) while making aeration with air at pH ≥ 6. Lastly, the ferric hydroxide flocs thus sepd. are recovered and then dissolved in an inorganic acid, e.g. sulphuric acid or hydrochloric acid, for regeneration for recycling of the acid soln. of ferric hydroxide flocs to the previous process. 27.2.78 as 020869 (5pp117)

AGEN ★ D15 83395B/46 ★ J5 4129-751
 Treating sulphide waste water contg. organic cpds. - by injecting with oxygen or air, adding sulphuric acid, oxidising and discharging
 AGENCY OF IND SCI TECH 30.03.78-JA-036012
 (08.10.79) C02c-05/04

Process is described for waste water discharged from the sulphurising redn. process using e.g. Na_2S as reducing agent in the mfr. of dyes, dye intermediates, pharmaceuticals, etc., contg. sulphides and organics.

Air or O_2 is injected into waste water to oxidise of sulphides and organics until no reaction of sulphides is detected, and then the waste water is admixed with H_2SO_4 to sediment and separate S and organics. SO_2 generated is absorbed in the original waste water. Finally the waste water, opt. after being neutralised, is again oxidised by the injection of air, O_2 and/or O_3 and then discharged.

Process greatly reduces the concns. of colouring materials and COD components as well as sulphides with very high efficiency. 30.3.78 as 036012 (3pp117)

AGEN ★ D15 83396B/46 ★ J5 4129-752
 Treatment of waste water contg. COD components, colouring, sulphide(s) - includes injecting air or oxygen into waste water to oxidise sulphide(s) and organics, adding acid, treating with hypochlorite

AGENCY OF IND SCI TECH 30.03.78-JA-036013
 (08.10.79) C02c-05/04

Waste water contg. sulphides and organics, e.g. those discharged from the sulphurising redn. process using sodium sulphide, sodium hydrosulphide, etc., as a reducing agent in the mfr. of dyes, dye intermediates, medicines, etc. was treated by injecting air or oxygen into waste water to oxidise sulphides and organics present until no reaction is detected. Then sulphuric acid is added to the oxidised waste water for acidification to sediment and separate sulphur and organics. Sulphur dioxide generated upon acidification with sulphuric acid is absorbed in the original waste water and then the acid waste water, is subjected to oxidn. using air, oxygen, ozone or a mixt. of these after neutralisation. It is then treated with a hypochlorite, e.g., sodium hypochlorite, potassium hypochlorite, etc.

This method is capable of treating COD components and colouring matter present in waste water, as well as sulphides, with very high efficiency. 30.3.78 as 036013 (4pp)

DNIN ★ D15 83397B/46 ★ J5 4129-755
 Treatment of waste water - using water-soluble oxidn. catalyst contg. chromium salt or iron salt, opt. mixed with other metal salts
 DAINIPPON INK CHEM KK (DNII) 31.03.78-JA-036887
 E19 (08.10.79) C02c-01/40 C02c-05/04
 Treatment of waste water, e.g. industrial waste waters

and living waste waters, using a specific water-soluble metal catalyst, is claimed. A water-soluble metal catalyst composed mainly of a water-soluble Cr salt alone, e.g. chromium nitrate, chromium chloride, chromium sulphate, etc., or a water-soluble Fe salt alone, e.g., ferric chloride, ferrous sulphate, ferric sulphate, iron alum, etc., to which is added, as required, other water-soluble metal salts is prepd. The catalyst is added to waste water at a pH at which the water-soluble metal catalyst does not undergo hydrolysis to form insoluble hydroxides, and then the waste water is oxidised using air or O₂ at 150-300°C under a pressure of 10-100 kg/cm² under which waste water can be kept in liq. state.

Method can treat waste water, partic. highly contaminated water contg. polyhydric alcohols, organic acids, phenols, aromatic sulphonates, night soils, etc., with very high efficiency. 31.3.78 as 036887 (3pp117)

SHIA ★ D15 83398B/46 ★ J5 4129-756
Dephosphorisation of waste water contg. organic phosphorus cpds. - by biological treatment under aerobic conditions to form inorganic cpds. and sepn. of solid particles

SHINKO PFAUDLER KK 30.03.78-JA-037301

C01 (08.10.79) C02c-05/10

In the dephosphorisation of waste water contg. large quantities of organic phosphorus cpds., e.g. discharged from mfr. of organic phosphorous agrochemicals, the waste water is first subjected to a biological treatment under aerobic conditions to change most of the organic phosphates into an inorganic phosphorus form (like phosphoric acid) or an easily coagulable form, and then the waste water thus treated is subjected to sedimentation, floatation, filtration and/or adsorption treatments to separate solid particles from the waste water.

Method can convert the organic phosphorous cpds. which are difficult to remove by conventional methods, e.g. using lime, into inorganic type phosphorous cpds. (PO₄-P) which are easily coagulable. 30.3.78 as 037301 (3pp117)

SHIA ★ D15 83399B/46 ★ J5 4129-757
Dephosphorisation of waste water - by adding controlled amt. of lime and agitating strongly and then moderately before sepg. obtd. flocs

SHINKO PFAUDLER KK 31.03.78-JA-037708

C01 (08.10.79) C02c-01/40 C02c-05/02

In the dephosphorisation of waste water contg. large quantities of phosphorus cpds., e.g. those discharged from the mfr. of organic phosphorous agrochemicals, lime is added to the waste water, followed by sedimentation, filtration, etc. The amt. of lime added is limited to approx. the theoretical reaction equivalent to phosphorus in a strong alkaline region, and then strong agitation (enough to destroy coarse flocs formed) is applied immediately after the addition of lime and then moderate agitation is applied to form flocs which are, in turn, pptd. and removed from the treated waste water.

Method can attain higher dephosphorisation efficiency for phosphorus-rich waste water by the addition of smaller amts. of lime in a short time, and thus the amt. of sludge generated is small and the cost of treatment is reduced. 31.3.78 as 037708 (3pp117)

HITA ★ D15 83413B/46 ★ J5 4130-088
Measuring alkalinity of water - by admixing water sample with acid pref. sulphuric and determining quantity of carbon dioxide liberated

HITACHI KK 31.03.78-JA-036613

J04 R16 (09.10.79) G01n-31

Alkalinity of water is measured by (1) admixing acid (pref. sulphuric acid) with the water sample, and (2) determining quantity of the liberated carbon dioxide, from which the alkalinity is calculated.

The method is used for measurement of alkalinity of (e.g. reservoir water for city-water service, etc.). Sufficient accuracy is obtd. with simple procedure. CO₂ liberated by the injection of acid is excluded from the sample water by agitation and air-sparging, and subsequently analysed by non-scattering IR analyser. The method is not affected by accumulated foreign materials, and the CO₂ content can be continuously monitored over a long period

of time, without cleaning of the appts. 31.3.78 as 036 (6pp173)

NIOC ★ D15 83419B/46 ★ J5 4130
Measuring salt content in lubricating oil, cooling water etc. - using an indicator prepd. by supporting silver chromate on silica gel, which is discoloured by salt

NIPPON OIL KK 31.03.78-JA-036759

H07 J04 R16 (09.10.79) G01n-33/30

A hollow glass tube is packed with (a) indicator for salt which is prepd. by supporting silver chromate on silica gel powder and then by drying; both ends of the glass tube are sealed with absorbent cotton; the tube is vertically placed in a container which contains (b) a homogeneous mixt. of deionised water, sample lubricant oil, surfactant and petroleum solvent or (c) sample cooling water, until the level of the tube reaches the bottom of the container; and since (b) or (c) are penetrated into (a) and discolour (a), the content of the salts in the lubricant oil or the sea water (c) is determined from the length of the discolouring region of (a) by comparing with a calibration curve.

The method is simple and rapid. Pref. (a) consists of silica gel of 100-200 mesh and 0.1-0.7 wt. % of silver chromate. 31.3.78 as 036759 (4pp90)

AMAK/ ★ D15 83491B/46 ★ J5 4130
Electrolytic prodn. of ionised water - using partitioned cell, reversing polarity of terminals at intervals to prevent scale deposition on electrodes

AMAKAWA I 01.04.78-JA-038639

J03 (09.10.79) C02b-01/82 C25b-15

Appts. for electrolysing mineral water to produce water contg. calcium ions or acidic ions comprises a cell divided by a porous ceramic into two chambers A and B, each having electrodes in each chamber. A DC is passed to electrolyte mineral water in the chambers to cause Ca²⁺ and K⁺ cations to permeate from chamber A through the ceramic to the chamber B and anion of Cl⁻ and S⁻ from the chamber B through the ceramic to the chamber A. The cation contg. water is passed from chamber B through a pipe and valves to a storage vessel and the anion contg. water is passed from the chamber A through a second pipe and valve to a second storage vessel. The positive and negative terminal connections are then reversed and the valves adjusted. The electrolysis is repeated and the cation contg. water and anion contg. water are transferred to their respective storage vessels.

Scale is not deposited on the electrodes by alternating changing and using the electrodes. 1.4.78 as 038639 (3pp117)

JAGA ★ D15 83577B/46 ★ J7 9033
Appts. for evaporating sea water - includes a vacuum evaporator heater and device for conducting liq. from vacuum condenser to heater for degassing

JGC CORP 06.09.72-JA-089407

(19.10.79) B01d-01 B01d-03/06 C02b-01/06

Appts. comprises a vacuum evaporator, a heater for heating a supply of sea water by heat exchange with the vapour generated from the evaporator, and a means for conducting the liq. from a condenser of the vacuum generating system associated with the evaporator to the heater for degassing. 6.9.72 as 089407 B01d-1/00,3/06. C02b-1/06 (19.10.79) JGC CORP (3pp47) (J4 9044975)

NICH- D15 18765Y/11 = J7 9033
Heavy metal or radioactive material-contg. sludge treatment - adding a bituminous emulsion contg. a thiol cpd. and/or sulphur

NICHIREKI CH IND KK 18.07.75-JA-087994

K07 L02 (20.10.79) *J52012-755 C02c-03 + B01j-01 G21f-09

A sludge contg. harmful components such as Hg, Cd, Cu, As, P, PCB or radio-active material is made harmless by adding a bituminous emulsion contg. ≥1 of -SH radiolabile cpd. their metal salts or elemental S. The harmful components in the sludge are converted into an insol. difficultly-soluble stable cpd. which is solidified by coagulation of the sludge mixt. The bituminous emulsion is added to a molten bitumen, and emulsifying the mixt. with a surfactant.

The solidified sludge exhibits excellent adhesive properties, proofing, anti-corrosive and water-resisting characteristics and is used as a binder for aggregates and soil etc.

The products are suitable for use in road pavement, land reclamation and construction of a water-proofing layers. 18.7.75 as 087994 C02c-3/00, B01j-1/00, G21f-9/30 (20.10.79) NICHIREKI CH IND KK (5pp) (J5 2012755)

NICH- D15 18766Y/11 = J7 9033-460
Sludge treatment - by adding bituminous emulsion and cement to form solidified sludge contg. harmful components
NICHIREKI CH IND KK 18.07.75-JA-087995
K07 L02 (20.10.79) *J52012-756 C02c-03 + B01j-01 G21f-09/30

The sludge is treated by adding a bituminous emulsion contg. an -SH radical-contg. cpd., a metal salt thereof and/or elementary sulphur; adding a cement of a cement and an aggregate to convert the harmful components into an insoluble or difficultly soluble stable cpd.; and solidifying the harmful components, together with the solid components in the sludge using the bituminous granules.

The harmful components are e.g. Hg, Cr, Cd, Pb, Cu, salts thereof, As, P, PCB and radio-active matters etc. The cement is e.g. Portland cement, blast furnace cement and is selected in accordance with characteristics of the sludge and a treatment of solids. It is used with a rapid cement-hardening agent, and dispersant, (in)organic cohesive polymer agents etc. The aggregates are used in amts. <8 times that of the cement and they improve the strength of the solidified sludge. 18.7.75 as 087995 C02c-3/00, B01j-1/00, G21f-9/30 (20.10.79) NICHIREKI CH IND KK (5pp) (J5 2012756)

MISK D15 72722X/39 = J7 9033-461
Treatment of water from wet waste gas desulphurisation process - to reduce COD

MITSUBISHI KAKOKI KAISHA (MITP) 03.10.73-JA-110540
E36 J01 (20.10.79) *J50061-057 + B01d-53/34 C02c-05/04
Waste-waters from a wet desulphurisation process (purge soln.) which uses sulphite soln. as an absorption soln. are treated with H₂O₂ at pH <2, 40-100°, in the presence of Fe and/or Cu salts to remove the COD. This process readily removes COD from purge solns. with higher than normal COD at mild conditions as mentioned above.

In an example a purge soln. with COD 320 ppm was adjusted to pH 1.5 with H₂SO₄ and treated with FeSO₄ (70 ppm) and H₂O₂ (1000 ppm) at 60° for 15 mins. After neutralisation of the above reaction system with NaOH, the sludge formed was filtered. The COD of the filtrate was decreased to 60ppm. 3.10.73 as 110540 B01d-53/34, C02c-5/04 (20.10.79) MITSUBISHI KAKOKI (2pp) (J5 0061057)

NREN D15 44884X/24 = J7 9033-462
Decolourising lignin contg waste liquor - by contacting with porous ion exchange resin and weak basic anion exchange resin

NIPPON WATER TREATM KK 25.10.74-JA-123173
A91 F09 J01 P63 (20.10.79) *J51049-563 B01d-15 C02c-05/02
Lignin-contg. waste liquor is decolourised by treating with porous ion exchange resin, and the hydrophobic gp. of lignin is adsorbed and then treated with weak basic anion exchange resin which has been regenerated to OH type. Weak basic anion exchange resin is of styrene type or acrylic type, having amino exchange gps., and is regenerated with alkali. Process allows waste soln. treatment at the time of pulp prodn. A good decolouration is obtd. 25.10.74 as 123173 C02c-5/02, B01d-15/00 (20.10.79) JAPAN WATER TREATMENT (3pp) (J5 1049563)

HITA D15 31920A/17 = J7 9033-463
Treating waste water by reverse osmosis - including adding aluminium ions to form soluble complexes with the fluorine ions in the water

HITACHI KK 28.02.75-JA-023921
(20.10.79) *US4080-289 B01d-13 C02b-01/82 C02c-05/02
In a system for treating waste water by reverse osmosis, the water contg. fluoride and calcium, the fluoride is converted to soluble complexes before passage through the reverse osmosis appts. by the addn. of aluminium ions to the water. Pref. the water is pretreated with a mixt. of aluminium ions and slaked lime.

The deposition of hard CaF₂ scale on the reverse osmosis membrane is prevented. Any soft scale that is deposited can be removed by passing sponge plastic balls through the reverse osmosis tubes. 28.2.75 as 023921 C02c-5/02,

B01d-13/00, C02b-1/82 (20.10.79) HITACHI KK (11pp) (J5 1099686)

AGEN D15 96743X/52 = J7 9033-594
Carboxymethylated edible yeast for collecting oil on water - prepd. by treating yeast with carboxymethylcellulose
AGENCY OF IND SCI TECH 30.04.75-JA-052397
A97 H03 Q42 (22.10.79) *J51128-150 E02b-15/04 + C02b-09/02

Oil floating on water is collected using a modified yeast obtd. by carboxymethylating, with CMC, an edible yeast such as bread yeast obtd. by culturing *Saccharomyces cerevisial* or *Candida utilis* with molasses.

Carboxymethylation is pref. carried out in an organic medium such as EtOH, C₆H₆, i-PrOH and MeCOMe etc. due to the fact that the product is lowered in its gelation characteristics when it is carried out in an aq. medium.

The carboxymethylated produce is obtd. in powdered form, so spray-drying or pulverisation are not necessary. Cpd. is non-toxic. 30.4.75 as 052397 C02b-9/02, E02b-15/04 (22.10.79) AGENCY OF IND SCI TECH (3pp) (J5 1128150)

AGEN D15 00946Y/01 = J7 9033-596
Discharged oil treating agent - comprising modified yeast of *Saccharomyces*, *Torula* or *Candida* gp.

AGENCY OF IND SCI TECH 02.05.75-JA-053441
H03 Q42 (D16) (22.10.79) *J51132-653 + C02b-09/02 E02b-15/04

A discharged oil treating agent comprises the modified yeast obtd. by removing a water-soluble material from a yeast and subsequently carboxymethylating the yeast thus treated.

In an example, a raw or dried yeast, e.g. belonging to *Saccharomyces* gp., *Torula* gp., *Candida* gp. etc. is treated with water, a dol. acid or alkali soln. or saline water at a temp. of from ordinary temp. to 150°C for 10 mins. to 5 hrs. under agitation to separate the water-soluble matter. It is then subjected to carboxymethylated by use of monochloroacetic acid in a medium such as H₂O, EtOH, benzene, isopropanol, acetone, etc.

The amt. of the product used is 2.5-5% by wt. based on that of the flowed-out oil. It exhibits excellent coagulating activity on heavy oil. Valuable material such as liponucleic acid, glutacione, cathalase etc. is recovered from an aq. soln. from which the treated yeast is sepd. 2.5.75 as 053441 C02b-9/02, E02b-15/04 (22.10.79) AGENCY OF IND SCI TECH (4pp) (J5 1132653)

AJIN D15 32706A/18 = J7 9033-798
Removing oil floating on sea by gelation - using gelling agent prepd. by dissolving (N) acylamino acid ester or amide in organic medium contg. inorganic metal salt

AJINOMOTO KK 01.09.76-JA-104782
E16 H03 + Q42 (E33 E34) (23.10.79) *J53030-476 + C02b-09/02 E02b-15/04

The method comprises dissolving N-acylamino acid amide or N-acylamino acid ester in an organic medium contg. inorganic metal salt to obtain a gelling agent. The agent is sprayed onto floated oil, and water is sprayed at such a velocity that floated oil is not dispersed to minute drops. The inorganic metal salt is LiCl, NaClO₄, MgBr₂, CaCl₂ or Ca(OH)₂. The organic medium is acetone, acetic ester, or alcohol.

In an example, 9l of heavy oil was floated on 900l of sea water, and the gelling agent was sprayed thereonto. Sea water was pumped up, and sprayed thereonto. Floated oil was gelled and gelled oil was removed with a metal wire net of 100 cm mesh. 1.9.76 as 104782 C02b-9/02, E02b-15/04 (23.10.79) AJINOMOTO KK (3pp) (J5 3030476)

VIME = ★ D15 83652B/46 ★ SU -617-913
Heavy metal ions removal from aq. wastes - by electrolysis part of water to reduce electrolytic process energy requirement and to eliminate need for chemical purificn.

VILIN MECH AUTOM 06.01.76-SU-310947
J03 M11 (15.07.79) C02c-05/12

Electrolytic purificn. of aq. waste contg. heavy metal ion(e.g. from galvanisation and nonferrous metallurgical industries) is based on electrolysis of part of the water and remixing with the remainder to increase ele-

conductivity to at least 10^{-3} ohm⁻¹cm⁻¹ and pH to 9.5-12. This lowers electrical energy expenditure (by 1.5-2 fold) and removes necessity for subsequent chemical treatment, viz removal of Fe ions released during electrolysis.

Budilovskii, Yu. Ya., Ryskin, S. Ya., Bul. 26/15. 7. 79. 6.1.76.as310947(2pp114).

URAL= ★ D15 83661B/46 ★SU-643-716
Cavitation preventer for steam turbine supply system pump - comprises by-pass chamber connected to deaerator to prevent boiling-up on pressure loss

URAL THERM TECH RES 14.09.77-SU-523977

Q56 Q72 (28.11.78) C02b-01/10 F04d-09 F22d-11/02

Deaerating and feeding installation, e.g. for protecting, supply pumps from cavitation during pressure drop in the de-aerator is used in thermal power engineering and heat technology. It comprises the de-aerator with water-supply pipe connected to it plus a supply pump, the suction pipe of which is linked to both parts. Reliability is increased by installing a by-pass chamber in the form of a hydraulic trap between the suction pipe and the pipeline. The trap is located above the point where the pipeline connects to the deaerator and it is connected to the vapour space of the latter.

Kondratev, A. D., Oprishchenko, B. G., Kurnyk, L. N., Bul. 3/25.1.79.14.9.77.as523977(3pp29).

TEKH= ★ D15 83668B/46 ★SU-647-504
Waste water thermal decontamination cyclone furnace - has water atomisers placed along spiral line at certain distances

TEKHENERGOKHIMPROM 20.02.76-SU-328467

J09 Q73 (18.02.79) F23g-07/04

The cyclone furnace is used for waste water thermal decontamination and contains a vertical, cylindrical chamber with a narrow section, head and working sections, burners and waste water atomisers.

In order to increase reliability and efficiency of water decontamination, contg. high boiling point organic impurities, the atomisers are placed along a spiral line on the cylindrical chamber.

The first atomiser is placed under the burners at a distance equal to 0.3-0.4 times the chamber dia. The last atomiser is placed prior to narrow section and at a distance of 1.0-1.1 times the chamber dia.

Bernardiner, M. N., Katsnelson, L. O., Lepakhina, T. G., et al Bul. 6/15.2.79.20.2.76.as328467(3pp110).

LEDY/ ★ D15 83740B/46 ★SU-649-444
Iron oxide removal from cation exchanger used in water softening etc. - by consecutive treatment with aq. hydrochloric acid, complexone in presence of reducing agent and aq. condensate

LEDYUKHIN A M 03.01.77-SU-436861

A91 J01 (29.03.79) B01d-15/06

Fe oxides removal from sulphonated cation exchange resins, includes treating the resin at elevated temp with a soln. of a complexone, in the presence of a reducing agent, and then washing with water or pref. aq. condensate.

The degree of wash off is increased by initially treating the resin with a soln. of HCl.

Preferably the resin is treated with 1-2% HCl soln. at volume ratio of 1:1 with sorbent, at 40-90°C. Dedyukhin, A. M., Bul. 8/28.2.79.3.1.77.as436861(2pp-1347).

FARE= ★ D15 83765B/46 ★SU-649-658
Purificn. of petroleum-contaminated aq. waste - using chitin and chitosan natural polymer solid adsorbent

FARE FISHING INST 14.02.77-SU-451800

A97 H05 J01 (28.02.79) C02b-01/14 C02c-05/02

More effective purificn. of aq. waste contaminated by petroleum or petroleum prods. is based on using chitin or chitosan natural polymer solid adsorbent. The spent adsorbent together with used petroleum prods. may be utilised as fuel.

The adsorbents are high mol. wt. natural polymers. Chitin(2-acetamide-2-desoxy-D-glucosic polysaccharide) is found in crab, crayfish and shrimp. Chitosan is partially desacetylated chitin.

Safronov, T. M., Plastun, V. I., Gridienko, V. V., Bul. 8/28.2.79.14.2.77.as451800(2pp114).

HYDR= ★

D15

83766B/46 ★SU-649-661

Biological purificn. of industrial aq. waste - by addn. of active sediment supernatant before air tank treatment

HYDROLYSIS IND RES 26.10.76-SU-416625

(12.04.79) C02c-05/10

Biological purificn. of aq. waste(e.g. from chemical cellulose-paper and microbiology industries) gives increased purity by quicker, simpler method by addn. of active sediment supernatant before treatment in air tanks viz. stirring 2-5 mins. at 20-80°C and pH 3-12. The use of supernatant removes the necessity to separate purified water from the purifying agent.

The supernatant is prepd. by centrifuging and it may be concentrated by evapn.

Zharova, T. V., Chernyatinskaya, T. G., Bul. 8/28.2.79. 26.10.76.as416625(3pp114).

SCHL-

D15

76695A/43 =US 4173-36

Mounting and sealing high pressure membrane cell - within flange vertically-movable opposed housings having adjustable split ring clamp

SCHLEICHER & SCHULL 18.04.77-DT-717048

J01 + Q47 (06.11.79) *DT2717-048 +E05c-19

A clamp assembly, for high pressure diaphragm test cell comprising two parts, both with a wedge flange, consists of a carrier frame which can be secured to a stationary support and the upper cell part whose wedge flange is directed downwards. The frame has a vertical carrier pin with two clamp ring parts mounted at its bottom end so as to swing freely. Each ring part engages the wedge flanges of the cell parts. A fastener then forces the rings together to press the cell parts against each other.

The device makes possible convenient and rapid handling of the cell by a single person, and the use of rigid, locally fixed pressure times in connection with the cell. 24.8.77 as 827428 (7pp926)

BLOK/ ★

D15

83991B/46 ★US 4173-41

Rotary mixer for sludge and flocculating polymer - includes incline frusto/conical drum having internal baffles and weirs diminishing towards outlet end

BLOK A 08.12.77-US-858776 (07.07.76-US-703126)

(06.11.79) B01f-09/06

The mixer comprises a frusto-conical drum having a large inlet and a restricted open outlet and is rotatably supported about a horizontal axis. The drum includes an imperforate wall with a series of baffles mounted internally in circumferentially spaced relation to each other and extending longitudinally and radially inwardly. The number of baffles of each series diminishes from the inlet end to the outlet end for providing a relatively gentle handling of material at the outlet.

Mixing of the sludge and polymer is initially obtd. at the inlet end of the mixer. The mixing action is then gradually slowed down so that building up of the flocs will not be accomplished too rapidly. Flocs are provided which are strong enough to be pressed. 8.12.77 as 858776 C.i.p 4062776 (4pp1044)

UNIC ★

D15

84034B/46 ★US 4173-5

Nitrification-denitrification of waste-waters - using activated sludge, with anaerobic denitrification of a portion then returning aerobic zone

UNION CARBIDE CORP 23.11.77-US-854321

(06.11.79) C02c-01/06

The known activated sludge method of purifying waste water in which (i) wastewater contg. N-cpds. is mixed in anoxic zone in the presence of C cpds. with an O₂-contg. gas and activated sludge contg. C-consuming and N-oxidizing bacteria so that N-cpds. are nitrified; (ii) a nitrified, oxygenated mixed liq. is discharged from the oxic zone and passed to a solids concn. zone to concentrate the solids from the liq.; (iii) a major portion of the concd. solids returned to the oxic zone as the activated sludge; and (iv) where the total mean residence time of solids (SRT) is, days is improved as follows: (a) nitrified oxygenated liq. solid is withdrawn and passed to an anoxic zone with a flow rate < ½ the vol. flow rate of nitrified oxygenated mixed liq. entering the solids concn. zone; (b) the nitrified oxygenated liq. -solid in the anoxic zone is kept under anoxic conditions for 0.4-36 hr. so that the liq. -solid is de-

ified and N₂ gas is formed; (c) the N₂-contg. gas is released and the denitrified liq. -solid is returned to the oxidation zone.

Integrated biological process not only effectively removes N-cpds. (and can be adjusted to remove phosphate as well), but also requires reduced tankage and power consumption. 23.11.77 as 854321 (15pp478)

TE-★ D15 84035B/46 ★US 4173-532
Waste water treatment - using acidic coagulants and basic reagent vary pH cyclically

ENTENMANN INC 27.05.77-US-801375 (07.03.74-US-449003)
(06.11.79) C02b-01/20

A continuous process for removal of wastes from effluent contg. large amts. of sugars and starches comprises a) adding an agent to inhibit fermentation; b) continuously passing the effluent into a clarifier, and adding to the flow an acidic primary coagulant to reduce the pH to 2.5-3.5; c) reducing continuous circulation within the clarifier, and continuously adding an alkaline material to raise the pH to 5-12.5; and form flocs by reaction with the primary coagulant which trap wastes; d) adding an acidic secondary coagulant to the liq. as it circulates, lowering the pH to 5-8.5 and forming more flocs; e) separating the flocs and the clarified effluent.

The process is esp. useful in treating effluent from a cake baking plant, and gives more complete wastes removal than known processes.

The fermentation inhibitor is pref. chlorine or a chlorine cpd. The primary coagulant is ferric chloride soln.; the alkali is lime, and the secondary coagulant is Al sulphate. After the secondary coagulant, more of an alkaline agent may be added. Pref. an anionic or cationic polyelectrolyte is also added to the circulating liq. The effluent may also be pretreated with polyelectrolyte before entering the clarifier. Appts. is described for carrying out the process, including a clarifier fitted with inlets for the treatment chemicals, and baffles and perforated plates, which cause circulation of the liq. so that the treatment chemicals are added in the above sequence and which trap flocs. Two or more clarifiers may be used, connected in series, so that the pH cycle described is repeated. Smaller amts. of reagents are required in each successive clarifier stage. If the effluent is pretreated with polyelectrolyte, further stages are not usually required. 27.5.77 as 801375 (+27.2.76-US-662286)(17pp955)

ESSO ★ D15 84036B/46 ★US 4173-533
Removing suspended oil droplets from water - using partially submerged, vertical pipe with injection of gas bubbles to contact oil droplets

EXXON PROD RES 07.11.77-US-848961
H01 (06.11.79) B01d-37/02

Suspended oil droplets are removed from waste water by passing the waste water into a submerged vertical pipe and introducing a gas from a separator above the surface to the lower portion of the pipe. The gas is injected into a diffuser which forms gas bubbles for countercurrent contact with the waste water as they rise in the pipe.

The overall density of the suspended oil droplets is reduced so as to promote gravitational separation of the oil droplets from the waste water. The oil is withdrawn from the top of the pipe and clarified waste water is discharged from the lower portion of the pipe.

Used for offshore operations where oil and water mixts. are produced from an offshore well. The combination of gravitational separation provided by the pipe and flotation separation provided by the injected gas permits a larger vol. of oil bearing waste water to be clarified than that achieved by conventional skim piles. The appts. is practically maintenance-free. 7.11.77 as 848961 (6pp1044)

ENVI ★ D15 84037B/46 ★US 4173-534
Thickener unit for primary and secondary sewage sludge - includes upper and lower feed wells, a confined liquid zone and an aerator

ENVIROTECH CORP 12.12.77-US-859768 (30.09.76-US-728480)
(06.11.79) C02b-03

A treatment unit for concomitantly treating primary sludge and aerated sludge in an activated sludge type wastewater treatment system, includes an open tank and a continuous partition wall which defines a confined liq. zone. A float collection box is mounted within the zone to collect solids.

The tank is connected to a primary clarifier.

The bottom of the tank includes a sediment collection region. Primary sludge is introduced into a lower feedwell and flows into the lower part of the tank to thicken. Secondary sludge is aerated and introduced into an upper feedwell so that it flows and thickens in the upper part of the tank by flotation type thickening.

Used for purificn. of municipal or industrial wastewater. Aerated secondary sludge in the upper zone of the tank forms a blanket of oxygen-rich liq. above the primary sludge in the lower zone. The blanket diminishes the tendency of the primary sludge to become anaerobic and promotes aerobic decomposition of solid particles rising into the blanket from the primary sludge. 12.12.77 as 859768 (C.i.p 4082 671) (8pp1044)

HAYE/★ D15 84041B/46 ★US 4173-546
Treating radioactive caesium-contg. waste - by solidifying in hardened silicate matrix contg. shale particles to immobilise the caesium ions

HAYES JF 26.04.78-US-900076 (26.07.76-US-708473)
K07 L02 (06.11.79) G21f-09/16

In the treatment of waste materials contg. radioactive caesium isotopes by mixing them with a soluble alkali metal silicate and a hardener to form a solid mass, particles of shale are added to the mix. before solidification to immobilise the Cs isotopes and reduce their leachability by environmental water.

In a specific embodiment, the waste is placed in a contg. landfill, and a solid barrier of the silicate, hardening agent and shale particles is formed between the waste and the landfill.

The method is suitable for treating liq. and solid wastes, esp. contaminated coolants from nuclear reactors. The shale acts as an ion exchanger and effectively removes and immobilises any Cs ions passing through it. 26.4.78 as 900076 (6pp909)

LICN D15 33503B/18 =US 4173-719
Liquid irradiation device - with adjustable inclined treatment plate fed by diffusors and rising vessel

LICENTIA PATENT GMBH 19.10.77-DT-746917
J04 K08 +R16 (06.11.79) *DT2746-917 +G01n-23

Appts. for electron beam irradiation of flowing material, e.g. sewage sludge, includes a beam accelerator and emitter over an inclined irradiation tray, and a riser vessel with a top overflow adjoining the tray upstream end to feed material to the tray. There is at least one diffuser communicating with the vessel bottom to introduce the material.

There may be three juxtaposed diffusers, each perpendicular to the vessel, and the tray, vessel and diffuser form a structural unit, which is pivotable about an axis in the irradiation zone and extending perpendicularly to the flow direction on the tray. 29.8.78 as 937856 (5pp1358)

KARS/★ D15 84120B/46 ★ZA 7802-840
Water purificn. - by direct contact with outside of tube emitting UV radiation

KARSTEL C J 18.05.78-ZA-002840
(29.06.79) C02b

BIWA-★ D15 84131B/46 ★ZA 7804-650
Water treatment and storage unit - comprises a tank supported by a column consisting of superimposed settling and filtration tanks

BIWATER SHELLABEAR 04.05.78-GB-017717
(04.07.79) C02b C02c

ROHM ★ D15 B/46 ★ZA 7804-808
Ion exchange desalination process - where weakly basic free base gps. are converted to carbonate form prior to contact between feed soln. and resin

ROHM & HAAS CO 23.08.78-ZA-004808
A91 J01 (27.08.79) B01d C08i

In an ion exchange process for desalination effected by (a) contacting an aq. feed soln. contg. a salt of a strong acid with a thermally regenerable ion exchange resin having weakly acidic free acid gps. and weakly basic free base gps. whereby the resin is loaded with the salt by ion exchange and the feed soln. is desalinated, (b) removing desalinated soln., and (c) thermally regenerating the resin and eluting from the resin the salt, the improvement comprises converting the weakly basic free base groups to a carbonate form prior to or simultaneously with contact between the feed soln. and the resin. 23.8.78 as 004808 (37pp)

D16: FERMENTATION INDUSTRY

SNAM ★ D16 82559B/46 ★BE -876-204
Reduction of phenylalanine levels in blood and other media - by use of phenylalanine ammoniac lyase enzyme on porous fibres of biocompatible cellulose triacetate

SNAMPROGETTI SPA 12.05.78-IT-023336

A96 B04 P34 (12.11.79) A61k A61m B01d

Compsn. for reducing the level of phenylalanine in the blood or other medium contains the enzyme phenylalanine ammoniac lyase, fixed on porous fibres of biocompatible cellulose triacetate. The cellulose triacetate is usually made biocompatible by addition of a blood platelet aggregation inhibitor.

The inability to metabolise phenylalanine is usually hereditary and causes phenylketonuria or Folling's disease and causes mental retardation, convulsions, eczema and affects skin pigmentation. High phenylalanine blood levels affect the metabolism of tryptophane, tyrosine and catecholamine formation. It has also been suggested that elimination of phenylalanine reduces leucemia cell formation.

The method of fixing the enzyme on cellulose triacetate fibres avoids the rejection problem and allows the blood levels of phenylalanine to be controlled. The compsn. may also be used to eliminate (or reduce) phenylalanine in foodstuffs before their use and avoids time-consuming chromatographic preparations. 11.5.79 as 876204 (8pp395)

UNBI ★ D16 82576B/46 ★BE -877-591
Appts. for luminescence assay of antigens, nucleotide(s) etc. - useful for routine diagnosis

UNIV OF BIRMINGHAM 09.07.79-BE-877591

B04 J04 R16 (05.11.79) G01n

Appts. for quantitative analysis of a substance (A) comprises a housing, containing several sample cells, each of which has a window. Light emitted from the cell (via the window) when it is positioned in an examination chamber, is received by a photodetector, which provides an output signal depending on the amt. of light emitted. The cells are driven sequentially to the examination chamber by a transport system.

Method for analysing (A) comprises reacting it and a known quantity of the same cpd. labelled with an indicator, with a specific reagent. This indicator can be measured by determining emission from a luminescent reaction in which it participates. From the emission the amt. of labelled (A) which has reacted (or not reacted) is determined.

Esp. used for routine, diagnostic assay of antigens and nucleotides, or substrates from which they are formed. 9.7.79 as 877591 (21pp1251)

AHSC ★ D16 82609B/46 ★BE -877-709
Enzymatic assay of tri:glyceride in biological fluid - with conversion of tetrazolium salt to coloured formazan

AMER HOSPITAL SUPPL CORP 13.07.78-US-924528

B04 R16 (05.11.79) G01n

Method for enzymatic assay of triglycerides (I) in biological fluids comprises adding to the sample a lipase (L), glycerol dehydrogenase (GD), a pyridine nucleotide (II), a buffer, a tetrazolium cpd. (III) and diaphorase (D).

Glycerol released by hydrolysis of (I) is oxidised with redn. of (II), the reduced form of which then converts (III) to a coloured formazan. The absorbance at 475-525 nm is measured. Esp. (L) is derived from *Chromobacterium viscosum*, (GD) from *Enterobacter aerogenes*, and (D) from *Clostridium Kluyveri*. The enzyme reagent esp. contains (per ml) 100-300 IU of (L) 5-15 IU of (GD), 2.5-7.5 mg (II) and 15-45 IU of (D) and also 0.075-2 g/l (III).

Used esp. for assaying (I) in serum. Compared with known method this process requires smaller samples shorter reaction times, has larger linear range and/or needs fewer reagents. The reconstituted reagent is stable for 72 hr. at 4°C. 13.7.79 as 877709 (19pp1251)

USDC ★ D16 B/46 ★BR 7902-574
Rapid continuous fermentation process and appts.

US SEC OF COMMERCE 26.04.78-US-900371

(30.10.79) C12b-01 26.4.79 as 002574

BIOC- ★ D16 B/46 ★BR 7902
Accelerated fermentation and distn. of conc. sugar substrates prodn. of ethanol

BIOCHEM DESIGN SPA 28.04.78-IT-049116

(30.10.79) C12c-11/14 30.4.79 as 002668

KANT/ D16 27955T/18 =DS 2152
Biological container tray - for investigating the activity of biological control reagents

KANTOR FS (AST-) 19.10.70-US-081781

B04 C03 (08.11.79) *DT2152-068 C12k-01/10

The effectiveness of a biological control reagent is checked by contacting a biological sample with a certain range of various concentrations of the reagent. A number (ten) of containers is joined to a bank and contain the reagent in various quantities, including zero concentration. The reagent is provided in dry (powder) form and is suitable for renewed dispersion to form the desired range of concentrations. The containers are pref closed in a nitrogen atmosphere on a plastic strip.

The pref material for the container bank is a polystyrene pressing. This is a simple and low-cost device which can be used in automated processes even in smaller hospitals and clinics. 19.10.71 as 152068 (7pp39).

SHIO D16 69910V/40 =DS 2413
2-keto-L-gulonic acid prodn. - by microbiological reduction of diketo-D gluconic acid

SHIONOGI KK 22.03.73-JA-032842

B05 (08.11.79) *DT2413-963 C07h-07/02

Prepn. of 2-keto-L-gulonic acid and its salts comprise propagation of microorganisms which generate this acid and then extraction from the bacterial cells; a convenient precursor is 2,5-diketo-D-gluconic acid or its salts. Suitable species are *Brevibacterium*, (pref. *B. ketosolens* nov. sp., ASM-1005, ATCC 21914); *Bacillus*, (esp. *B. megaterium*, ASM-20, ATCC 21916); *Staphylococcus* (partic. *S. aureus*, ASM-30, ATCC 21915); *Micrococcus* (esp. *M. identitificans*, IFO 12442; *M. rubens*, IFO 3707 or *M. roseus*, IFO 3764); and *Pseudomonas*, (esp. *P. chlororaphis* 3904).

The cells are disintegrated and extracted with acetone. The prod. is an intermediate for ascorbic acid. 22.3.73 as 413963 (7pp047).

SCHA- ★ D16 82642B/46 ★DT 2818
Red grape juice fermentation vat - keeps husks suspended by descending circulatory current

SCHARF W GMBH 25.04.78-DT-818013

(08.11.79) C12g-01/02

In a fermentation process of mashed red grapes, the husks are kept in uniform distribution in the grape juice by a descending circulatory current which counteracts the buoyancy forces acting on the husks. These are therefore surrounded by fluid on all sides with the greatest possible diffusion.

The result is an intensified contact between husks and juice without damaging the husks, so that the treatment is completed in a shorter time and becomes more economical. 25.4.78 as 818013 (24pp39)

BOEF ★ D16 82716B/46 ★DT 2819
Substrate for serum alpha-amylase determination - contains starch or amylose granules surface crosslinked to control swelling

BOEHRINGER MANNHEIM GMBH 02.05.78-DT-819298

A89 B04 R16 (08.11.79) C08b-31 C08b-33 G01n-31/14

Substrate for the determination of α -amylase based on partially starch derivatised with determinable gps., consisting of surface-crosslinked starch or amylose granules of diameter 0.01-0.20 mm with a controlled reduction in swelling capacity.

Used e.g. in determination of serum α -amylase activity which is an important clinical parameter for pancreatic function. The substrate is uniform, both within a batch and from batch to batch, and gives improved linearity of absorption. This makes the repeated determination and calibration curves unnecessary. 2.5.78 as 819298 (14pp)

XN ★ D16 82813B/46 ★DT 2917-001
 carrier-bound disulphide cpds. of benzothiazole and pyridine
 oxide - useful for producing e.g. immobilised enzymes or
 immune components

TOYO JOZO KK 28.12.78-JA-164909 (28.04.78-JA-049958)
 A96 B04 E13 (08.11.79) B01d-15/08 C07g-07 C08I-05/12 C08I-
 33/20 C08I-77/02

new disulphide cpds. of carriers having S-S exchange rea-
 ctivity are cpds. of the formula $R-S-S-X_1-X_2-A$ (I) in which
 is a 2-benzothiazolyl group or 2-pyridyl N-oxide group;
 is a separating grp.; X_2 is a linking group; and A is the
 bound residue of the carrier.

(I) react with thiol cpds. to give immobilised thiol cpds.
 when the thiol cpd. is an enzyme, the product is an immob-
 ilised enzyme. When the thiol cpd. is a hapten, antigen
 or antibody, the product is an immobilised immune compon-
 ent useful in affinity chromatography. (I) can also be re-
 acted with agents which split S-S bonds (e.g. dithiothreitol)
 at pH 9-11 to give an SH-contg. carrier of the formula
 $R-S-X_1-X_2-A$. 26.4.79 as 917001 (30pp280)

AXFO/ ★ D16 82821B/46 ★DT 2917-180
 multiple inoculation of bacteria samples - with array of needles in
 a swivelling inoculation head between sample and nutrient cells (NL
 11.79)

AXFORD H G 03.05.78-CA-302513
 B04 (08.11.79) C12k-01/04

multiple inoculation system of bacteria samples consists
 of a swing arm with needles arranged in an inoculation head
 in the same pattern as the cells of a bacteria sample tray.
 When the samples have been taken they can be transferred
 to a nutrient medium carrier.

This reduces the time required for the identification of
 a series of bacteriological samples to a minimum. The
 chances of errors arising are also greatly diminished.

7.4.79 as 917180 (41pp39)

OFF/ ★ D16 82846B/46 ★DT 2917-810
 self-cleaning disc filter esp. for wine - having circular filter discs
 attached to shaft which can be rotated with scraped forks pivoted in
 centre and supported to clean off deposits

DELLA TOFFOLA F 04.05.78-IT-082522
 J01 (08.11.79) B01d-33/26

self-cleaning filter device with dry cake discharge has a
 number of circular filter discs mounted on a shaft to which
 they are rigidly attached. Also pivotted on the shaft are
 scraper forks which extend along either side of the disc.
 They have a support at the outer end to prevent them rotat-
 ing with the disc.

There is only a very small clearance between the disc
 and the scrapers so that virtually all deposits are removed
 when the disc is rotated. The shaft has a drive motor att-
 ached to it. Below the discs there is a screw conveyor to
 remove the dislodged dry cake at the bottom of a conical
 hopper.

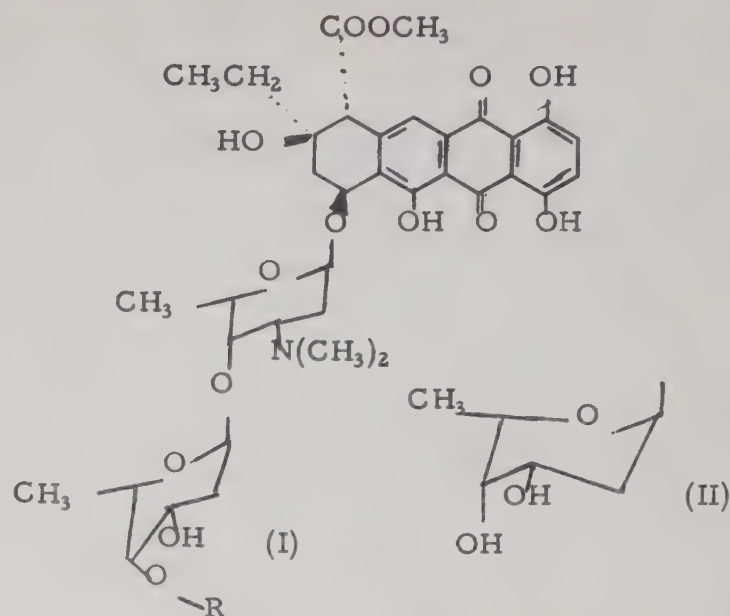
Used for filtering liquids esp. wine, for which filter aid
 and precoat is used. Allows cleaning without wetting out the
 cake and reduces turnaround time for the cleaning operation.
 3.5.79 as 917810 (14pp1053)

BRIM D16 57458Y/32 =GB 1555-636
 Musettamycin and marcellomycin antibiotics - are obtd. by
 cultivation of Actinosporangium sp. ATCC 31127

BRISTOL MYERS CO 15.04.76-US-677480
 B03 (14.11.79) *US4039-736 A61k-31/35 C07h-15/24

Antibiotic anthracycline cpds. of formula (where R is H
 or myself and mycin) or is a gp. (II) (marcellomycin)) are
 new.

(I) are prepd. by cultivating Actinosporangium sp. ATCC
 31127, (mutant) in an aq. nutrient medium contg. N and C
 sources under submerged aerobic conditions until a sub-
 stantial amt. of bohemiac acid complex is produced, recov-
 ering the complex, and sepg. the antibiotics. Pref. the
 complex is recovered by extn. of the whole fermentation
 broth with a water-immiscible organic solvent.



14.4.77 as 015521 (22pp936)

VENT- D16 70639A/39 =GB 1555-832
 Labelled tri- and tetra-peptide(s) - for angiotensin converting
 enzyme detection and diagnosis of Gaucher's disease and
 sarcoidosis

VENTREX LAB INC (RYAN/) 10.05.77-US-795497
 B05 E14 K08 +R16 (B03 E13) (14.11.79) *US4115-374 C07c-
 103/52 G01n-31/14

Quantitatively measuring the angiotensin - converting enz-
 yme activity of a biological material comprises (a) mixing
 an acylated peptide with the material, the peptide having
 the property of being reversibly bound by the enzyme, hav-
 ing a free carboxylenol-gp. and having a peptide bond sus-
 ceptible to enzyme catalysed hydrolysis, resulting in form-
 ation of dipeptide and remnant reaction prods.

Method further comprises (b) incubating the resulting
 mixt. under conditions where the angiotensin converting
 enzyme is catalytically active for sufficient time to effect
 catalysis of hydrolysis of the peptide; (c) sepg. the rem-
 nant reaction prod. from the mixt. after incubation; and
 (d) estimating the amt. of remnant prod. produced by the
 hydrolysis, so that the catalytic activity of the enzyme is
 quantitatively measured. 7.11.77 as 046226 (964)

PROT- D16 80831A/45 =GB 1555-939
 Recovery of cephalosporin C from aq. soln.

PROTER SPA 11.03.77-GB-010452
 B02 C02 (14.11.79) *J53112-892 +C07d-501/26
 Cephalosporin C (I) is recovered from aq. soln.
 in which it was produced by fermentation, by (a) acylating
 (I) by adding to the aq. soln. a reactive deriv. of an acid
 of formula $Ar-COOH$ (II) (where Ar is (subst.) aryl) at
 0-30 °C at a pH of 7-11% (b) salifying the N-acyl-Cephalo-
 sporin C (II) obtd. by adding (iso)quinoline; (c) lowering
 the pH to 1.0-3.5 by adding an inorganic acid, keeping
 temp. at 0-30 °C until quinoline salt of (III) is obtd.; and
 (d) collecting the salt.

Cephalosporin C is easily converted into 7-amino-ceph-
 alosporanic acid used in prepn. of antibiotics. 31.1.78 (3pp)

HABE/ D16 03968Y/03 #GB 1556-024
 Electromolecular propulsion of cpds. in semiconducting media - for
 the prepn., selective extn. or analysis of organic or inorganic cpds.

HABER N 22.07.76-US-707532 (25.08.76-GB-035367)
 B04 E24 J03 R46 +P41 R16 (J04) (14.11.79) *BE-845-787 G01n-
 27/26

Process for imparting mobility to ≥ 1 chemical species
 comprises subjecting the species in a semiconductive trans-
 port medium to a voltage of 0.05-30000 volts/cm across
 the medium to produce a current density of 0.0001-400
 microamp/cm² and at least equal to the threshold current
 value for ≥ 1 species in the medium, below which value
 that species remains stationary, to reduce a high mobility
 rate in the species.

Pref. the medium comprises a neutral media base (e.g.
 methoxyethoxy ethanol), a conductivity adjusting agent
 (e.g. perchloric acid) and/or modifying agent (e.g. isoph-
 orone) for chelectric constant viscosity on proton or elect-
 ron charge transfer content and the chemical species is
 ≥ 1 heavy metal cpds.

The method is capable of accomplishing very refined analytical sepsns. 25.8.76 as 035367 (42pp393)

SHIO ★ D16 82974B/46 ★ J5 0123-885
7-Amino-de:acetoxy-cephalosporanic acid prepn. - by culturing e.g. *Absidia*, *Fusarium* or *Streptomyces* microorganism
SHIONOGI KK 15.03.74-JA-030388

B02 (29.09.75) A61k-31/54 C07d-501/18 C12d-09/04
Prepn. of 7-amino.deacetoxy.cephalosporanoic acid (I) comprises one microorganism chosen from *Nectria haematococca* CMI-63862, *Cylindrocarpon radiclecola* ATCC-11011, *Cephalothecium* ATCC-8685, *Absidia glauca* Robillarda sp ATCC-20379, *Fusarium coeruleum* SRL-1081 *Fusarium caucasicum* IF6979, *Fusarium solani* ATCC-14523 or *Streptomyces lunatus* ATCC-19775 in a culture medium contg. meat extract, peptone, soyabean, powders, corn steep liquor, saccharide, starch, dextrin, glycerine, mannitol, molasses, amino cpd. rice bran, urea, ammonium salt, nitrogen source, phosphate salt, sulphate salt, inorganic acid source and vitamin.

The reaction cpd. obtd. by fermentation is reacted with deacetoxy cephalosporin or its salt and thereby, (I) or its salt is obtd. The salt of (I) is the Na salt, K salt, ammonium salt, Mg salt, alkylamine salt, pyridine salt or quinoline salt.

(I) or its salt is a precursor producing a microbicidal remedy. 15.3.74 as 030388 (6pp15)

AJIN ★ D16 83124B/46 ★ J5 4128-393
Determining volatile substances in e.g. fermentation liquor - by contacting microorganism electrode with liquor, measuring decrease of electrode or equilibrium current, etc.

AJINOMOTO KK 28.03.78-JA-035907
E19 J04 R16 (04.10.79) G01n-27/46
Determining volatile substance (e.g. (m)ethanol, acetic acid, etc. useful as fermentation material) comprises contacting a microorganism electrode, in which microorganism assimilating volatile substances and consumable O₂ are sealed between a diaphragm of oxygen electrode and a volatile substance-permeating membrane covering the diaphragm, with a liq. to be examined; measuring the decreasing rate of the electrode current or the equilibrium current; and determining volatile substances by using a proportional relationship between the decreasing rate of the current or the equilibrium current and the concn. of volatile substances.

Volatile substances are very simply, stably and selectively determined with high reproducibility in e.g. 2-10 mins. without using reagents. Microorganism used is e.g. yeast such as *Saccharomyces cerevisiae*, bacteria such as *Brevibacterium fravum* ATCC 14067, activated sludge, etc. Volatile substance-permeating membrane is pref. silicone film. 28.3.78 as 035907 (4pp50)

AJIN ★ D16 83125B/46 ★ J5 4128-394
L-Glutamic acid and L-glutamine determ. - using microorganism electrode comprising *Escherichia coli* bacteria in association with carbon dioxide electrode

AJINOMOTO KK 28.03.78-JA-035906
A89 B05 E16 R16 (04.10.79) G01n-27/46
Determin. of L-glutamic acid and L-glutamine comprises contacting a microorganism electrode, in which *Escherichia coli* bacteria are fixed near a diaphragm of a CO₂ electrode, with a liq. to be examined under anaerobic conditions, and obtg. the substrate concn. by utilising the proportional relationship between the substrate concn. (log C) and the voltage output of the microorganism electrode.

In the anaerobic reaction in the method, L-glutamic acid converted to γ -aminobutyric acid and CO₂ by the action of glutamate decarboxylase, and CO₂ gas formed is determined by the CO₂ electrode. Microorganism used is a strain of high glutamate decarboxylase activity belonging to *Escherichia coli*, such as *Escherichia coli* ATCC 8739. The diaphragm of the electrode is e.g. a silicone membrane.

Glutamic acid and glutamine can be more simply and precisely determined than by previous enzymatic methods. 28.3.78 as 035906 (5pp50)

AGEN ★ D16 83157B/46 ★ J5 4128-4
High strength microcapsule contg. enzyme, hormone, medicine etc. - by dissolving photocrosslinkable polymer, adding active component and stirring, adding surfactant and irradiating

AGENCY OF IND SCI TECH 29.03.78-JA-037038
A97 B07 J04 (05.10.79) B01j-13/02 C07g-07/02
The microcapsules are prepd. by dissolving a photocrosslinking polymer, e.g. partial cinnamoyl ester, cinnamylidene, acetic acid ester or α -cyanocinnamylidene acetic acid ester of PVA, amylose, starch or of alginic acid etc. in an organic solvent in amt. of 0.01-1 (0.05-0.1) wt. % adding aq. soln. of core substance to be capsulated, e.g. enzyme, hormones and medicines, etc. to the polymer soln. followed by vigorous stirring so as to cause emulsification, so the polymer dissolved in the organic solvent is easily deposited on an organic aq. interface due to balance between hydrophilic and hydrophobic properties, adding aq. soln. of surfactant in amt. of 20-100 pts. wt. of pt. wt. of the organic solvent so as to cause emulsification and to deposit the polymer evenly on the interface generated, and irradiating light on the emulsified liquor obtd. to carry-out crosslinking of the polymer via its photofunctional radicals.

Microcapsules having excellent mechanical strength and the granular size of 10 to a few hundred μ m are easily obtd. without damaging physical and chemical activity of core substance. 29.3.78 as 037038 (4pp34)

TOAG ★ D16 83159B/46 ★ J5 4128-48
Excavating process using stabilising liq. - comprising an aq. soln. of xanthan gum, i.e. water-soluble heteropolysaccharide obtd. by modifying carbohydrate with *Xanthomonas* bacteria

TOA GOSSEI CHEM IND LTD 29.03.78-JA-035563
A81 (05.10.79) C09k-07/02
The improvement comprising using, as stabilising liq., a soln. prepd. by dissolving 0.01-0.5 pts. wt. xanthan gum in 100 pts. wt. water, and replacing excavated mud in the innerpart of the hole with concrete to form driven stakes a continuous underground wall so that collapse of the inner wall of the excavated hole is prevented.

The stabilising liq. is not deteriorated by the action of the cement, so that the stabilising liq. can be recirculated and reused. The process can be used for excavation of sea water-contg. soil. 29.3.78 as 035563 (6pp34)

TOAG ★ D16 83160B/46 ★ J5 4128-48
Compsn. for ground-excavating stabilising liquor - comprising xanthan gum obtd. by modifying carbohydrate with *Xanthomonas* bacteria, fine siliceous powder and short fibres

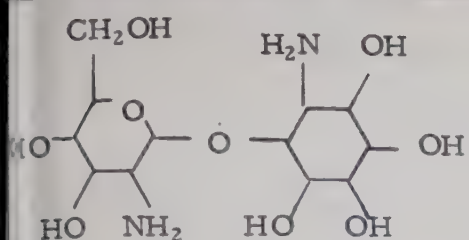
TOA GOSSEI CHEM IND LTD 29.03.78-JA-035564
A81 Q42 (05.10.79) C09k-07/02 E02d-17/04
Compsn. comprises xanthan gum, i.e. water-soluble heteropolysaccharide, obtd. by modifying carbohydrate with bacteria of *Xanthomonas* gp., finely powdered siliceous matter having a granular size of < 10 (pref. < 1) μ , e.g. clays, white carbon and anhydrous or hydrated silica, etc. and/or short fibre having a length of < 2 (pref. < 100) μ , e.g. rock wool, pulp, glass wool, polypropylene fibre, cotton and wool etc. The amts. of the finely powdered siliceous matter and the short fibre are 1-50 (5-30) pts. wt. resp. against 1 pt. wt. of xanthan gum.

Compsn. is used for ground-excavating stabilising liquor which can prevent collapse of excavated ground and prevent worsening of stabilising liquor by the action of cement, further exhibiting more easily discarding treatment of excavated mud than that in prior art where bentonite is used. 29.3.78 as 035564 (6pp34)

KYOW ★ D16 83190B/46 ★ J5 4128-5
Cpd. FU-10, prepd. by cultivating *Micromonospora* strain - is used as intermediate for amino-glycoside antibiotics, e.g. fortimicin and D

KYOWA HAKKO KOGYO KK 24.03.78-JA-033975
B03 (05.10.79) A61k-31/71 C07h-15/22 C12d-09/14
A novel cpd. FU-10 (I) and its non-toxic acid addition salt are new.

(I) is useful as a sy



thetic intermediate for aminoglycoside antibiotics such as fortimicins A and D.

Prodn. of (I) comprises cultivating a FU-10 from the cultured broth. Examples of the microorganisms are

Micromonospora olivoasterospora MK-70 (ATCC 21819) and *Micromonospora olivoasterospora* Mm 744 (ATCC 2009). The cultivation is effected in a culture medium comprising a carbon source, a nitrogen source and an inorganic salt at 25-40°C at a neutral pH for 2-5 days. 29.3.78 as 033975 (7pp33)

TOYOBO KK ★ D16 83226B/46 ★ J5 4128-793
Determn. of alpha-keto:glutaric acid - by treating with hydroxyglutaric acid dehydrogenase and reduced nicotinamide adenine dinucleotide

TOYOBO KK 29.03.78-JA-037047
B04 J04 R16 (05.10.79) G01n-31/14 G01n-33
Determination of α-ketoglutaric acid comprises treating ketoglutaric acid with hydroxyglutaric acid dehydrogenase and reduced type nicotinamide adenine dinucleotide (NADH₂), and measuring the amt. of resulting D-α-hydroxyglutaric acid or that of consumed NADH₂ to determine α-ketoglutaric acid.

α-Ketoglutaric acid coexisting together with various ads. in living body can be enzymatically, precisely and simply determined by using hydroxyglutaric acid dehydrogenase which reacts characteristically with α-ketoglutaric acid.

An example of the enzyme, hydroxyglutaric acid dehydrogenase, is obtd. by culturing *Peptococcus aerogenes* ATCC 14963, which reacts, via. NADH₂ as coenzyme, with α-ketoglutaric acid to reduce it into D-α-hydroxyglutaric acid. The loss of NADH₂ is measured by a decrease in the absorbance at 340 nm. 29.3.78 as 037047 (5pp50)

TOYOBO KK ★ D16 83227B/46 ★ J5 4128-794
Determn. of activity of glutamic oxalacetic trans amylase - by treating sample with L-glutamic acid, oxalacetic acid, hydroxyglutaric acid dehydrogenase and NADH

TOYOBO KK 29.03.78-JA-037048
B04 J04 R16 (05.10.79) G01n-31/22 G01n-33/16
Determn. of the activity of glutamic oxalacetic transamylase (GOT) comprises treating sample with L-glutamic acid, oxaloacetic acid, hydroxyglutaric acid dehydrogenase and reduced type nicotinamide adenine dinucleotide (NADH₂), and determining the activity of GOT by measuring the amt. of resulting D-α-hydroxyglutaric acid or that of consumed NADH₂.

Activity of GOT can be precisely determined by using hydroxyglutaric acid dehydrogenase which exhibits very high substrate specificity to α-ketoglutaric acid and utilises NADH₂ along as coenzyme. By using pyruvic acid in place of oxaloacetic acid, GPT (glutamic pyruvic transamylase) can be also determined in the same way as for GOT; hence the activity of GOT and GPT can be determined by using one kind of enzyme and merely changing part of substrate.

Hydroxyglutaric acid dehydrogenase is obtd. by culturing e.g. *Peptococcus aerogenes* ATCC 14963. The activity of the enzyme, GOT, can be measured using the decreasing rate of the absorbance at 340 nm based on the consumption of NADH₂. 29.3.78 as 037048 (6pp50)

TOYOBO KK ★ D16 83228B/46 ★ J5 4128-795
Determn. of activity of glutamic pyruvic trans-amylase - by treating sample with L-glutamic acid, pyruvic acid, hydroxyglutaric acid dehydrogenase and reduced nicotinamide adenine dinucleotide

TOYOBO KK 29.03.78-JA-037049
B04 J04 R16 (05.10.79) G01n-31/22 G01n-33/16
Determn. of the activity of glutamic pyruvic transamylase (GPT) comprises treating sample with L-glutamic acid, pyruvic acid, hydroxyglutaric acid dehydrogenase and reduced type nicotinamide adenine dinucleotide (NADH₂), and determining the activity of GPT by measuring the amt. of resulting D-α-hydroxyglutaric acid or that of consumed NADH₂.

Activity of GPT can be precisely determined by using hydroxyglutaric acid dehydrogenase which exhibits very high substrate specificity to α-ketoglutaric acid and utilises NADH₂ alone as coenzyme. Also the activity of GOT (glutamic oxalacetic transamylase) can be determined by using oxaloacetic acid in place of pyruvic acid by the method.

An example of the enzyme, hydroxyglutaric acid dehydrogenase, is obtd. by culturing e.g. *Peptococcus aerogenes* ATCC 14963. The amt. of NADH₂ is determined from the fall in absorbance at 340 nm. 29.3.78 as 037049 (6pp50)

SANWA KAGAKU KENKYUSHO (KASHI) ★ D16 83344B/46 ★ J5 4129-117
Antitumour compsn. contg. dead fungal bodies - comprising *Pneumococcus*, haemolytic *Streptococcus*, *Staphylococcus*, *Catarrhneisseria*, *Tetracoccus*, *Pseudomonas aeruginosa*, etc.

SANWA KAGAKU KENKYUSHO (KASHI) 31.03.78-JA-036662
B04 (06.10.79) A61k-35/74 A61k-39/02
Antitumour agent contains, as active ingredient, a mixt. of dead fungus bodies of (a) *Pneumococcus*, (b) haemolytic *Streptococcus*, (c) *Staphylococcus*, (d) *catarrhneisseria*, (e) *Tetracoccus*, (f) *Pseudomonas aeruginosa*, (g) *Bacillus pneumoniae* and (h) *influenza bacillus*.

Specifically, an injectable antitumour agent contains dead fungus bodies of 50 x 10⁶ cells of (a), 40 x 10⁶ cells of (b), 500 x 10⁶ cells of (c), 60 x 10⁶ cells of (d), 20 x 10⁶ cells of (e), 250 x 10⁶ cells of (f), 40 x 10⁶ cells of (g), 40 x 10⁶ cells of (h) and 4 mg of phenol as antiseptic per ml of the soln. 31.3.78 as 036662 (4pp140)

KAKE ★ D16 83346B/46 ★ J5 4129-119
Miticide effective against e.g. citrus red mite and animal parasites - contains Lysocellin, its salts or ester as active component, obtd. from *Streptomyces* microorganism

KAKEN CHEM KK 30.03.78-JA-035973
A97 C03 (06.10.79) A01n-09
Miticide contains as active component Lysocellin (I), its salt or its ester. (I) is effective against mites which are parasitic on plants, e.g., citrus red mite, two spotted spider mite. It has imago-killing, egg-killing effects and the lethal effect to larvae and young mite due to the inhibition of ecdysis. When the active cpd. is used at relatively low concn., it shows sterile effect. Mites controlled include plant parasitic mites (e.g., citrus red mite, European red mite, two spotted spider mite) and animal parasitic mites.

(I) is the antibiotic sepd. from the culture of microorganism *Streptomyces*. The miticide is used in the form of emulsion, suspension, aq. soln., wettable powder, powder, organic solvent soln., aerosol, fumigant, etc. Solid carriers include, e.g., clay, talc, gypsum, CaCO₃, diatomaceous earth, zeolite, bentonite, white carbon, silicic acid anhydride, wood flour, wheat flour, soy bean flour, starch, alkyl resin, PVC, ester gum, urea, etc. 30.3.78 as 035973 (3pp108)

NIPT ★ D16 83360B/46 ★ J5 4129-181
Bread yeast prepn. - using medium mfd. by adding nutrients to sugar soln. obtd. by mixing raw sugar and cane sugar

NIPPON TENSAI SEITO KK 31.10.77-JA-129753
(D11) (06.10.79) C12c-11/08
Bread yeast is prepd. using raw sugar as major carbon source, by (a) combining nutrients in a sugar soln. obtd. by mixing raw sugar and cane sugar molasses with the proportion of fermentable sugar 90-70:10-30; (b) combining steffen waste concentrate in amt. corresponding to 2-5 w/w% of fermentable sugar in the mixt.; (c) culturing bread yeast in the culture medium obtd.; and (d) sepg. bread yeast from the cultured medium. Instead of steffen waste concentrate casamino acid, in amt. corresp. to 3-10 w/w% of the fermentable sugar in the mixt. obtd. in (a), may be used.

Waste water is not heavily contaminated in BOD and colour value c.f. when cane molasses are used as major C source. By increasing the osmotic pressure of the culture medium at the stationary phase the sugar resistance of bread yeast obtd. can be improved and the object can be attained by combining sodium chloride 0.5-2.0 w/w% in the culture medium at the stationary phase of the culture. 31.10.77 as 129753 (5pp5)

MITN ★ D16 83361B/46 ★ J5 4129-182
 Bacterial culture of *Microcylus aquaticus* - using methanol as carbon source, gives prod. of high protein content
 MITSUBISHI GAS CHEM IND 27.03.78-JA-035049
 (D13) (06.10.79) A23k-01 C12k-03
 Prepn. of bacterial bodies comprises cultivating a methanol-assimilable bacterium belonging to *Microcylus aquaticus* (e.g. DSM 334, ATCC 27068, ATCC 27069, ATCC 2539 and NCIB 9271) in a medium contg. methanol as main carbon source.

Bacterial body of high protein content can be obtd. at a high yield. Since methanol is water-soluble, cultivation is easy and clean bodies can be obtd. by simple working-up treatments.

A suitable methanol concn. in the medium is ≤ 6 wt. %, partic. ≤ 3 wt. %. The cultivation is aerobically conducted at 20-40 °C, pref. 25-37 °C, and at a pH of 5-9, pref. 6-8. The dissolved oxygen concn. of the medium is pref. controlled at 0.5-20 ppm. In case where an ammonium salt is used as nitrogen source, the pH value of the culture decreases during the cultivation so that an alkali is added for pH maintenance. 27.3.78 as 035049 (3pp140)

NIRA ★ D16 83362B/46 ★ J5 4129-185
 Preservation of fixed urokinase or streptokinase enzyme - by storing in inert gaseous atmos. e.g. nitrogen, helium or argon, or in vacuum

UNITIKA KK 30.03.78-JA-037672

A96 B04 (06.10.79) C07g-07/02 C12d-13/10

Preservation of fixed urokinase or streptokinase comprises storing in a gaseous atmos. (e.g. N₂, He or Ar) or in vacuum. When compared with preservation in water, reduction of activity is extremely minimised. No special facilities or complicated operations are needed.

In an example, a nylon 6 tube (inner dia. 3 mm, outer dia. 5 mm) was sliced to thickness of 2 mm. The pieces were thorough stirred in a 3N-HCl aq. soln. at 30 °C and then washed with water; thoroughly stirred in a methanol soln. contg. 2 wt. % of polyethyleneimine and 2 wt. % dicyclohexylcarbodiimide at room temp. followed by drying. The prod. was thoroughly stirred in an acetone soln. contg. 4 wt. % of a maleic anhydride-methyl vinyl ether copolymer and 0.8 wt. % of anhydrous nitrophthalic acid at room temp. followed by washing with acetone and drying; and in a physiological salt aq. soln. of urokinase (600 unit/ml) at 7 °C for 24 hrs. The thus obtd. fixed urokinase was wiped with filter paper, placed in a glass bottle and stored at 7 °C or 25 °C for 3 months. The % maintenance of activity was 103% at 7 °C and 94% at 25 °C. 30.3.78 as 037672 (3pp140)

KYOW ★ D16 83363B/46 ★ J5 4129-187
 Choline oxidase prodn. - by cultivation of *Brevibacterium album* or *cerinum* microorganisms

KYOWA HAKKO KOGYO KK 29.03.78-JA-035349

B04 (06.10.79) C12d-13/10

Prodn. of choline oxidase comprises incubating choline oxidase producing *Brevibacterium* microorganisms (e.g. *Brevibacterium album* KY-4319 (NRLL B=11,046, ATCC No. 15,111), *Brevibacterium cerinum* KY-4320 (NRRL B=11,047, ATCC No. 15,112), in nutrient culture medium.

Choline oxidase is useful for quantitative analysis of choline.

In an example, a platinum loop of *Brevibacterium album* KY-4319 was inoculated in 10 ml of culture medium (pH = 7.2) of 2 g/kl choline chloride, 0.5 g/dl corn steep liquor, 0.5 g/dl yeast extract, 0.5 g/dl Na glutamate, 0.1 g/dl K₂HPO₄ and 0.05 g/dl MgSO₄·7H₂O and incubation was continued at 30 °C. for 48 hrs. with shaking to form a seed culture. The seed culture was inoculated in 2 l of the culture medium and incubation was further continued at 30 °C for 48 hrs. with shaking. After incubation, all of the incubated culture medium was added to 3 l of the culture medium and incubation was continued at 30 °C for 24 hrs. with shaking at 500 rpm whilst aerating at 1 l/l (culture medium). After incubation, 0.52 U/ml of choline oxidase was formed in the culture medium. 29.3.78 as 035349 (9pp68)

TOYM ★ D16 83364B/46 ★ J5 4129
 Hydroxy-glutaric acid dehydrogenase - prepd. by culturing fungi of *Peptococcus* genus

TOYOBO KK 29.03.78-JA-037046

B04 E17 (B05) (06.10.79) C07g-07/02 C12d-13/10

Novel hydroxyglutaric acid dehydrogenase is claimed. catalyses oxidn. of D- α -hydroxyglutaric acid via nicotinamide adenine dinucleotide to give α -ketoglutaric acid and reversely α -ketoglutaric acid is reduced via reduced form of nicotinamide adenine dinucleotide to yield D- α -hydroxyglutaric acid. The enzyme is highly specific to these reactions.

Prodn. of the hydroxyglutaric acid dehydrogenase comprises culturing novel fungi of *Peptococcus* genus in culture medium. Enzyme may be used in determin. of α -ketoglutaric acid and D- α -hydroxyglutaric acid and is useful in various analysis for medical and physiological fields to give high reliance of data. As fungi may be cited, e.g. *Peptococcus aerogenes* ATCC 14963 strain. 29.3.78 as 037046 (11pp69)

FUJI- ★ D16 83365B/46 ★ J5 4129
 Alcohol-ferricytochrome oxidn.-redn. enzyme prepn. - by culturing suitable microbe, e.g. *acetobacter aceti* IFO 3284

FUJI ZOKI SEIYAKU 31.03.78-JA-037828

B04 J04 (06.10.79) C07g-07/02 C12d-13/10

Method comprises culturing a microbe, which can produce alcohol:ferricytochrome oxidation-reduction enzyme (AF-redoxase), in a culture medium and recovering AF-redoxase from the cultured prod.

The AF-redoxase is a novel enzyme, which does not require NAD or NADP as the electron acceptor, requires oxidation-reduction pigment as the electron acceptor, has optimum pH in acidic range, shows good affinity to alcohol and is not inhibited by formed aldehyde. Further it can be measured in the visible zone and it can be used for the enzymo-assay of alcohols.

The microbe may be *Acetobacter aceti* IFO 3284 or *Gluconobacter suboxydans* IFO 12528. The culture is at 28-32 °C at pH 6-7 for 1-3 days by submerged culture. AF-redoxase is accumulated intracellularly partic. in the part of cell membrane and AF-redoxase can be separated by breaking the bacterial body and centrifuging at 27000 rpm for 90 mins. using a super centrifuge. The sepd. fraction contains most of AF-redoxase and AF-redoxase is solubilised with a surfactant. The solubilised AF-redoxase can be further refined by conventional means. 31.3.78 as 037828 (9pp5)

MEIJ ★ D16 83501B/46 ★ J5 4130
 Antibiotic BN-2229-F substance - prepd. by culturing suitable fungi of *Pseudomonas* genus

MEIJI SEIKA KAISHA 03.04.78-JA-038113

B04 (09.10.79) A21d-09/20 A61k-35/74 C07g-11

Novel antibiotic BN-229-F substance has the appearance of red needles of m.pt. 156 °C. It analyses for C 48.19; H 4.63; N, 8.15; Fe, 9.78 (%); O, 29.25 (%) (difference). Mol. wt. is 518 (high resolving power MS analysis) and molecular formula is C₂₁H₂₄N₃O₉Fe. Characteristic UV and IR spectra are given. The substance has antibacterial activity.

Prodn. of the antibiotic BN-229-F substance comprises culturing a BN-229-F substance-producing fungi of *Pseudomonas* genus and taking out BN-229-F substance from the cultured mixt. The fungi may be e.g. *Pseudomonas seba* BN-229 strain deposited as FERM-4421. 3.4.78 as 03 (6pp69)

NIHZ ★ D16 83502B/46 ★ J5 4130
 Material having specified aminoacid compsn. - useful as gastric juice secretion-inhibiting agent

NIPPON ZOKI PHARM KK 31.03.78-JA-038715

B04 (09.10.79) A61k-37/02 C07g-17

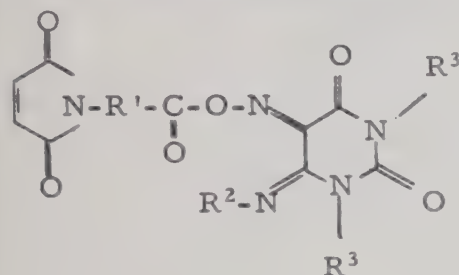
Substance (I) having an aminoacid compsn.: Asp (9 residues/mol), Thr (5), Ser (6), Glu (15), Pro (4), Gly (9), Ala (9), Cys/2 (1), Val (6), Ile (4), Leu (11), Tyr (3), Phe (1), Lys (4), His (2), Arg (3), Trp (1), Hse (1) is new. The substance has a mol. wt. of 9700 and UV (pH 7.0-8.0) $\lambda_{\max}$ = 278 nm.

Process for producing gastric juice secretion-inhibiting substance comprises treating vaccinia virus-infected

ous animal tissue with acetone, extracting the tissue with water or buffer soln., subjecting the mixt. to ammonium sulphate fractionation and then acetone fractionation to give physiologically active protein and then treating the protein with bromide cyanide in formic acid. Gastric juice secretion-inhibiting agent contains, as effective component, the substance (I) and is used to treat ulcers. The agent is pref. administered orally. 31.3.78 as 038715 (6pp69)

ASAHI ★ D16 83522B/46 ★ J5 4130-584
2,6-Di:oxo-hexa:hydro-1,3-di:subst.-pyrimidine derivs. - useful as bonding agents of sulphhydryl or primary amino gps. of enzymes, fungi bodies, microbes etc.

ASAHI CHEMICAL IND KK 31.03.78-JA-037729
B03 C02 (09.10.79) C07d-207 C07d-239 C07d-403/12
2,6-Dioxo-5-(maleimidoacyloxy)imino-4-alkylimino-1,3-disubstd. hexahydropyrimidines of formula (I) are new,



(I)

(where R¹ is divalent aliphatic or alicyclic hydrocarbon residue or divalent aromatic ring residue; R² is alkyl; R³ is alkyl or aryl gp.).

(I) may bond to substance having

SH gp. on primary amino gp. on moderate condition in good yield to give various physiologically useful substances (I) are useful as bonding agent in field of biochemistry or medicines, e.g. in bonding of enzyme (or fungi body) with supporting substance in enzyme-fixing, bonding ligand with carrier in affinity chromatography, bonding of enzyme with antibody in enzyme antibody process or bonding of enzyme with antigen substance (or antibody) in enzyme immunity determination method. It may be used as intermediate for the synthesis of agricultural chemicals having antibacterial effect by means of easy reactivity of maleimido gp. with SH gp. in protein of microbes. 31.3.78 as 037729 (10pp69)

AGEN ★ D16 83596B/46 ★ J7 9033-595
Oil absorbent prodn. esp. for oil spillages - by removing alkali-soluble substances from yeast and carboxymethylating the resulting yeast

AGENCY OF IND SCI TECH (KANF) 02.05.75-JA-053440
H03 Q42 (22.10.79) C02b-09/02 E02b-15/04
The method comprises removing alkali-soluble substance from yeast, and carboxymethylating the yeast. The material contains no soluble substance and has excellent ability to collect spilled oil into oil balls. The yeast used can be *Saccharomyces*, *Candida*, *Torula*, *Pichia*, etc. 2.5.75 as 053440 C02b-9/02, E02b-15/04 (22.10.79) AGENCY OF IND SCI TECH; KANEGAFUCHI CHEM KK (3pp83)
(J5 1132650)

IIZU/ D16 23566X/13 = J7 9033-994
Plant growth promoter - from culture medium for cultivation of edible mushrooms

IIZUKA C 12.07.74-JA-079069
C03 (24.10.79) *J51018-670 A01n-05 A01n-09 A01n-21 A61k-35/66 C05f-11 C21d-13/10

Mycelium of edible mushroom e.g. *Cortinellus shiitake* belonging to Basidiomycetes is inoculated on a culture medium e.g. sawdust:rice bran =3:1, bagasse-rice bran =3:1, beet lees:rice bran =12:1 and hypha is cultivated in a cultivation room. The culture medium on which the mycelium has spread or the culture medium discharged after takeup of fruit body is broken out and heated with water in order to promote autodigestion of mycelium in the medium.

After metabolite of mycelium has been dissolved out in water, the suspension obtd. is filtered through a filter bag made of flannel under increased pressure. The filtrate is made bacteria free by filtering through a membrane filter. The extract is diluted to 300-500 times the volume and sprayed on the surface of leaves or mixed into soil. The promoter is esp. useful in the cultivation of soybean. In an example the agent resulted in the increase in the yield of 2,6 times higher than when no promoter was used. 12.7.74 as 079069 A01n-5/00, C05f-11/00, A01n-21/00,

C21d-13/10, A61k-35/66 (24.10.79) IIZUKA, C (13pp)
(J5 1018670)

STAL D16 12826R/08 = J7 9034-059
Enzymic saccharification of starch hydrolysate
STALEY A E MFG CO 26.08.68-US-755094
(24.10.79) *BE-737-923

MITU D16 27140X/15 = J7 9034-076
L-amino-chloro-pentenoic acid prepn - by organic solvent ext. of *amanita pseudoporphyria* fungal culture
MITSUBISHI CHEM IND KK 20.08.74-JA-095404
B05 E16 (24.10.79) *J51022-883 C07c-101/04 C12d-13 + A61k-31/19

Novel L-2-amino-4-chloro-4-pentenoic acid is extd. with a solvent from an L-2-amino-4-chloro-4-pentenoic acid producing fungus belonging to genus *Amanita* using as a solvent for extn. water, a lower alcohol, e.g. methanol and ethanol, a ketone, e.g. acetone, methyl ethyl ketone etc., a lower fatty acid, e.g. acetic acid or a mixt. of solvents (pref. lower alcohol).

The extn. is carried out at room temp. or opt. with heating using a continuous operation. 20.8.74 as 095404 C12d-13/00, A61k-31/195, C07c-101/04 (24.10.79)
MITSUBISHI CHEM IND KK (3pp) (J5 1022883)

MITU D16 27139X/15 = J7 9034-077
Amino-methylpimelic acid prodn - by solvent extraction of acid producing fungal culture

MITSUBISHI CHEM IND KK 20.08.74-JA-095403
B05 E16 (24.10.79) *J51022-882 C07c-101/20 C12d-13 + A61k-31/19

Novel physiologically active L-2-amino-4-methylpimelic acid is extd. with organic solvent from an L-2-amino-4-methylpimelic acid producing *Lactarius* fungus using water on a lower alcohol (methanol, ethanol etc.), a ketone (methyl ethyl ketone), a lower fatty acid (acetic acid) or a mixt. solvent at room temps. with heating. 20.8.74 as 095403 C12d-13/00, A61r-31/195, C07c-101/20 (24.10.79)
MITSUBISHI CHEM IND KK (3pp) (J5 1022882)

MITU D16 27143X/15 = J7 9034-078
Novel amino acids prodn - by solvent extraction of fungal *Tricholomopsis rutilans* strain

MITSUBISHI CHEM IND KK 20.08.74-JA-095402
B03 E13 (24.10.79) *J51022-886 C07d-307/34 C12d-13 + A61k-31/34

Novel amino acid having specific physiological activity extd. from Basidiomycete belonging to genus *Tricholomopsis*, e.g. *Tricholomopsis rutilans* (Fr.) Sing. An acidic amino acid TX₃ is extd. with a solvent from an acidic amino acid TX₃-producing fungus belonging to genus *Tricholomopsis*.

Solvent for extn. are aq. solvents, e.g. water, a lower alcohol such as methanol or ethanol, a ketone such as acetone or methyl ethyl ketone, a lower fatty acid such as acetic acid or a mixt. of solvents. The extn. is carried out at room temp., or with heating to complete extn., the operation is carried out repeatedly or continuously. 20.8.74 as 095402 C12d-13/00; A61k-31/34, C07d-307/34
(24.10.79) MITSUBISHI CHEM IND KK (2pp) (J5 1022886)

MOSU ★ D16 83665B/46 ★ SU -644-833
L-ascorbic acid microbiological synthesis - using *Escherichia coli* 85 microbial strain producer for high yield

MOSCOW LOMONOSOV UNIV. 26.11.76-SU-423976
B05 E16 (30.01.79) C12d-13/06 C12k-01/02

New strain *Escherichia coli* 85 produces in its cells highly active enzyme aspartase, producing L-aspartic acid. It can be grown on various media, pref. meat-peptone-agar or -broth.

It rapidly produces (within 6 hr) pure isomer L-aspartic acid; (α)_D²⁰ = +25.5°. There is no racemic activity. The yield of L-aspartic acid is higher than that obtainable with other strains.

Kondrateva, E. N., Egorov, N. S., Berezin, I. V., et al
Bul. 4/30.1.79.26.11.76.as423976(3pp70).

UFIS= ★ D16 83721B/46 ★SU-649-380
Vaccine for preventing or curing erysipelas infection of fish - contg. specified virus strain culture, formalin, aluminium hydroxide, glycerol and salt soln.

UKR FISHERIES RES 09.06.77-SU-496750

B04 C03 P14 (26.03.79) A01k-61 C12k-05

Vaccine for preventing or curing the red infection of fish contains a virus culture and formalin. The therapeutic effect is enhanced by addn. of $Al(OH)_3$, glycerol and Henx's salt soln.

The virus culture contains rhabdo-virus GT-82.

The compsn. contains(in wt. %) the rhabdo-virus culture 10-50, $Al(OH)_3$, 10-25 formalin 0.3-0.5, glycerol 10-25; sterile salt soln. is the balance.

Osadchaya, E. F., Bul. 8/28.2.79.9.6.77.as496750(2pp-70).

AGRI= ★ D16 83722B/46 ★SU-649-387
Strain Verticillium Dahliae kleb 214, causing wilting of cotton plants - used to produce infection background for selection of wilting-resistant cotton plants

AGRIC MICROBIOLOGY (PLAN=) 21.07.77-SU-509660

C03 (26.03.79) A01n-15 C12k-01

The strain is kept for the prodn. of the prepn. 'Vertox' (RTM) by the deep cultivation method. Vertox is used as an artificial infection background for the selection of wilting-resistant cotton plants.

The introduction of Vertox into the soil(30-40kg/ha), before the sowing of cotton plants, causes 73-78% wilting. Sidorova, S. F., Khotyanovich, A. V., Ilina, R. M., et al Bul. 8/28.2.79.21.7.77.as509660(3pp70).

GENE= ★ D16 83739B/46 ★SU-649-436
Gamma-globulin prodn. for medical and veterinary use - by sepn. from blood plasma by sorption on amino silochrome and desorption with acetate buffer

GENETICS MICROORGAN 01.03.77-SU-457507

B04 (28.02.79) A61k-35/06 C07g-07/02

γ -Globulin, useful in veterinary and medical practice for prophylaxis, diagnosis and treatment is prepd. from blood plasma or serum by adsorption on amino-silochrome ion exchanger pref. at pH 7.0-8.0 with subsequent desorption with salt buffer.

The prod. purity is increased if the desorption is conducted with acetate buffer at pH 4.0-5.0(pref. 0.1 molar acetate buffer at pH 4.5) in static conditions with sorbent sepn. by decantation. The eluate is treated with sodium or ammonium sulphate to ppte. γ -globulin fraction which is then additionally purified. The prod. is dialysed to remove residual salts and freeze-dried to give final prod. of high purity using simplified procedure. Human blood serum or animal blood plasma can be used as starting materials. Telnova, M. A., Kotova, T. S., Belyaev, S. V., et al Bul. 8/28.2.79.1.3.77.as457507(2pp938).

GROZ= ★ D16 83782B/46 ★SU-649-683
Bleaching of clay suspensions for paper industry - by adding sulphuric acid, Thiobacillus ferrooxidans culture and ammonium phosphate, and blowing with air at specified rate

GROZNYI PETRO INST 08.06.77-SU-493523

E31 F09 G01 (15.05.79) C04b-33/04

Iron impurities are removed from clay more efficiently when the latter is suspended in water, $H_2SO_4(I)$ added to pH 2-2.5, Thiobacillus ferrooxidans strain BKMB-458 grown in the Silberman Lungren 9K medium (II) added in amts. of 10-20ml/l. of suspension and followed by 0.3-0.4g of ammonium phosphate(III)/litre of suspension. Next, air is blown through the mixture at the rate of 1-1.5 vols/hour. vol of suspension for 4-5 days at 24-28°C. This converts almost all Fe cpds. into soluble form. The clay finds use in paper industry.

Arakelyan, R. N., Dadayan, V. M., Burykina, I. I., Bul. 8/28.2.79.8.6.77.as493523(3pp124).

BMIC= ★ D16 83831B/46 ★SU-650-644
Yeast cells prodn. appts. - has fan directing gas flow from fermenter through cylindrical mixer filled with liquid, and separating filter

BELO BELGIPROBIOSIN (BEKI) 10.01.77-SU-446735

(08.03.79) B01d-45 C12d-01/10

The separator includes a container open at the top, filled

with liquid, and contains at least one hollow floating element, a gas-supply pipe and fan, the exit end of which is disposed in the cavity of the float.

In order to create a liquid suspension, and a mixing chamber for the impure gas and liquid suspension and a filter forming the side wall of the chamber and serving to separate the liquid from the gas.

The degree of purificn. of the gas from the yeast is increased by disposing the container inside a cylindrical body which is also open at the top end above the container. The pipes to feed in the contaminated gas are connected tangentially. The mixing chamber is cylindrical, the fan and gas-inlet pipe being disposed in the mixing chamber. Korotkevich, V. A., Sokolovskii, N. T., Bortnikov, I. I., Bul. 9/5.3.79.10.1.77.as446735(2pp29).

FERM= ★ D16 83901B/46 ★SU-651-0
Continuous microbial culture growing - includes periodical transfer of medium between fermenters and proportional regulation of nutrient flow to improve growth rate

FERMENT PROD RES 21.09.77-SU-528860

(07.03.79) C12b-01/08

The microbiol. culture growth is accelerated and infection is prevented by rejuvenating microbial cells with simultaneous inhibition of activity of excreted prods. of metabolism. This is due to the transfer of culture medium from the first main fermenter to the second one, and from the latter to the next one after 12-14 h when the microorganisms reach the exponential phase of physiological development. The ratio of inflow into the inoculum is 1:9, and the rate of yeast growth is maintained at 0.3-0.5h⁻¹. Yarovenko, Nakhmanovich, B. M., Yarovenko, V. V., et al Bul. 9/5.3.79.21.9.77.as528860(3pp89).

KOLO/ ★ D16 83902B/46 ★SU-651-0
Mechanical foam breaker - has bladed float with spherical support using pins clear in disc perforations

KOLOSHA S N 23.03.77-SU-468165

(07.03.79) B01d-19/02 C12b-01/18

The effectiveness of foam breaking in microbiological or chemical units is enhanced by generating cavitation in the fluid.

The spherical support has studs set with a clearance in perforations of the disc. The shaft carries a conical float attached to the support, and exhibiting blades, and raised by buoyancy when the fluid fills up the tank.

The rise of the float places the disc on the surface of the fluid, and the speed of shaft causes intensive foam forming with proportional pressure exerted by the blades. The disc is then tilted by an amount depending on the clearance of the studs, and thus ensures the break-up of the foam.

Kalosh, S. N., Pimenov, B. I., Bul. 9/5.3.79.23.3.77.as468165(4pp89).

KIFO= ★ D16 83903B/46 ★SU-651-0
Hops bitter substance extractor - has hollow shaft with conical disc between frusto/conical partitions and tangent to nozzles

KIEV FOOD TECH INST 26.09.77-SU-526936

(05.03.79) B01d-11/04 C12c-09/02

The extraction of bitters from hops is accelerated and the usage of extracts leading to increased colloidal stability of beer is improved by the use of the hollow extractor shaft, fitted in the head and connected to the pulsator.

The ring partitions are in the form of truncated cones with apexes down, and the conical discs of the shaft hold nozzles set parallel to the surface of the cones.

The clearance between the cones is adjustable by moving the hollow shaft, and this determines the duration of treatment for the hops in the extractor. The extract is removed at the bottom, and the nozzles tangent to the shaft ensure intensive stirring of the medium.

Polyakov, N. F., Orlov, L. A., Peresunko, S. R., et al Bul. 9/5.3.79.26.9.77.as526936(2pp89).

LEEP= ★ D16 83904B/46 ★SU-651-0
Portable microbial culture incubator - has catalytic heater in center of bottom and adjustable side holes for air flow

LENGD EPID MICROBIO (ASCH=) 20.09.77-SU-529386

(07.03.79) C12k-01 10

aintenance of long-term stable temp. regime and improved efficiency of microbial e.g. meningococcus culture in the stable incubator are ensured by the catalytic heater, which promotes the sepn. of deep oxidn. prod. in the course of microbial growth.

The heater is attached to the centre of the bottom the es of which have holes for air passage.

The air passages are controlled by adjustable shutters, the fuel vapour fed to the preheated catalyst is oxidised CO₂ and H₂O coupled with heat evolution. The latter forms up the housing and is uniformly distributed in the incubator together with the reaction prods.

Probeichikov, V. M., Ivanov, A. F., Kadenatsi, B. M., et al 9/5. 3. 79. 20. 9. 77. as529386(2pp89).

★ D16 84026B/46 ★US 4173-514
mannitol-rich aq. mannitol-sorbitol solns. - prepd. by epimerisation aq. glucose solns., isomerisation, then hydrogenation
MICI AMERICAS INC 02.06.77-US-802653
E17 (D17) (06.11.79) C12d-13/02

Mannitol (I)-rich solns. of (I) and sorbitol (II) are prepd. from glucose (III) as follows: (a) an acidic aq. soln. of (I) is epimerised with an Mo⁶⁺ catalyst at ≤ 100°C; (b) the resulting aq. soln. of a mixt. of (III) and mannose (IV) is isomerized with a glucose isomerase enzyme (so that a portion of (III) is isomerized) to afford an aq. soln. contg. (II), (IV), and fructose; (c) the aq. mixt. is catalytically hydrogenated to furnish an aq. soln. of (I) and (II).

Inexpensive method gives high mannitol yields in the (I)-(II) mixt. (>40 % by wt. on dry basis), while only small mts. of volatile by-prods. are formed. 2.6.77 as802653 (pp478)

ECDD ★ D16 84027B/46 ★US 4173-515
growth medium for detecting group D enterococci - contg. inhibitors gram positive and negative bacteria, and ferric ammonium citrate and esculin hydrolysate inhibitors

MCDONNELL DOUGLAS CORP 02.05.77-US-792715 (03.05.76-US-682661)
B04 (06.11.79) C12k-01/10

Growth medium for the detection of Gp. D enterococci in polymicrobial specimens contains: (a) C and N sources, (b) an antibiotic to inhibit the growth of Staph. aureus; (c) an agent to inhibit the growth of Gram negative organisms; and (d) an indicator system consisting of ferric ammonium citrate and esculin hydrolysate. In use a ppte. forms in the medium when Gp. D enterococci are present.

The medium selectively identifies Gp. D enterococci (e.g. Strep faecalis) in urine, etc. and is suitable for use with an automated microbial analyser (US 4,118,280) which can give a test result in 12-18 hr. 2.5.77 as 792715(3pp)

CHEM- D16 06659A/04 =US 4173-516
animal and human tissue cells cultivator - keeping cells in circulating suspension by nutrient gas bubbles

CHEMAP AG 15.07.76-OE-005213
(06.11.79) *DT2722-921 C12b-01/14

Appts. for cultivating animal or human cells highly susceptible to damage from agitation comprises an upright container for nutrient solution and suspended cells and subdivided by a guide into two zones. Oxygen-contg. gas is introduced from a chamber below the container through a separating plate and circulates soln. between the zones.

The movement keeps the cells suspended but is sufficient

to gently not to produce damage. The container is divided by a tubular guide elongate vertically within a tube forming one zone. 6.10.77 as 840165(+11.7.77-US-814415) (8pp1358)

SANO D16 06057Y/04 =US 4173-629
Antifungal antibiotic S 31794/F-1 - produced by cultivation of the fungus Acrophialophora limonispora(BE060177)
SANDOZ LTD 08.07.75-CH-008894
B04 C03 (06.11.79) *DT2628-965 A61k-35

Novel antibiotics S 31794/F-1 have the following characteristics: - (i) $\lambda_{\max}$ 194nm E_{1cm}^{1%}=807; (ii) $\lambda_{\max}$ 225nm (shoulder)E_{1cm}^{1%}=132; (iii) $\lambda_{\max}$ 276nm E_{1cm}^{1%}=12.8; (iv) $\lambda_{\max}$ 284nm (shoulder)E_{1cm}^{1%}=10.5; (v) ¹H NMR spectrum in deuterated DMSO (100 MHz, sec⁻²) and ¹³C NMR spectrum in CD₃OD are given; (vi) in amorphous forms, analysis is C 53.9%, H 7.5%, N 10.1% and O 27.3%; (vii) IR spectra are given for amorphous and crystalline forms and (viii) in crystalline form the analysis is C 55.5-56.5%, H 7.5-7.7%, N 10.5-10.8% and O 26.5-27.0%.

Antibiotics are pref. prepd. by aerobic fermentation of Acrophialophora limonispora nov. spec. Dreyfus + Muller. They are antimycotics effective against Candida Albicans. 28.6.78 as 919760(+2.7.76-US-702210) (9pp974)

DUGG/ ★ D16 84086B/46 ★US 4173-656
Rapid ageing of alcoholic liquors - by treatment with particles of charred and red layer wood

DUGGINS RS 23.02.76-US-660720
(06.11.79) C12h-01/12

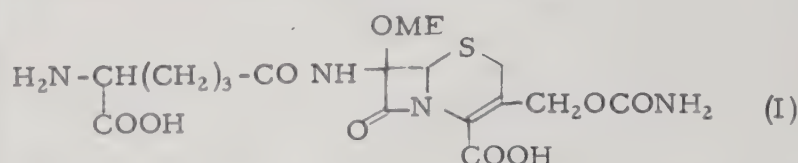
Compsn. for use in aging alcoholic liquors consists of particles of charred wood, and particles of 'red layer' wood which are placed in the liquor to be aged.

Because of the high surface area of the particles the aging process can be carried out in a much shorter time, reducing the amt. of warehouse space required. Expensive charred wooden casks are not needed. 23.2.76 as 660720 (7pp955)

ELIL ★ D16 84108B/46 ★US 4173-702
7-Substd.-valero-amido-7-methoxy-3-cephem-4 carboxylic acid - useful as broad spectrum antibacterial and anthelmintic

ELI LILLY & CO 10.08.70-US-062390 (12.08.69-US-849395)
B02 C02 (06.11.79) C07d-501/20

Cephem of formula (I) and its salts are new:



(I) has broad-spectrum antibacterial activity and anthelmintic activity; it is effective against plant pathogenic bacteria. (I) is a component of the Antibiotic 16886 mixt. described in Der. 28848 V/15. 10.8.70 as 062390 (15pp)

See Also

D13 J5 4129179
D17 SU 649328

D15 GB 1555646

D15 J7 9033596

D17: SUGAR; STARCH

HEIN/ ★ D17 82709B/46 ★DT 2819-135
Continuous sugar centrifuge - with nozzles in ring main spraying diluting liquor on massecuite flying across gap

HEIN L 29.04.78-DT-819135
P41 (08.11.79) B04b-15/12 C13f-01/10

A continuous sugar centrifuge for massecuite has at the base of the divergent bowl an accelerator with a bell. The massecuite has to cross the gap between the bell and the bowl. A diluting liquor is supplied by a pipe to a ring main with nozzles which direct jets of liquor on the mass-

ecuite as it flies across the gap.

This prevents any premature dissolution of sugar, yet reduces the viscosity in time to ensure a clean separation of sugar crystals and molasses. 29.4.78 as 819135(9pp39)

DAAG ★ D17 83615B/46 ★J7 9034-058
Removal of potassium from sugar soln. - by adding magnesium cpd. and phosphoric acid to soln. and sepg. ppte.

DAINIPPON SEITO KK 11.07.69-JA-054570
A91 C04 E34 (24.10.79) C13d-02

Method comprises adding Mg cpd. and phosphoric acid to

sugar soln. and sepg. the ppte. Alternatively the sugar soln. is treated with ion-exchange resin to replace K with NH_4 before the addition of Mg cpd. and phosphoric acid.

Pref. the Mg cpd. and phosphoric acid can be added separately or as magnesium phosphate to sugar soln. and at any stage in the sugar mfg. process. The pH of sugar soln. is adjusted to ca. 7 for ion-exchanged soln. and 8-11 for non-treated soln.

K is removed with high efficiency. Ashes other than K, colloidal substances and non-sugar organic substances are removed at the same time. The precipitate can be used as such for fertiliser. 11. 7. 69 as 054570 C13d- (24. 10. 79) DAI NIPPON SEITO KK (5pp83)

STBR D17 65799T/41 #SU -649-328
Fructose from glucose soln -by passage under specific - conditions through microorganism cells contg bound glucose isomerase
STANDARD BRANDS INC 09.11.70-US-088187 (10.06.72-SU-793523)

E13 (D16) (25.02.79) *US3694-314 +C13k-11
Glucose is isomerised into fructose by contacting a 5-80 wt. % aq. glucose soln. (viscosity 0.5-100.0cP) with enzyme glucosoisomerase at 20-80°C and pH =6.9.

The yield of fructose is increased and the formation of side-products is suppressed by passing the glucose soln. through 2-12 layers of microorganisms contg. in their cells stabilised glucosoisomerase. Each layer should have an activity of 3-1000 IGIU per cm^3 . The stability is 50-1200 h. The ratio of the layer height to its width is 0.01 to 2.

The starting glucose-contg. soln. is pref. a hydrolysate obtd. by acidic- fermentative liquefaction of starch, or a two-step fermentative liquefaction of starch. The pH is pref. 6.5-8, esp. 7-8. The concn. is pref. 40-60 wt.

%. The temp. is pref. 60°C. The glucosoisomerase can be bound or stabilised inside the cells, or on their surface, by means of various method, e.g. a thermal treatment. These are two types of microorganisms, which can be employed in this process. Thermally unstable microorganisms, such as *Pseudomonas hydrophila*, are sufficiently active only in the presence of arsenate or fluoride ions. This is not necessary, if thermally stable microorganisms, such as *Streptomyces*, are used. Another advantage of this gp. consists in that the isomerisation reaction can be carried out at elevated temp., and hence, intensified. The process can be conveniently carried out in a known stack filter press.

Lloyd, N.E., Lewis, L.T., Logan, K.M., et al Bul. 7/25.2.79.10.6.72.as793523(6pp70).

KIFO=★ D17 83905B/46 ★SU -651-031
Sugar juice carbonator - has bubblers connected to space above juice in preceding sections and conical bottoms at same level
KIEV FOOD IND TECH 10.05.76-SU-359073
(07.03.79) C13d-03/06

The utilisation of CO_2 gas fed to the carbonator in sugar prodn. is improved and servicing enhanced due to the conical bottom of the carbonator which are set on the same level. The first section in the forward flow of the juice has a feed chamber for juice and gas sepd. by a partition.

The bubblers of each subsequent section are connected to the space above the juice of the preceding section ensuring successive gas passage from section to section.

Reva, L.P., Logvin, V.M., Logvin, Z.I., et al Bul. 9/5.3.79.10.5.76.as359073(3pp89).

See Also

D13 J5 4129179

D16 US 4173514

D18: SKINS; HIDES; LEATHER; TOBACCO

BRTA D18 23067U/17 =DS 2246-787
Cigarette mfr - from processed tobacco contg absorbent fibres
BRIT AMER TOBACCO LTD 24.09.71-GB-044721
P15 (08.11.79) *DT2246-787 A24b-15/05

A smokable material comprises prepd. tobacco and 3-50 (5-25) wt. % of absorbent fibres of crosslinked water in soluble derivs. of carboxymethylcellulose. The tobacco may comprise 25-30 wt% stalks and 75-70 wt% leaves. The smoking properties are improved compared with those using the usual cellulose fibres. 23.9.72 as 246787(4pp68)

TOXF D18 57089A/32 =DS 2801-239
Tobacco smoke filters - comprising activated carbon fibres contg. nitrogen and obtd. by thermal treatment of PAN

TOHO BESLON KK (NISB) 13.01.77-JA-001866
A97 F04 P15 (A18 A35) (08.11.79) *DT2801-239 A24b-15/02
A tobacco smoke filter (I) comprises oxidised fibre material and it contains, as filter element, active C fibres (II) contg. N. which have been produced by oxidn. (carbonisation) of polyacrylonitrile fibres (III), and then activation of the oxidised (III).

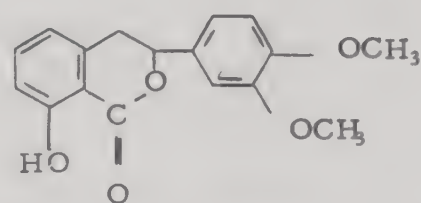
Pref. (II) have a specific surface of 100-1500 m^2/g and a N content of 2-15 wt% and pref. (II) are combined with other fibre materials. Pref. (III) have an acrylonitrile content of > 60%

(I) is useful for removing acidic materials from tobacco smoke. 12.1.78 as 801239(9pp481).

NISB ★ D18 83366B/46 ★J5 4129-197
8-Hydroxy-3-(3,5-dimethoxyphenyl)-2-benzopyran-1-one - used to improve flavour of tobacco

JAPAN TOBACCO & SALT PUB 29.03.78-JA-035326
E13 P15 (06.10.79) A24b-03/12
Agent comprises cpd. of formula (I) (I) is obtd. by extraction of *Hydrangea serrata*. The leaves are crushed and extracted with methanol, ethanol, chloroform,

(I)

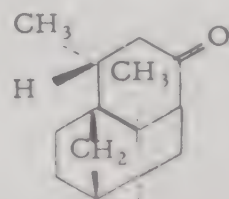


ethyl acetate, dichloromethane or its mixt. and filtered. The filtrate is dried under reduced pressure and from the residue water-soluble part is removed, and extracted with dichloromethane and filtered.

The filtrate is absorbed in column packed with silicic acid satd. with dichloromethane and eluted and the effective fractions are collected. The fractions are dried under reduced pressure and recrystallised from methanol. The cpd. is white pillars having m.pt. of 115-116°C. Amt. of (I) to be added to tobacco is 0.001-0.1 (0.01-0.05) wt. %. 29.3.78 as 035326 (3pp22)

NISB ★ D18 83367B/46 ★J5 4129-198
Tobacco flavourant - comprises a 1,5-di:methyl-7-oxo-1,8; 2,4a di:methano naphthalene cpd.

JAPAN TOBACCO & SALT PUB 31.03.78-JA-036682
E15 P15 (06.10.79) A24b-03/12
The title cpd. is of formula (I). It can be obtd. by extn. of tobacco leaves with dichloromethane, vapour distn., silica



(I)

gel column chromatography and gas chromatography; or by photosynthesis from 6,10-dimethyl-2-(1-methyl ethenyl)-spiro (4,5)dec-6-en-8-on. The amt. of (I) added to the tobacco is 0.00001-0.01, pref. 0.0001-0.001 wt. %.

In an example, 50 g tobacco leaves are mixed with ethanol soln. contg. this 0.01% (I) such that the content of (I) in the tobacco leaves is 0.0001% by spraying. 31.3.78 as 036682 (4pp22)

NISB ★ D18 835148/46 ★ J5 4130-531
5,6-Epoxy-3-hydroxy-beta-ionol derivs. - useful as long-lasting
aroma and taste improving agents for tobacco

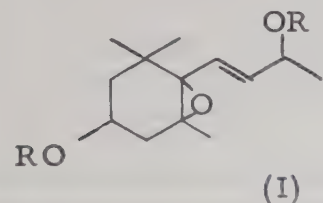
JAPAN TOBACCO & SALT PUB 31.03.78-JA-036681

E13 P15 (09.10.79) A24b-03/12 C07d-303/14

Ionol derivs. are of formula (I) (where R is H or COCH₃).

(I) have long-lasting aroma and taste-improving effect, and are used in tobacco.

(I) are extracted from Japanese leaf tobacco, which is crushed or cut in 0.5-1.0 mm and soaked in polar organic solvents (e.g. methanol, ethanol, dichloromethane).



The extract obtd. is filtered and concentrated at < 50°C under reduced pressure. The solvent-soluble part of the concentrate is extracted with water-insoluble solvents such as ether, dichloromethane, etc. The extract is washed with acid solns. and alkaline solns. such as 0.5-4 N-sodium hydroxide in order for 2-4 times. After further distn. and extn. etc. (I) is obtd. 31.3.78 as 036681 (5pp136)

CELA D18 30314Q/00 = J7 9034-079
Tobacco replacement material - contg. starch, starch ethers or cellulose ethers

CELANESE CORP 01.11.68-US-772834 (10.01.68-US-696699)

A97 + P15 (A11) (24.10.79) *NL6900-136

CELA D18 06275S/03 = J7 9034-080
Tobacco substitute
CELANESE CORP 15.07.69-US-842032
A11 P15 (A97) (24.10.79) *BE-753-481

CHCC D18 55363A/31 = US 4173-504
Synthetic fibre tobacco filters - of composite polypropylene-EVA
fibres, heat treated to above the EVA m.pt. to stabilise the filter

CHISSO CORP 19.01.77-JA-004757

A97 F04 P15 (A18) (06.11.79) *DT2801-211 A24c-05/50

Tobacco filters are made from fibre bundles contg. (I) 20-100 wt. % melt spun composite fibres and (II) 1-80 wt. % other fibres.

The composite fibres in (I) have side-by-side or sheath-and-core arrangement of (i) a first component comprising mainly crystalline polypropylene or propylene copolymer and (ii) a second component comprising (a) EVA copolymer of vinyl acetate content 0.5-18 mol. %, (b) saprification prod. of (a), or (c) a mixed polymer of polyethylene and (a) or (b) having total vinyl alcohol component content ≥ 0.5 mol. %. Circumferential ratio of (ii) is 60-100% of the composite fibre cross-section and the composite wt. ratio of (i): (ii) is 30:70-70:30.

The fibres in (I) are heated at between the m.pt. of (ii) and that of (i) to stabilise them by the self adhesion of the (ii) portions of the composite fibres.

The filters obtd. have uniform hardness and small pressure drops and give uniform smoke flow. 27.12.77 as 864357 (8pp945)

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

SORN/ ★ D21 82610B/46 ★BE-877-711
 Plastic core for soap tablet to prevent waste - is egg-shaped and sized to suit any tablet
 SORNIN S M 13.07.79-BE-877711
 (05.11.79) C11d

A smooth, egg-shaped core of hard plastic material is moulded in the centre of a tablet of soap. Soap from the composite tablet can then be used until the core is washed clean. This obviates the wastage of soap which normally occurs as a conventional soap tablet becomes very thin.

To suit all sizes of soap tablet, the core has a length on its major axis of about 4 cm and minor axes lengths of about 1 and 2 cm. respectively. 13.7.79 as 877711 (3pp)

WELA ★ D21 82700B/46 ★DT 2819-036
 Multistep hair-dyeing using phenol derivs. - mixed with hydrogen peroxide and subsequent oxidn. with peroxy-di: sulphate and/or bromate

WELA AG 29.04.78-DT-819036
 E24 (08.11.79) A61k-07/13 D06p-03/14

Human hair is dyed in several steps by (i) applying a phenol deriv. -based hair-dye, (I), esp. p-aminophenol, m-aminophenol and/or resorcinol, admixed with H_2O_2 shortly before use; (ii) opt. after-treating with a phenol deriv. -based agent, (II), and (iii) oxidising in 1 or 2 steps with a peroxydisulphate and/or a bromate.

In (i), concn. of (I) is pref. 0.1-15 (0.5-10) wt. % w.r.t gel or emulsion used. (I) is left to act 20 min. on hair, whereby white hair is converted to a pale-yellow colour. In (ii), the dried hair is opt. treated 5 min. at pH 9.5-10.5 with a gel contg. (II), e.g. pyrocatechol or resorcinol. In (iii) the dried hair is treated (a) 5 min. at pH 9.5-10.5 with a 0.1-10 (0.5-5) wt. % concn. soln. of NH_4^- or Na peroxydisulphate, to achieve a blonde- to brown-red shade, and opt. (b) 5 min. with a 0.1-10 (0.5-5) wt. % $NaBrO_3$ soln. to displace hair shade towards an olive tint.

Fast, natural, or reddish blond to brown shades are obtd. without using aromatic p-diamines, which may cause allergies and mutations. 29.4.78 as 819036 (12pp200)

NATT ★ D21 82835B/46 ★DT 2917-504
 Aerosol hair spray compsns. - contg. neutralised carboxylated resin with increased solubility in hydrocarbon propellants
 NAT STARCH & CHEM CORP 05.05.78-US-903441
 A96 (A13 A14) (08.11.79) A61k-07/06

Aerosol hair-spray compsns. contain (A) 0.5-5% copolymer of ≥ 1 unsatd. mono-carboxylic acid (I) and ≥ 1 vinyl or vinylidene monomer (II), (B) 5-60% hydrocarbon propellant, and (C) solvent up to 100%, in which 7-100% of the COOH gps. in (A) are neutralised to increase solubility, and $\geq 50\%$ of the neutralised gps. are neutralised with prim., sec. or tert. amines with a longest chain of 8-20C atoms.

Use of the above amines gives increased solubility in alcohol/hydrocarbon propellant systems, which are preferred to halogenated hydrocarbons for ecological reasons. 30.4.79 as 917504 (20pp195)

UROS/ ★ D21 82856B/46 ★FR 2416-010
 Compsn. for treating hair and scalp to promote regrowth - contg. lemon, garlic, tobacco, nettles, water and oils
 UROSEVIC M 06.02.78-FR-003251
 (05.10.79) A61k-07/06

The compsn. comprises extracts of the juice of lemon, garlic, tobacco, nettles, olive oil, tumsol oil, in distilled water. The compsn. is applied by first scarification of the epiderm with a sterilised razor, application of tincture of iodine using cotton wool, rubbing the scalp with a raw garlic clove, using an Oneal steam appts. contg. the prod. which is vaporised over 15 mins., washing and rinsing the head, followed by a 2nd application of the prod. and massaging with the fingers.

The compsn. dresses the hair, arrests falling hair, removes dandruff and encourages regrowth. 6.2.78 as 003251 (4pp597).

ALLI/ ★ D21 82865B/46 ★FR 2416-074
 Rounding and smoothing the ends of fibres - by heating together with auxiliaries preventing their fusing together
 ALLIBERT A S A L 01.02.78-FR-002761
 A32 F02 L01 P53 P61 (05.10.79) A61k-05 B22f-01 B24d-13 B29c-25 D01g-01/04

The extremities of fibres and filaments are rounded or softened by the action of heat at a temp. close to that at which the materials of the filaments melt. The operation is carried out in the presence of an auxiliary which prevents the heated fibres or filaments from coalescing. The auxiliary can be eliminated either by gravity or by chemical means. The fibres or filaments may be of plastic, glass, ceramic, metal alloys, etc. whilst the auxiliaries range from gases to molten metals.

The product finds application as a reinforcement in dental cements, and delicate sanding and polishing operations can be carried out with materials such as filings of silver-bronze, the grains of which have been rounded. 1.2.78 as 002761 (5pp1014).

MINN D21 29537Y/17 =GB 1555-463
 Hair bleach, dry powder compsn. - contg. hydrogen peroxide precursor, ammonium salt, thickener and alkali
 MINNESOTA MINING CO 08.10.75-GB-041298 (14.07.75-GB-029489)
 (14.11.79) *FR2317-910 + D06l-03/02

A dry, storage-stable compsn. of powdered solids is prepd. capable of being mixed with water to give a strong hair bleaching compsn.

The compsn. comprises ≥ 13 wt. % of a hydrogen peroxide producer cpd. which will produce hydrogen peroxide when dissolved in water, but which is a stable solid when dry; an alkali metal or ammonium peroxydisulphate or peroxydiphosphate as a bleach accelerator; an ammonium cpd. providing ammonium ions when dissolved in water, being constituted at least in part by the ammonium-based bleach accelerator; a thickener dispersed in the alkaline soln.; and an alkaline cpd. in amt. to give the compsn. an alkaline pH in water, being constituted $\geq$ in part by ≥ 1 of the previous components used.

The compsn. can be sold in a simple single sealed packet or other container for mixing by the user with (tap) water. 13.7.76 (7pp931)

UNIL D21 28816A/16 =GB 1555-796
 Compsn. for treating acne contg. an alkyl lactate - a glycol, or its polymer and water, stable against hydrolysis
 UNILEVER LTD 15.10.76-GB-042915
 A96 B05 (A25) (14.11.79) *BE-859-817 A61k-07/48

Cosmetically acceptable compsn. comprises 2-50 wt. % 1-4 C alkyl lactate (or their mixts.), 1-80 wt. % water miscible 2-4C alkylene glycol or a polymer derived from them, and 5-50 wt. % water. The lactate is dissolved in the glycol (polymer) and water; compsn. has a pH of 4-7.

Pref. lactate is ethyl (actate). Pref. monomeric glycols are n-propylene glycol or 1,3-butylene glycol; pref. polymeric glycols are polyethylene glycol (mol.wt. $\leq 10,000$) or polypropylene glycol (mol.wt. ≤ 400).

Compsns. are useful in prevention or treatment of acne and other skin disorders. Compsn. does not dehydrate or degrease skin and ensures that the lactate reaches sebum lipids. 13.10.77 (8pp963)

KESL/ ★ D21 82935B/46 ★ GB 2020-220
Tooth positioning and retaining device - with air holes leading labial and lingual sides to allow patient to breath

KESLING P C 04.05.78-US-902874

A96 P32 (14.11.79) A61c-07 B29c-01/14

A dental tooth positioning and retaining appliance comprising a resilient arch-shaped body with cavities to receive the teeth of a patient. The appliance has air holes which lead between the labial and lingual sides of the appliance to allow the patient to breath through his mouth while the appliance is in position.

The air holes are formed by a comb-shaped insert which is placed in the mould at the time the appliance is formed and subsequently removed to create the air holes.

The appliance has tooth sockets located in the ideal positions and is placed in the mouth of a patient to receive his teeth and urge them into the ideal arch relationship. The air holes are formed in the appliance when it is moulded and are arranged so that they do not interfere with the tooth sockets. 6.4.79 as 012281 (9pp295)

LIOY ★ D21 83035B/46 ★ J5 4127-882
High polymer emulsification agent - comprising complex salt of cationised cellulose or starch and an anionic or amphoteric active agent

LION FAT & OIL KK 28.03.78-JA-035901

A96 (A11) (04.10.79) B01f-17 C08j-03/20

High polymer emulsification agent, consists mainly of complex salt comprising cationised cellulose contg. 0.5-3 wt. % cationic nitrogen or cationised starch contg. 0.5-5 wt. % cationic nitrogen of 0.5 to 5 wt. %, and 0.05 to 1 mol of anion or amphoteric active agent based on 1 cation equivalent of the cationised cellulose or starch mentioned above.

This high polymer emulsification agent enables the stable dispersion of cosmetics and perfumes even when they contain oily ingredients in amts. of 10-50%.

In an example, complex salt was formed from cationised cellulose and anion or amphoteric active agent of 0.05-1 mol equiv. based on 1 cation equiv. of the cationised cellulose, and was mixed with water to adjust to 70 pts. wt., and was stirred vigorously at 60°C for 5 mins. Aq. emulsification agent was thus obtd. To this complex salt soln. were added 30 pts. wt. of liq. paraffin, and were emulsified at 60°C for 20 mins. at 5000 rpm by homomixer. 28.3.78 as 035901 (70pp96)

SHIS ★ D21 83352B/46 ★ J5 4129-134
Three-liq. type hair bleaching agent - comprising mixt. of (bi)sulphite-organic solvent mixed liq., liq. contg. ferrous salt and aq. hydrogen peroxide soln.

SHISEIDO KK 28.03.78-JA-035694

E37 (06.10.79) A61k-07/13

Bleaching agent comprises a mixt. of (a) a 1st liq. composed of (bi)sulphite and organic solvent; (b) a 2nd liq. contg. ferrous salt; and (c) a 3rd liq. comprising aq. H₂O₂ soln.

Liq. (a) is used to partially break the bisulphide bond of keratin in hair. Liq. (b) causes ferrous ions to be adsorbed on the hair forming a complex salt with melanin pigment. On use of liq. (c) liq. H₂O₂ is contact-decomposed with the ferrous ions in the complex salt and melanin pigment is efficiently decomposed.

Melanin pigment in hair can be safely oxidn.-bleached under moderate conditions of pH 5-8 without forming a nasty odour. 28.3.78 as 035694 (10pp5)

LIOY ★ D21 83353B/46 ★ J5 4129-135
Hair treatment compsn. - contg. cationised polymer, fatty acid salt and oily component

LION FAT & OIL KK 28.03.78-JA-035902

A96 E12 (06.10.79) A61k-07/06

Hair-treating compsn. contains 0.05-5 w/w% cationised polymer, 0.1-5 w/w% 12-18C fatty acid salt and 10-50 w/w% oily component.

As polymer, cationised PVP cationised acrylic resin, cationised cellulose, cationised starch, etc. can be used. The cationised cellulose obtd. by cationising hydroxy-methylcellulose which has a polymerisation degree of glucose units of 100-20,000, addition mol number of ethylene oxide on a glucose unit of 1-3 (1.5-2.5), with nitrogen cpd., can be used and that having quat. nitrogen content of

0.5-3.0%, can pref. be used.

With the hair-treating agent the cpd. salt composed of the cationised polymer and the fatty acid salt is stuck to hair together with the oily component and the coating film which is hardly washed out by washing with shampoo or by rinsing, is formed on the hair. The hair-treating agent gives nutrients and emollient effect to hair. The hair is protected from brushing, combing, etc. 28.3.78 as 035902 (7pp5)

YAMA ★ D21 83354B/46 ★ J5 4129-136

Anti-dental plaque compsn. - comprises a liq., solid or semi-solid composed mainly of water soluble glucomannan

YAMANOUCHI PHARM KK 30.03.78-JA-037212

B04 (06.10.79) A61k-07/16

Anti-dental plaque compsn. is liq., solid or semi-solid substance mainly of water soluble glucomannan (I) which suppresses the formation of the dental plaque which causes decay of teeth and other oral diseases.

(I) is obtd., e.g. by washing refined konjak powder with organic solvent such as alcohol to remove water insol. glocomannan and drying the residue. Pref. pure (I) is used in an amt. of 0.1-5.0 (0.1-1.0)% in oral drugs. 30.3.78 as 037212 (5pp5)

KANE ★ D21 83355B/46 ★ J5 4129-137

Nail enamel compsn. - contains acrylic resin mixt. comprising various acrylate and methacrylate ester(s), as film forming agent

KANEBO KK 28.03.78-JA-036292

A96 (A14) (06.10.79) A61k-07/04

A nail enamel contains an acrylic resin mixt. consisting of (a) a methacrylic acid ester copolymer composed of 35-65 (40-60) w/w% of methylmethacrylate and/or ethylmethacrylate and 65-35 (60-40) w/w% of propylmethacrylate and/or butylmethacrylate and (b) a methacrylic acid esteracrylic acid ester copolymer composed of 50-85 (55-80) w/w% of methylmethacrylate and/or ethylmethacrylate and 50-15 (45-20) w/w% of methylacrylate and/or ethylacrylate, as the film-forming agent.

This acrylic resin mixt. is equal to nitrocellulose as the film-forming agent for nail enamels and the formed film is excellent in glossiness, light resistance, bendability, abrasion resistance, stability, water resisting property and hardness. The acrylic resin is soluble in acetic acid esters, ketones and aromatic hydrocarbons and the amt. of toluene in nail enamel can be decreased. Thus the nail enamel is superior to conventional nail enamels in safety and danger of fire. 28.3.78 as 036292 (7pp5)

ASAE ★ D21 83358B/46 ★ J5 4129-150

Fluid shortening prepn. - using fish hardened oil, lauric acid type oil and fat, glycerine fatty acid mono:ester lecithin

ASAHI DENKA KOGYO 31.03.78-JA-037843

(06.10.79) A21d-02 A21d-13/08 A23l-01/19

Method comprises (1) prepg. a compsn. composed of (a) 97.5-98.9 wt. % of oil and fat consisting of 70-90 pts. of fish hardened oil having rising m.pt. 28-40°C and 10-30 pts. of lauric acid oil and fat, 1-2 wt. % glycerin fatty acid monoester and (c) 0.1-0.5 wt. % lecithin; (2) melting the compsn. in a heated vessel at a temp. where β -form crystal is completely melted; (3) passing the melted compsn. through a rapid-cooling and kneading equipment with stirring to cool it to the temp. where it is $>5^\circ\text{C}$ lower than the rising m.pt. of the fish hardened oil; (4) re-turning the compsn. to the vessel; (5) repeating steps (2) and (3) more than once continuously; (6) cooling the compsn. in the vessel to 40-55°C; (7) then cooling the compsn. with a cooling velocity of $<10^\circ\text{C/hr.}$ to the solid fat indicator 5-12; (8) stirring the compsn. for >2 hrs. at that temp. and (9) preserving it at that temp.

β' -form crystal is dispersed and shortening excellent in creaming properties, crystallising properties and β' -form stability, can be obtd. The shortening is composed of very few fine crystals and relatively large amt. of coarse crystals and the fluid shortening which hardly suffers from sepn. and sedimentation, can be obtd. By changing the preserving temp., shortening having desired hardness can be obtd. 31.3.78 as 037843 (6pp5)

STOM= ★ D21 83734B/46 ★SU-649-431
Dental canal filling paste compsn. - contg. zinc oxide, sodium fluoride, acrylamide copolymer, bentonite, DMSO, water and medicinal cpds.

STOMATOLOGY RES INS 18.05.77-SU-480463
A96 B05 (A14) (28.02.79) A61k-05/*

The paste, useful in therapeutic stomatology for filling dental canals in chronic periodontitis and pulpitis comprises (in wt. %): sodium fluoride 3.5-4.5; dimethyl sulphoxide 4.5-5.5; hexacaine 1.0-2.0; acrylamide copolymer 1.5-2.5; bentonite 5.0-6.0; pentol 3.0-4.0; sorbitan oleate 2.0-3.0; fat 7.5-8.5; water 17.0-19.0 and zinc oxide the rest.

The filling compsn. has antiseptic, anti-inflammatory and healing characteristics. It stimulates the regeneration of bone tissue in periapical region.

Kudrin, A. N., Nikitina, T. V., Shuldova, T. A., et al Bul. 8/28.2.79.18.5.77.as480463(2pp938).

CHEM= ★ D21 83735B/46 ★SU-649-432
Moisture stable hair lacquer compsn. - contg. polyester resin, acetylated fatty acid mono:glyceride, propellant and scent
CHEMISATION DES BUR (MOFA=) 11.05.77-SU-484338
A96 E17 (A23) (28.02.79) A61k-07/11

Hair lacquer compsn. comprises (in wt. %): polyester resin 2.0-6.0; acetylated fatty acid monoglyceride(I) 0.1-0.6; propellant 40.6-50.0; scent 0.1-0.3 and organic solvent the rest. The addn. of cpd. (I) as plasticiser improves the prod. quality. The lacquer forms a uniform transparent film which is stable in the high moisture atmos. It dries in 0.5 min.

Typical (I) is acetylated stearic, palmitic or oleic acid monoglyceride. Natural or synthetic essential oil can be used as scent.

Mikelson, Ya. M., Alksne-Alksnit, L. E., Lekhter, A. E., et al Bul. 8/28.2.79.11.5.77.as484338(2pp938).

RITP ★ D21 83972B/46 ★US 4173-219
Dental tray for applying fluoride gel to teeth - has upper and lower polyethylene foam tray portions approximating dental curve and forming medicament holding troughs, and hinges
SYBRON CORP 30.01.78-US-873269
A96 P34 (06.11.79) A61m-35

Dental tray for applying medicaments such as fluoride gel to both the upper and lower teeth simultaneously includes an upper tray portion and a lower tray portion for the upper and lower dentitions respectively. Each tray portion includes an outer shell of closed cell polyethylene foam having a U shaped base approximating the curve of the dental arch. This outer shell has integrally formed buccal, lingual and rear walls upstanding from the base to form a closed medicament holding trough.

The base is flat from the posterior ends of the U-shape to the bicuspid region, and concave from the bicuspid region to the anterior end; the buccal wall being normal to the base from the anterior to the posterior ends. The lingual wall is normal to the base at the posterior ends and inclined to the base away from the buccal wall at the anterior end. The buccal and lingual walls form a trough which increases in depth from the posterior to the anterior ends. The tray portions are connected by hinge members extending between posterior ends of the tray portions, and a handle extends outwardly from the anterior upper edge of each

buccal wall. A layer of open cell polyurethane hydrophilic foam is bonded to and lines the tray portions inner surfaces.

A low cost readily disposable dental tray is provided. 30.1.78 as 873269 (7pp1405)

CDCR- ★ D21 83998B/46 ★US 4173-4
Non-toxic topical hair colouring compsns. - contg. copper or zinc cysteine, and finely divided sulphur
CDC RESEARCH INC 09.03.78-US-884964 (09.04.76-US-675485)
E12 (E36) (06.11.79) A61k-07/13

Topical compsn. for colouring grey hair contains (a) 0.2-1.5 wt. % of a colouring agent (I) comprising Cu- or Zn cysteine and (b) 0.5-20 (0.5-10) wt. % of finely divided S (II) in a suitable non-toxic aq. vehicle. Non-toxic compsns. gradually colour grey hair to the desired hue, and may be safely used by unskilled personnel. In addn., compsns. have antidandruff (Cu cpd.) and other beneficial properties (Zn cpd.). 9.3.78 as 884964 (6pp478)

RITP ★ D21 84023B/46 ★US 4173-50
Dental tray comprising laminated polyethylene and polyurethane prep. by heating sheets of the materials until tacky, vacuum bonding the sheets and cutting out the article from the bonded sheets

SYBRON CORP 03.02.78-US-874850
A96 (06.11.79) B29c-17/03

Prodn. of a laminated plastics article, such as a dental tray, having an open cell hydrophilic polyurethane foam formed and heat bonded to a closed cell polyethylene foam is claimed. The dental tray has upper and lower portions which are hinged together and contoured to accommodate the partic. tooth structure of the posterior and anterior teeth, and the geometry of the upper and lower jaws. Superimposed sheets of the two foams are heat softened and then vacuum formed and compressed to form a laminated bonded sheet. The tray is contoured and then cut or blanked from the sheet.

A low-cost readily disposable article. Polyethylene and polyurethane foam sheets 64, 66 are unrolled from rollers 60 and 62, and continuously fed through an oven 68. The polyethylene sheet 64, is carried by the polyurethane 66, and propelled through the oven by a chain-drive mechanism 70. The oven is infra-red heated to about 700°-900°F. The sheet surfaces are flash heated to a point between the melting point of the polyethylene and polyurethane i.e. between 225°F and 240°F. When the sheets 64, 66 leave the oven 68 they are tacky but are not joined as they enter a vacuum forming mould 74. The softened polyethylene is compressed against the polyurethane and takes a thinner set. A clamping ring 76 seals the mould, and air is evacuated through a line 86 to draw the sheets 64, 66 over a raised die 82. The open cell structure of the polyurethane is embedded in the softened closed cell of the polyethylene. The dental tray is cut or blanked from the laminated sheet 75 by a knife 84. The polyurethane foam may be in the polyether form and the heating oven chamber is about 12 ft. long; the sheets travelling through the oven at 40 feet per minute. 3.2.78 as 874850 (10pp1405)

See Also

D23 US 4173585

D22: BANDAGES; DRESSINGS

PLAC ★ D22 82572B/46 ★BE-877-580
Transparent dressing, esp. for wounds, based on a hydrophilic gel in the form of a dried re-swellaable sheet
MAX PLANCK GES WISSENSCH 15.11.78-DT-849570
A96 P34 (05.11.79) A61p

The material with a liquid constituent, is in the form of a dried swellaable transparent sheet of a transparent hydrophilic organic gel in sheet or band form, which can contain buffer substances, current active substances for treating wounds, nutritive agents and/or growth substances and

which can opt. contain linear or mesh reinforcing material. The material is prep. by dissolving a monomer or mixture of monomers and ≥ 1 hydrophilic gellable high M.W. substance in aq. medium followed by forming the soln. into the desired thickness. One or more polymerisation initiators is then added with opt. addn. before, during, or after the initiator addn. a reinforcing material. The swollen gelled material is then dried.

Material is easy to remove and also the wound area may be observed through it. As a result of drying, it is

much easier to store. It readily reswells, absorbing up to 10 times its weight of liquid in 1 hr. Also it is suitable with no or only partial re-swelling for strongly secreting wounds. It is also possible to apply treatment substances on top of the dressing which contact after diffusion. 9.7.79 as 877580 (17pp597)

CROM- ★ D22 82614B/46 ★CA 1065-254
Protective film-forming teat dip for dairy animals - contg. germicide, e.g. iodine detergent carrier, 1-vinyl-2-pyrrolidone polymer and a pH buffer

CROMAC CHEM CO 02.09.76-CA-260421

A97 E36 P34 (A14 E14) (30.10.79) A611-13

Teat dip consists of 0.1-3% of a germicide (I), 1-25% of a detergent carrier (II), 1-10% of a pH buffer (III) and 0.1-20% of a 1-vinyl-2-pyrrolidone polymer (IV).

Effectiveness of the dip, esp. of a conventional iodine dip, is improved by the (IV), which forms a protective film on the teats; this may also protect the udder between milkings.

Pref. 1-10% (IV) is used, 2%. Suitably (I) is iodine. The dip is at pH 4-5.5, esp. 4.8, a Na salt of citric, phosphoric and/or carbonic acid being used as the buffer. The dip pref. also contains 0.01-3% (based on (IV)), of a u.v. light absorber and pref. also 10-35% of plasticiser. 2.9.76 as 260421 (8pp1248)

PROC D22 55284V/31 =DS 2107-723
Disposable diaper fastening system - using a pressure sensitive tape fastener

PROCTER & GAMBLE CO 19.02.70-US-012656

P32 + P21 (08.11.79) *CA-951-051 A41b-13/02

The tear-off strip of the fastening of a disposable baby napkin, is positioned between the impermeable underlayer and the releasable end of the adhesive tape. The under-surface of the tear-off strip is fixed to the underlayer, whilst the upper surface can be easily sep'd from the releasable end of the adhesive tape to which it is attached. A safety element secures the releasable end of the tape to the strip, at a short distance from its end, so that a drawing tab is formed.

The adhesive tape is held superimposed on the napkin underlayer, so that it can quickly be prepared for use, and additional security is provided by the safety strip treated with a special adhesive which holds the silicone surfaced tear-off strip until the napkin is in position. 18.2.71 as 107723 (5pp1045).

MINO- ★ D22 82631B/46 ★DS 2902-079
Animal esp. cat litter material - contains porous calcium silicate having high absorption capacity and low bulk wt.

MINORA FORSCHUNGS 19.01.79-DT-902079

E33 P14 (08.11.79) A01k-23

Animal litter material contains or consists of a porous Ca silicate granulate or powder having pore radius < 500 (< 100) esp. < 60 pref. 10-20 μ .

The material has low bulk wt. e.g. down to 250 kg/m³; high grain strength and compressive strength, e.g. up to 10.2 N/mm²; high absorption capacity, e.g. 200 wt. % for water and aq. media, e.g. urine. The material does not swell, stick or smear, does not stain and forms no dust. No liq. escapes, even on saturation under pressure. The Ca silicates have (i) pH 8.7-10, bind acid, neutralise uric acid and prevent smell formation, and (ii) have bactericidal properties. 19.1.79 as 902079 (7pp200).

EURO- ★ D22 82659B/46 ★DT 2818-276
Biological parts fixture - with sliding clasp fastener and hardening strips for easy application and stripping

EUROCOM EST 26.04.78-DT-818276

A96 P13 P32 (A97) (08.11.79) A01g-01/06 A61f-13/04

A device to steady two biologically viable parts relative to each other (e.g. broken twigs of valuable plants or broken human bones) during the healing process, consists of a sliding clasp fastener which is attached to a hose overlapping the joint. The strips which secure the fastener at the same time act as stiffeners.

This eliminates possible damage when the bandage is removed, and skin infection by gypsum bandages. It offers a quick remedy to storm damage in horticulture and fruit growing establishments. 26.4.78 as 818276 (40pp39)

ESSI ★ D22 82892B/46 ★FR 2416-492
Electrically heated steriliser for contact lenses - makes tank electrode inaccessible when connected to power supply

ESSILOR INT 03.02.78-FR-003069

R21 (05.10.79) G02c-07/04

Contact lens steriliser is of the type in which a lens is indirectly heated by evapn. of a conductive liq., e.g. water, in a small tank. The tank contains two electrodes connected to externally accessible terminal pins.

A tank filling hole is positioned adjacent to the terminal pins. A safety cover can be moved between two extreme positions. The first position reveals the hole while the terminal pins are covered. Alternatively, the cover is moved to obscure the hole while the pins are exposed for connection to a power supply.

The tank electrodes cannot now be touched while the steriliser is connected to a power supply. 3.2.78 as 003069 (10pp448).

FULH D22 02418Y/02 =GB 1555-531
Sanitary towel with components held by pressure sensitive adhesive - of polystyrene and polyethylenebutylene ABA or teleblock copolymer (BE241276)

FULLER H B CO 27.06.75-US-590936

A96 P21 P32 + P34 (A18) (14.11.79) *DT2628-890 A61f-13/16 C081-57 + C081-53/02

An article is prep'd. for absorbing fluid comprises an elongated absorbent pad contg. 2 major surfaces; an outer layer in adherent contact with ≥ 1 of the 2 surfaces; a hot-melt, pressure-sensitive, adhesive layer adhered to an outwardly-facing surface of the outer layer; and a protective liner in sheet form adapted to cover the adhesive layer from which it can be removed.

The hot-melt pressure-sensitive adhesive comprises a rubbery copolymer comprising a block copolymer having a rubbery polyolefin centre block and polystyrene terminal blocks, a plasticiser or diluent, and a tackifier resin. The article prep'd. is esp. used as a sanitary napkin provided with a means of attachment to a supporting garment. 25.6.76 as 026509 (8pp931)

TORA D22 25641A/14 #GB 1555-605
Sterilising dialyser contg. semipermeable membrane - by saturating with liq. contg. antibacterial agent e.g. aq. hydrogen peroxide and irradiating

TORAY IND INC 24.09.76-JA-113716 (10.08.77-GB-033537)

A96 J01 P34 (A35 A88) (14.11.79) *DT2742-588 A61m-01/03 + B01d-13

Sterilisation of a dielyser contg. a semipermeable membrane comprises (a) saturating the membrane with an aq. soln. contg. antibacterial agent; and (b) irradiating the dielyser in the presence of the agent to kill remaining micro-organisms.

Pref. the dielyser is an artificial kidney and the antibacterial is H₂O₂. The membrane is pref. of PMMA, cellulose, polyacrylonitrile or polycarbonate.

Method is esp. for hollow filament dielysers but may be applied to other medical instruments. 10.8.77 as 033537 (7pp393)

SERO- D22 77509Y/44 =GB 1555-637
(4,4')-Bis-formyl-polyhalo-diphenoxy alkanes - useful as intermediates to antiseptics, preservatives etc.

LAB SEROBIOLOGIQUE 27.04.76-FR-012454

E14 (14.11.79) *BE-853-940 C07c-47/56 C07c-121/60 + C07c-83/06

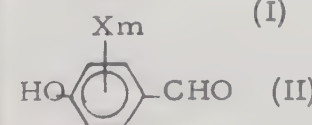
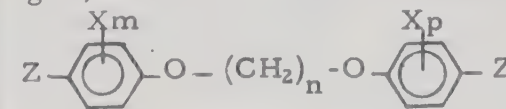
Diphenoxyalkanes of formula (I) are new. In (I) X is halogen; each Z is CHO or CH=NOH at the same time; n is

1-11; m and p are each 1-4.

(I, where Z is CHO) is produced by reacting a cpd. (II) with an alkali metal hydroxide to form an alkali metal alcoholate, and then reacting

with X-(CH₂)_n-X to give a symmetrical prod. which is opt. reacted with NH₂OH to produce (I, where Z is CH=NOH).

(I) are useful as antiseptics, preserving and conserving agents. 20.4.77 as 016486 (6pp997)



CUXS- ★ D22 82911B/46 ★GB 1555-769
 Easy-fasten surgical bandage - has ends impregnated with foam plastic pads to grip when tucked between bandage turns
 CUXSON GERRARD & CO 25.10.75-GB-043953
 Q61 (14.11.79) F16b-02/08

Bandage comprises a strip for winding several times around an injured body part, and an end section of different material which when tucked between two turns of the strip will cling to the strip to provide a secure fastening.

The end section may be an impregnated part of the strip, or may be foamed plastics pad stitched to the strip and with a rough cut surface providing barbs positively engaging strip fibres. The strip is pref. of textile fabric extensible longitudinally and both ends are tuck-in fastener sections. 25.10.76 (2pp1358)

FUJI/ ★ D22 83161B/46 ★J5 4128-491
 Ozone generator, for sterilisation and killing insects in food store - includes inner and outer glass tubes, rectifier, needle for prodn. of cation wind, electrodes and lead rod, and requires no blower
 FUJIMURA N 29.03.78-JA-035578
 E36 J03 (05.10.79) C01b-13/11

An ozone-generator capable of sterilisation and killing insects in a closed food-storing house, without the necessity for exhausting system, e.g. a blower etc., has ozone generated at an ozone-generating part. It is exhausted by the action of cation wind generated at cation-generating part.

The ozone generator comprises an outer glass tube and an inner glass tube inserted inside it, contg. a rectifier. A needle capable of generating a cation wind is attached to the end of the rectifier, and an opposing electrode is provided on the inner end surface of the outer glass tube.

Outer electrodes are formed on the outer surface of the outer glass tube, an inner electrode is formed on the inner surface of the inner glass tube, and a lead rod connects the inside electrode to the rectifier. 29.3.78 as 035578 (5pp34)

FUJI/ ★ D22 83162B/46 ★J5 4128-492
 Ozone generating electric discharge pipe for sterilising food store - includes inner and outer glass tubes, rectifier, needle electrode for producing cation wind, gold slurry coated membrane etc.
 FUJIMURA N 29.03.78-JA-035579
 E36 J03 (05.10.79) C02b-13/11

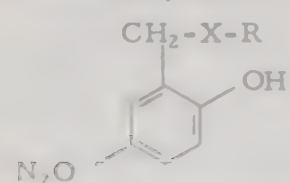
An ozone-generating electric discharge pipe capable of sterilising and killing insects in a closed food-storing house as well as preserving perishable foods, exhibits no generation of clearance between the glass tube and electrode, so the glass tube is not damaged on electric discharge.

The electric discharge pipe comprises an outer glass tube, and an inner glass tube spaced inside it, a rectifier in the inner glass tube and a needle electrode capable of generating a cation wind, at the end of the rectifier. An opposing electrode is provided at the inner end surface of the outer glass tube, and an outside electrode is formed on the outer surface of the outer tube, an inside electrode is formed on the inner surface of the inner tube, and a lead rod is connected to the inside electrode and to the rectifier.

The outside electrode or the inside electrode is formed by coating a gold slurry on the outer or inner surface of the outer or inner tube, followed by sintering and diffusion to form a tightly bound gold membrane. A protective plated Ni layer is formed on it, which is coated with an electrode conductive paint. A stainless steel electrode is then adhered to it. 29.3.78 as 035579 (5pp34)

TANA ★ D22 83336B/46 ★J5 4129-103
 Antiseptic, anti-mould compsn. for wood - contains antimicrobial 2-hydroxy-5-nitrobenzyl ether deriv. as active component
 TANABE SEIYAKU KK 29.03.78-JA-037028
 C03 E14 F09 P63 (06.10.79) B27k-03/38

The antiseptic and anti-mould agent contains 2-hydroxy-5-nitrobenzylether cpd. (I) as the effective ingredient,



(where R is alkyl, lower cycloalkyl, aryl or furfuryl. X is O or S. Y is halogen).

(I) show strong antibiotic activity on the microbes which cause deterioration of wood and being excellent

(I) in permeability in wood, they can be used at low concn. Further they usually show synergic effect with conventional antiseptics and insecticides. They are also miscible with the adhesive and the paint of wood use and can be used by combining them in adhesive, paint, etc. Examples of (I) are 2-hydroxy-5-nitrobenzyl-isobutylether, 2-hydroxy-5-nitrobenzyl-1'-methylpropylether, etc. 29.3.78 as 037028 (6pp5)

MOVA= ★ D22 83737B/46 ★SU -649-434
 Preservation of erythrocyte for diagnostic use - includes removal of erythrocyte stroma and plasma lipids by adsorption on cellophane film

MOSC VACCINE SERA 01.06.76-SU-365827
 B04 (28.02.79) A61k-35/18

Erythrocytes are sepd. from blood serum, washed and preserved in formalin soln. for use in diagnostic compsns.

The erythrocytes with high adsorption characteristics and improved storage stability are obtd. in higher yield if the erythrocyte stroma and plasma lipids are sepd. during the washing of formalised red blood cells by adsorption on inert material, pref. cellophane film. The method increases the yield of final prod. from 50-60% to 90-95%. The cells can be stored for long period in formalin-contg. buffer soln.

Moshiashvili, I. Ya., Bul. 8/28.2.79.1.6.76. as 365827 (2pp-938).

UFVA= ★ D22 83738B/46 ★SU -649-435
 Purified preserved erythrocyte suspension prodn. - includes washing of chicken red blood cells with specified borate-phosphate buffer soln. of sodium chloride

UFA VACCINE SERA 24.06.77-SU-500570
 B04 (28.02.79) A61k-35/18

Purified erythrocyte suspension, useful in adsorption of influenza virus, is prepd. by washing separated chicken erythrocytes with physiological saline soln. followed by formalin treatment, repeated washing and cell suspension prodn. The red blood cells with high adsorption characteristics are obtd. if the formalised cells are washed twice with borate-phosphate buffer soln. of sodium chloride at pH 9.0-9.2 and then once again with phosphate buffer soln. of sodium chloride at pH 5.5-5.7 and finally resuspending the washed cells in the same phosphate buffer soln.

The method can be used in the mfr. of an inactivated influenza virus vaccine without the loss of haemagglutination activity using fast procedure. Staruknina, G. N., Bul. 8/28.2.79.24.6.77. as 500570 (2pp-938).

IVAN= ★ D22 83938B/46 ★SU -651-072
 Device for cutting gauze into bandages - has gauze roll supply arrangement with cylindrical slit drum kinematically connected to belt conveyors

IVANOVO PAINT FINIS 20.12.76-SU-430126
 F07 (09.03.79) D06h-07/28

The unit used for cutting gauze into bandages contains an arrangement for gauze rolls supply having belt conveyors, disc knives and bandage receiving arrangement. In order to increase operational reliability, the gauze roll supply arrangement has a cylindrical slit drum kinematically connected to belt conveyors. The drum axis is perpendicular to the gauze roll supply direction and to the disc knives. The disc knives axles are parallel to the drum generating line. The line connecting the disc knife centres is concentric to the drum axis.

Solonitsin, V. M., Kalmikova, I. V., Smirnova, T. B., Bul. 9/5.3.79.20.12.76. as 430126 (3pp110).

KEND ★ D22 83966B/46 ★US 4173-131
 Knitted bandage with chain stitch warps - comprising oppositely false twisted yarns and slack fill yarns

KENDALL CO 15.11.78-US-960906 (01.12.76-US-746360)
 F04 P34 (06.11.79) A611-15 D04b-07/12 D04b-09/12

Two yarns of opposite false twist in chain stitch loops form the warps of a knitted bandage. Fill yarns extend in varied patterns across the warps with no fill yarn length extending across more than a mirror portion of the width. Port-

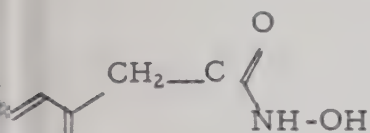
ons of the fill yarn lengths lie in a slack loop on the bandage surface.

Layers of bandage cling to one another and the wearer. The bandages are lightweight and rapidly knitted. The stretch properties of the bandage resemble a woven bandage. 5.11.78 as 960906 (+30.8.77;20.6.78-US-829130;917267) (7pp1320)

CIBA D22 17936T/11 =US 4173-577
Substd anilino-phenyl acetylhydroxamic acids - anti-inflammatories, analgesics, antipyretics and uv absorbers in sun-screening

CIBA GEIGY CORP 16.07.71-CH-010580 (09.09.70-CH-013415)
B05 E14 (06.11.79) *BE-772-333 A61k-31/18 +C07c-83/10

Phenylacetohydroxamic acids of formula (I) and their alkali(ne earth) metal salts are new. In (I), R₁ is Me or Cl



and R₂ and R₃ are each H, Me, or Cl. Specific cpds. are [O-(2,6-dichloroanilino)-phenyl]-acetohydroxamic acid, and [O-(3-chloro-o-toluidino)-phenyl]-acetohydroxamic acid.

(I) have antiphlogistic, analgesic and antipyretic activity, and inhibit platelet by aggregation. 13.2.78 as 877066 (+1.9.71, 6.5.74, 11.3.76-US-177088, 467366, 665986)(8pp964)

CLIN-★ D22 84066B/46 ★US 4173-604
Fragrance-deodorant concentrate vapour generator - has capillary carrier between concentrate and diaphragm across top of openable top container

CLINE-BUCKNER INC 09.02.78-US-876322
Q53 (06.11.79) F02m-37

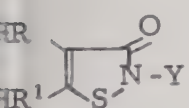
A generator comprises a closed container with an openable top over a capillary-action diaphragm and the concentrate below the diaphragm. The diaphragm extends across the top opening and its periphery is supported in the container.

Capillary-action cardboard or nonwoven cloth extends from contact with the diaphragm into the concentrate so that it is transported up into the diaphragm. The container is pref. a pull-top can and the diaphragm is of blotting paper or nonwoven cloth with a central pressure-equalisation port >0.05 in. in dia. 9.2.78 as 876322 (8pp1358)

ROHM ★ D22 84082B/46 ★US 4173-643
Combinations of 4-isothiazolin-3-one(s) with quat. ammonium salts which exhibit synergistic bactericidal activity

ROHM & HAAS CO 17.05.78-US-906539 (20.12.73-US-426881)
B03 C02 (06.11.79) A01n-09/12

Synergistic bactericidal compsn. comprises (a) an isothiazolinone of formula (I)



(where Y is 1-8C alkyl, cyclohexyl, phenyl, mono- or di-halo-phenyl, benzyl or mono- or di-halo-benzyl; R is H, halo or CH₃; and R¹ is H or halo) or an acid-addn. salt or metal salt complex; and

(b) a bactericidal quat. ammonium salt (II) is (a) n-alkyl (C₁₄:50%;C₁₂:40%;C₁₆:10%) dimethylbenzyl ammonium chloride; (b) a mixt. of 50 wt. % alkyl (C₁₄:60%;C₁₆:30%;C₁₂:5%;C₁₈:5%) dimethylbenzylammonium chloride and 50% alkyl (C₁₂:50%;C₁₄:30%;C₁₆:17%;C₁₈:3%) dimethylethylbenzylammonium chloride; (c) a mixt. of (n-(8 to n-C₁₈)alkyl dimethylbenzylammonium chlorides contg. >20% n-C₁₄ alkyl and >70 wt. % total of n-C₁₂ and n-C₁₄ alkyl; (d) p-diisobutylphenoxyethoxyethyl dimethylbenzylammonium chloride; (e) a mixt. of 80 wt. % methyldodecylbenzyltrimethylammonium chloride and 20% methyldodecylxylenebis (trimethyl) ammonium chloride; or (f) di-n-alkyl (C₈-C₁₁ n-alkyl, average C₁₀) dimethylammonium chloride; the wt. ratio of the isothiazolinone to being from 5:1 to 1:50.

Compsns. may be used as sanitisers, germicides and disinfectants, and are of partic. use in animal and bird cages, barns and dairies. 17.5.78 as 906539 (11pp476)

ARBR- D22 48302X/26 =US 4173-653
Oxydiacetaldehyde contg disinfectant compsn - does not have an unpleasant odour and does not cause eye irritation (BE110676)

ARBROOK INC 11.12.74-US-531842
E17 P34 (06.11.79) *DT2554-587 A01n-09/24

A sporicidal compsn. esp. for disinfecting medical or surgical instruments and household objects, comprises an aq. soln. of 3% oxydiacetaldehyde (I), 1.4% Na acetate and 1% phosphate buffer at pH8.

Pref. the (I)-contg. soln. also contains a compatible alkalinating agent; it may also contain a surfactant, and/or isopropanol or propylene glycol. 11.12.74 as 531842 (8pp)

MERI ★ D22 84109B/46 ★US 4173-703
N-Tri:methyl:silyl 3-carbamoyl:oxy:methyl-3 cephem-4-carboxylate(s) - intermediates for antibacterial 3 carbamoyloxy:methyl-3-cephem-4-carboxylic acids

MERCK & CO INC 27.02.78-US-881201 (14.12.71-US-207982)
B02 C02 (06.11.79) C07d-501/20

Cephalosporins of the formula (wherein Si≡ is trimethylsilyl; R¹ is an acyl gp. conventionally known in the cephalosporin art; R³ is H or OCH₃; and R is H or a blocking gp.) are new.

(VI) are intermediates to 3-carbonoyloxymethyl cephalosporins, to which they are converted by removal of the trimethylsilyloxy gp. followed by removal of R if required. The prods. are active at low levels against various Gram positive and Gram negative pathogens, and can be used to treat infections in humans and animals, in sterilising medical and dental equipment and for isolating microorganisms from their mixts. 27.2.78 as 881201 (+18.11.73, 6.12.76-US-398495, 747839)(4pp476)

See Also

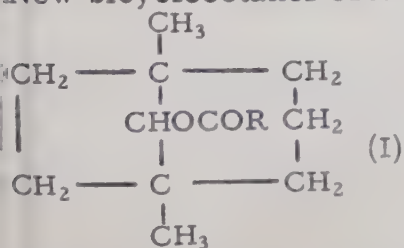
D25 DT 2817785

D23: OILS; FATS; WAXES

SHEL ★ D23 82556B/46 ★BE-876-161
Ester(s) of (1,5)-di:methyl-bi:cyclo-(3.2.1)octanol-8 - used in perfumes, heat transfer and brake fluids and lubricants

SHELL INT RES MIJ BV 12.05.78-NL-005143
E15 (12.11.79) A61k C07c

New bicyclooctanol esters are of formula (I)



where R is H or an aliphatic or aromatic hydrocarbyl gp. opt. amino subst.

The cpds. are used as perfumes and in perfume compsns. and in washing, cleaning, deodorising and cosmetic compsn. The esters derived from carboxylic acids of 5C can be used as heat transmission fluids, brake fluids, oil or lubricant additives. The cpds.

are very stable to heat. 10.5.79 as 876161 (21pp597)

BADI ★ D23 82749B/46 ★DT 2819-594
Octyl-cyclohexane perfume cpds. contg. 2,2,3,4 tetra:methyl-butyl gp. - are prepd. by octyl-phenol hydrogenation and opt. esterification methylation, oxidn., dehydrogenation or conversion to aldehyde

BASF AG 05.05.78-DT-819594
E15 G02 (G03) (08.11.79) A61k-07/46 C07c-35/08 C07c-47/32 C07c-49/30 C07c-69/14 C11d-03/18

New octyl-cyclohexane derivs. are of formula (I) (where

R¹ is H and R² is -OH, -CHO, -OAc, -O-CO-Et, -O-CO-C₃H₇ or OMe; R¹ and R² together are = 0; and the C₈H₁₇ gp. is present at -CH₂-CMe₂-CMe₃).

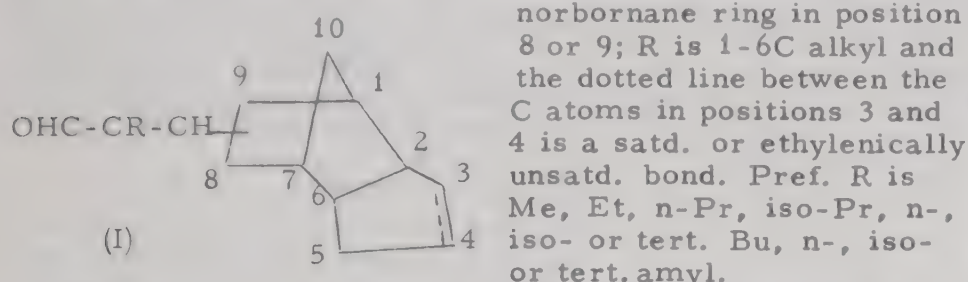
(I) are used as perfumes for cosmetics, cleansers and detergents and as odour-improvers for glue and paints. (I) have a wooden fragrance note, which is less intensive but more clinging and long-lasting than that of p-tert. Bu cyclo-hexyl acetate, -cyclohexanone or -cyclohexanol. (I where $R^1 + R^2$ is = 0) has a pleasant, wooden note. 5.5.78 as 819594 (13pp200)

KAOS ★ D23 82849B/46 ★ DT 2918-107
Tri:cyclo- α,β -unsatd. aldehyde perfume - is prepd. by reacting exo-formyl-endo-tri:cyclo deca-ene or -decane with aliphatic aldehyde

KA0 SOAP KK 04.05.78-JA-053620

E15 (08.11.79) A61k-07/46 C07c-45 C07c-47/20 C11b-03

New tricyclo- α,β -unsatd. aldehydes are of formula (I). In (I), an OHC-CR=CH- gp. is bonded to the exo-side of a



(I) are used in perfume compsns. e.g. for detergents, cleansers, cosmetics, soaps, shampoos and perfumes and have a long-lingering odour. 4.5.79 as 918107 (18pp200)

SHEL D23 91399Y/51 =GB 1555-551
Undecenals prepn. for use as perfume components - by hydroformylation of (1,9)-decadiene in the presence of a rhodium-contg. catalyst

SHELL INT RES MIJ BV 02.06.76-GB-022797

E17 (14.11.79) *NL7705-927 C07c-47/20

An undecenol of formulae (I) or (II) is prepd. by hydroformylation of 1,9-decadene in the presence of a rhodium catalyst.



(I)



CHO (II)

The 1,9-decadiene used is obtd from the reaction of cyclooctene with ethylene in the presence of an olefin disproportionation catalyst. Pref. the rhodium catalyst is a rhodium carbonyl deriv. contg. ≥ 1 phosphorus-contg. ligand, is a heterogeneous catalyst, and is obtd. by reacting a cpd. of formula $\text{XRh}(\text{CO})[\text{P}(\text{C}_6\text{H}_5)_3]_3$ with a phosphino-silane and a silica carrier. In the formula, X is H or halogen.

The undecanals are well-known synthetic aroma chemicals used to provide a lower note in perfume compsns. 2.6.76 as 022797 (2pp931)

ROHM D23 25224A/14 =GB 1555-870
Removing organic Lewis acids from water immiscible liquids - esp. vegetable oils, by contact with quaternary hydroxylated anion exchange resin

ROHM & HAAS CO 30.09.76-US-728107

A91 (14.11.79) *BE-859-251 C07c-19/02 C07c-25/28 C07c-67/48 C11b-03/10 + C07c-07/12 C07c-17/38

Organic Lewis acids are removed from a water-immiscible fluid by contacting with an hydrated ion exchange resin; the resin being a water-solvated macroreticular strong base quat. anion exchange resin in hydroxyl form. The Lewis acid is a free organic acid.

After contacting, the resin is pref. treated with an aq. soln. of a mineral acid to elute the adsorbed acids. The acid is rinsed from the resin with water, and the resin converted to hydroxyl form with aq. caustic alkali.

This process is esp. used in the purification of glyceride oils, such as soybean, peanut, anchovy, cottonseed, corn and coconut oils. 28.9.77 as 040247 (5pp931)

LIOC ★ D23 83356B/46 ★ J5 4129-138
Perfume compsn. contg. sabinene hydrate - has good body, a refreshing effect and a light, fresh aroma

LION DENTIFRICE KK 31.03.78-JA-037821

E15 (06.10.79) A61k-07/46

Perfume compsn. is characterised by contg. sabinene hydrate (I) as > 1 (1-80) w/w% on whole compsn. Addn. of (I) imparts intensified naturalness, good body, mildness, refreshing feeling and a light, fresh aroma.

Specifically, in the case of a peppermint type or spearmint type flavour (I) intensifies the refreshing feeling. In the case of fruit flavour (orange flavour, lemon flavour, etc.) (I) gives a light, fresh refreshing aroma. In the case of a heavy perfume such as a lilac floral type perfume the perfume can be converted to the light volatile perfume showing good diffusability. (I) is an inexpensive cpd. and can be prepd. easily from 5-isopropylbicyclo (3.1.0) hexane-2-one (sabinaketone) through the intermediate spiro (5-isopropylbicyclo (3.1.0) hexane-2,2'-oxylan). 31.3.78 as 037821 (5pp5)

AJIN ★ D23 83503B/46 ★ J5 4130-503
Heterocyclic phenol cpd. AOS - is useful as antioxidant for oils and fats and is extracted from Carthamus tinctorius seed using solvent

AJINOMOTO KK 03.04.78-JA-038944

E13 (D13) (09.10.79) C07g-17 C09k-15/34

Heterocyclic phenol cpd. AOS (I) has the physical data: (1) elementary analysis, C, 61-64; H, 6.07; N, 5.62; O, 25.68, (%); (2) mol. wt. 284; (3) m.pt. 124.6-125.4°C; (4) solubility=difficultly soluble in water, insoluble in n-hexane, easily soluble in ether or ethanol; (5) colour, light brown (I) is prepd. by contacting skim seed of Carthamus tinctorius with polar organic solvent for extraction

(I) is useful as natural antioxidant for oil and fat and foodstuffs and cakes contg. oil and fat. In an example, Carthamus tinctorius seeds (2.4 kg) were pulverised by a mill and divided by same amt. to 4 filters (vol. 2L) in which skim cotton, sea sand and Cellite had previously set in order. N-Hexane (1 L) was put in respective filters and allowed to stand in the dark place for 24 hrs. The n-hexane layer was flowed down from the filter. Same procedure was repeated by using fresh n-hexane (1 L), whereby Carthamus tinctorius oil was extracted and removed. Residue was treated with ether (1 L) and ethanol (1 L) similarly in order. The ethanolic extract was filtered through a glass filter treated with Cellite 545 and the filtrate was evaporated to give crude prod. (47.5 g). 3.4.78 as 038944 (5pp104)

SAGA ★ D23 83513B/46 ★ J5 4130-530
Liq. chloro-cyclopentene derivs. prepd. from cyclopentadiene - catalysed by complexes of transition metals, e.g. ruthenium, used to perfume soaps, detergents and printing inks and as a plasticiser

SAGAMI CHEM RES CENTRE 31.03.78-JA-036864

A60 E15 G02 (09.10.79) A61k-07/46 B01j-27/18 C07c-17/32 C07c-69/74

5-Chloro-3 (substd. methyl)cyclopentene of formula (I) is produced by reacting cyclopentadiene with chlorides of formula $\text{CCl}_2\text{X}^1\text{X}^2$ (II) in the presence of transition metal complexes (III) (X^1 and X^2 are H, lower alkyl, Cl, cyano or carboalkoxyl).



(I)

The latter is a by-prod. of naphtha cracking. The reaction is opt. in an inert solvent such as benzene, toluene, cyclohexane at 20-200°C, pref. 30-150°C under (super) atmospheric pressure.

(I) is colourless, transparent and non-flammable liq. and soluble in common solvents. It has a Cl content of 40-60%. 31.3.78 as 036864 (5pp136)

ZENK- ★ D23 83532B/46 ★ J5 4130-605
Preventing oxidn. of fats or oils - by adding an organic copper cpd. - pref. copper acetate

ZENKOKU NOGYO KYODO 31.03.78-JA-036880

E12 (11.10.79) C09k-15/32 C11b-05

Degradation of fats or oils due to the unsaturated fatty acids contd. therein which generate undesirable odour by the generation of peroxides, aldehydes, ketones or polymers by the oxidation caused by oxygen contd. in the atmospheric air, is prevented by the presence of Cu cpd. (pref. Cu acetate).

Other Cu cpds. such as Cu salt of formic acid, stearic acid, oleic acid, oxalic acid, succinic acid, citric acid, etc. also exhibit antioxidant effect. The process can be

applied to vegetable or animal fats or oils, such as beef tallow oil, lard, soya bean oil, fish oil etc. or to the fatty acids or their esters obt'd. by the hydrolysis of the fats or oils. Pref. amt. of Cu cpd. is 10-1000 (100-500) ppm as Cu, based on the amt. of fats or oils. 31.3.78 as 036880 (3pp126)

MEIP D23 68015Y/38 = J7 9034-062
Preventing deterioration of oil and fat-contg. foods - by irradiating with electromagnetic waves in a magnetic field and excluding foods having high absorption

MEIJI MILK PRODS KK (MEIJ) 10.02.76-JA-012767
(D13) (24.10.79) *J52096-754 A231-03

Method comprises putting foods in magnetic field, irradiating with electromagnetic waves measuring para-magnetic resonance absorption on free radicals originated from oil and fat and excluding foods having high absorption. The posn. (g-value) on the spectrum corresponding to free radical of oil and fat is 2.004-2.005.

Method checks the extent to which the food will be oxidised. By the oxidn. of oil and fat, free radical is formed as precursor for oxidised product and that though the free radical is finally converted to oxidised prod. and induces the qualitative deterioration, it can exist in free form rather stably for relatively long time, 10.2.76 as 012767 A231-3/00 (24.10.79) MEIJI MILK PROD (9pp)(J5 2096754)

ICIL D23 39814Y/23 = SU -649-307
(Ortho)-hydroxy-araldehydes prepn. - from (2)-aryl-amino-methyl phenols by oxidn. and hydrolysis

IMPERIAL CHEM INDS LTD 15.12.75-GB-051286
E14 (28.02.79) *BE-848-935 C07c-47/56

Prepn. of o-hydroxyaraldehydes(I) comprises oxidising a 2-arylamino-methylphenol(II), opt. substd. in the phenol ring by one or more alkyl gps., and hydrolysing the resulting 2-hydroxybenzylidene-arylamine(III).

(I) are useful as perfumes and aromatising agents, and as intermediates for the corresp. oximes, which are extractants for use in hydrometallurgy.

In an example, 5-nonylsalicylaldehyde is prepd. from 2-(4-methylphenyl-aminomethyl)-4-nonylphenol. Beswick, G. E., Bul. 7/25.2.79.14.12.76. as 430496(5pp).

ROCI = ★ D23 83845B/46 ★ SU -650-661
Oil or fat mfr. plant air purification unit - using cyclone dust separator having guide vanes with adjustable inclination angle mounted between casing and discharge pipe

ROST CIVIL ENG 26.03.76-SU-339284
P41 (D14) (09.03.79) B04c-03/06

Improved efficiency of purifying the air from dust prone to agglutination, and possibility of periodical removal of dust adhering to the inner surface of the cyclone, which can be used in various industrial plants, e.g. in fat and oil industry, are ensured by the control of the velocity of the air stream entering the cyclone, and of the angle of its entry.

The guide vanes mounted between the casing of the cyclone and its discharge pipe for purified air have the angle of inclination adjustable within the limits of 45° to 135° by external handles.

Boguslavskii, E. I., Shtokman, B. A., Bul. 9/5.3.79. 26.3.76. as 339284(3pp135).

FIRM D23 82568A/46 = US 4173-550
Perfume compsns. contg. 3-phenyl-cyclopentenone - e.g. as coumarin replacement, for improving, intensifying or modifying olfactory properties

FIRMENICH SA 06.05.77-CH-005689

E14 (06.11.79) *DT2819-858 C11b-09 + C11d-03/50 C11d-09/44

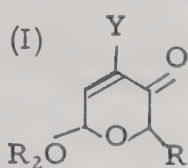
The odoriferous properties of perfumed articles are improved or modified by incorporating 3-phenyl-cyclopenten-2-en-1-one (I) therein. (I) is used as a nontoxic substitute for coumarin. It has spicy lactonic odour and good stability towards current perfume ingredients, diluents and supports. It can be used in fine perfumery and in the mfr. of technical compsns. and cosmetics. Pref. (I) concn. in the article is 1-10 (5) wt.%, though in soaps, detergents etc. lower concns. can be employed.

(I) may be prepd. e.g. by reacting bromobenzene with 3-ethoxy-cyclopenten-2-en-1-one. 23.10.78 as 953916 Div. ex 414420 (+14.4.78-US-896440)(3pp945)

PFIZ D23 34952A/20 = US 4173-572
Gamma pyrone(s) esp. maltol and ethyl maltol prepn. - from furan cpds., used in perfumes and flavouring and as flavour enhancers in food

PFIZER INC 12.11.76-US-741348 (28.08.78-US-937407)
E13 (D13) (06.11.79) *BE-860-699 C07d-309/22

Gamma-pyrone cpds. of formula (I) are new. In (I) R is 1-4C alkyl, phenyl is benzyl; R² is H or 1-4 C alkyl; and Y is 1-4 alkoxy. Pref. R is methyl or ethyl, Y is methoxy and R₂ is methyl. (I) provide flavour and aroma to food prods. They are prepd. by contacting 3-halo or 3-alkoxy furfuryl alcohol deriv. with halo-gen peracid or peroxide and heating until hydrolysis is complete. 28.8.78 as 937407 Div. ex 4126624 (7pp964)



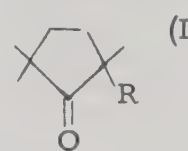
FIRM D23 85082Y/48 = US 4173-584
(2)-(N)-alkyl-cyclopentanone derivs. - prepd. by alkylating the corresp. (2)-(N)-alkyl cyclopentanone have fruity notes, like peaches or apricots (NL 15.11.77)

FIRMENICH SA 13.05.76-CH-005995

B05 E15 P15 (D13) (06.11.79) *DT2721-002 C07c-49/28

Cyclopentanone derivs. of formula (I) are new. In (I) R is 4-6 (pref. linear) alkyl. Specifically claimed is 2,5,5-trimethyl-2-pentyl cyclopentanone.

(I) are used for the prepn. of perfumes and perfumed prods., and in the aromatisation of foodstuffs, feedstuffs, beverages, pharmaceuticals and tobacco. (I) have a fruity character and also develop sweet fermented or mushroom-like aromatic odour. They are prepd. by conventional alkylating reactions. 3.2.77 as 793287 (3pp964)

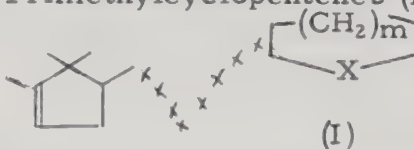


INFL ★ D23 84058B/46 ★ US 4173-585
Tri:methyl-3-cyclopentenyl-alkenyl- and alkylidene-cycloalkanone(s) - used in perfume and fragrance compsns. and perfumed articles including soaps, detergents, powders etc.

INT FLAVORS & FRAGR INC 10.08.78-US-932677

E15 (D21 D25) (06.11.79) C07c-49/46

Trimethyleyclopentenones (I) are new:



(Where m=0 or 1; one of xxx lines is single bond, other is double bond; x-CO)

(I) are useful in perfume and fragrance compsns.,

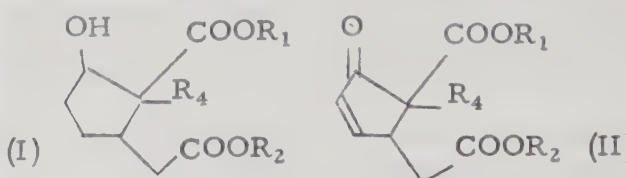
imparting rich, musky, cedar woody, sandalwood, sweet, floral, ionone-like, soft-fruity (apricot), green and earthy aromas with resinous top notes and nutty oily nuances. 10.8.78 as 932677 (71pp478)

SAKB D23 14431B/08 = US 4173-707
Cyclopentanol derivs. - are useful intermediates for jasmone cpds., used in perfumery

OTSUKA KAGAKU YAKUHI 12.08.77-JA-097175 (12.08.77-JA-097174)

E15 (06.11.79) *DT2824-843 C07c-69/74

New cyclopentanol derivs. are of formula (I). In (I) R₁ and R₂ are lower opt. branched (ar)alkyl or alkenyl and R₄



is 2-pentenyl or 2-pentynyl. The cpds. are prepd. simply by selective redn. of a 2-cyclopentenone of formula (II).

The cpds. are useful as intermediates for the synthesis of jasmoneid cpds. which are important as perfumes. Typical (I) is 2-tert-butoxycarbonyl-3-methoxycarbonylmethyl-2-(cis-2-pentenyl)-cyclopentanol. 8.6.78 as 913689 (6pp924)

D24: SOAP; SOAP DETERGENTS

See Also

D25 BE 876210

D25: OTHER DETERGENTS

FARH ★ D25 82551B/46 ★BE-876-146
Washing and cleaning prod., esp. washing powder - contg. ortho-pyro- and tri:poly-phosphate(s) with fusion phosphate
HOECHST AG 11.05.78-DT-820554
(09.11.79) C11d

The product contains 5-30% of a nonionic, hybrid, amphotenic, cationic and/or anionic surfactant 10-30% of a mixt. of detergence auxiliaries consisting of (a) alkali orthophosphate, pyrophosphate, tripolyphosphate and (b) fusion phosphate in which the ratio (a):(b) is from 30:1 to 1:30, the ortho/pyro phosphate ratio is from 10:1 to 1:10 and the ortho/tripoly phosphate ratio is from 20:1 to 1:20, the remainder being auxiliary prods. and additives. The fusion phosphates are highly condensed linear polyphosphates.

The prod. has a reduced phosphate content with resulting less ham to the environment and the detergent power is not less than previous prods. Also the product has good fluidity and stability to storage. 9.5.79 as 876146 (13pp)

UNIL ★ D25 82563B/46 ★BE-876-210
Prepn. of spray dried soap contg. washing powders - mixing suspension with current contg. part of soap or fatty acid
UNILEVER NV 11.05.78-GB-018975
(D24) (12.11.79) C11d

Process comprises forming a 1st current from an aq. suspension of the washing powder constituents and a 2nd current from at least a part of the constituent soap or the fatty acid precursor of the soap. The two currents are then mixed and spray dried.

Omitting the soap from the mainstream results in a lower viscosity and therefore less water may be used, also the main suspension has as a result less tendency to absorb air enabling a powder of higher apparent specific weight. 11.5.79 as 876210 (11pp597)

BADI ★ D25 82636B/46 ★DT 2817-785
Storage stable iodinated block copolymer for disinfectant detergents - contains THF and ethylene oxide polymer blocks
BASF AG 22.04.78-DT-817785
A97 (A13 D22) (08.11.79) C08g-65/32 C11d-03/48

Iodinated block copolymer (I) contg. 5-25 wt. % iodine is based on a polymer (II) of the formula $R(AB)_z$ (where R is H or a 1-18C aliphatic hydrocarbyl gp. if $z = 1$ and R is a z -valent 2-8C aliphatic hydrocarbyl gp. with O- z ethylene oxide (EO) units if $z \neq 1$; $z = 1-6$; A is a (co)polymer block with 4-100 1,4-butylene oxide (THF) units and 0-25 EO units and B a (co)polymer block with 0-50 THF and 1-100 EO units, the fraction of THF being over 50 mole-% in A and under 50 mole-% in B). In (II), the total molar ratio of THF/EO units is 0.25-1.2:1. (I) is produced by combining (II) with sufficient I_2 to give the required bound iodine content.

(I) is used as active component in disinfectant detergents. These are useful, e.g. in the beverage industry and in dairies. (I) has excellent storage stability, even in highly diluted form. 22.4.78 as 817785 (10pp016)

ALCN ★ D25 82734B/46 ★DT 2819-501
Aluminium bottleneck foil or label - secured to container by lye-resistant film contg. detergent or surfactant
ALCAN FOLIEN GMBH 03.05.78-DT-819501
A97 G02 Q32 R32 (08.11.79) B65d-23/08 G09f-03

In an Al bottleneck foil or label having a lye-resistant surface film on both sides, at least the foil side to be bonded to the carrier side contains ≥ 1 substance, (I), generating or promoting a washing activity in the presence of water.

The foil or label is used as a decorative foil in beer bottles, medicine containers, etc., and for marking and indicating the price of industrial or domestic glasses.

On washing before container re-use, the Al foils are loosened and the labels are removed with the washing soln. Al dissolution is prevented, together with associated hazards., e.g. pollution and H_2 generation. 3.5.78 as 819501 (16pp200)

ALCN ★ D25 82735B/46 ★DT 2819-510
Labelling container e.g. with decorative aluminium bottleneck foil - by introducing detergent between foil or label and container
ALCAN FOLIEN GMBH 03.05.78-DT-819510
G03 Q31 (08.11.79) B65c-03/08

One or more substances, (I) which generate or promote a washing activity in the presence of water, is/are introduced between foil or label and container, in a process for labelling containers by bonding bottleneck foils of opt. printed or embossed Al provided with a lye-resistant coating.

Process is used for labelling industrial and domestic glasses and for applying decorative foils on beer- or champagne or other sparkling wine bottles. The labels and foils are applied safely and removed quickly before container re-use. 3.5.78 as 819510 (15pp200)

PERA- ★ D25 82872B/46 ★FR 2416-209
Sulphonation column producing surfactants for cosmetics and detergents - has internal fins to improve contacting and heat dissipation
IIT SAS DI PERANI & 27.10.77-IT-029052
E21 J04 (05.10.79) C07b-13/02

Process and a reactor chamber, pref. column, for the continuous sulphonation of organic liqs. with SO_3 . The gas and liq. flow together as descending currents through an externally refrigerated reaction chamber. The currents flow down the inside of the chamber wall which is now roughened with tiny fins projecting into the liq. The fins can be continuous or discontinuous and arranged in a predetermined pattern.

The height of the fins is pref. between 0.1-10 (0.5-3) mm. Spacing between adjacent fins is pref. 8-30 times the height of a fin. In a cylindrical column, the spacing between adjacent fins is pref. equal also to 0.8-0.1 times the dia. of the column.

Used for prodn. of surfactants partic. for the mfr. of cosmetics and detergents. The fins produce improved contacting and heat dissipation. As a result it is possible to obtain a higher yield of prod., with optimum colour and solubility, than was possible with previous thin film columns. 25.10.78 as 030998 (10pp448).

PROC ★ D25 B/46 ★J5 4129-010
Storage-stable washing detergent compsn.
PROCTER & GAMBLE CO 23.12.77-US-864135
(06.10.79)
23.12.78 as 160968.

PROC ★ D25 B/46 ★J5 4130-509
Cationic surfactant
PROCTER & GAMBLE CO 29.06.77-US-811219
(09.10.79)
29.6.78 as 079228.

UNIL D25 33373B/18 =US 4173-539
Fabric softener compsn. - contg. complex of quaternary ammonium salt with one long chain and anionic surfactant
LEVER BROTHERS CO 31.10.77-GB-045254
E19 (06.11.79) *BE-871-714 D06m-13 34

Powable liq. fabric softening compsn. of uniform turbidity comprises a dispersion in isotropic medium of positively charged particles of softening agent with a m. pt. $< 95^\circ C$.

The particles comprises a quat. ammonium salt fabric

softener having one 12-12C straight chain aliphatic hydrocarbon gp., the chloride salt of whose cation A has a krafft pt. in water $< 95^{\circ}\text{C}$, complexed within the anion B of an anionic surfactant salt having one 12-24C straight chain aliphatic hydrocarbon gp. The normality ratio of A to B is 1:1 - 5:1. The total wt. of A + B is 2-15 wt. % of the compsn. The compsn. has a clear pt. $> 95^{\circ}\text{C}$.

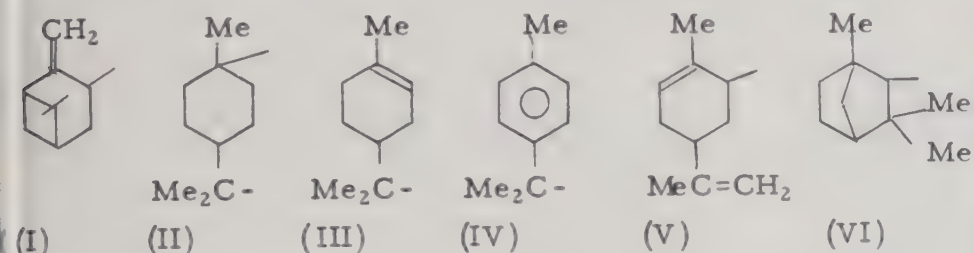
The compsns. are stable and can be used in the rinse following the washing process. 31.10.78 as 956234 (8pp)

INFL ★ D25 84040B/46 ★ US 4173-543
Improving aroma of solid or liq. detergent - by addn. of terpenyl alkyl, alkenyl, halo-alkenyl or alkynyl ether

INT FLAVORS & FRAGR INC 05.09.78-US-939896 (27.01.78-US-872937)

E15 (06.11.79) C11d-03/50

Process for augmenting or enhancing the aroma of a solid or liq. detergent comprises adding to a detergent base or a soap base 0.01-0.5% of a 10C terpenyl ether of formula $\text{Z}-(\text{OR})_n$. In the formula, n is 1 or 2; R is 1-4C alkyl, 3-4C alkenyl, 3C alkynyl or 3C haloalkenyl; and Z is a 10C terpenyl moiety of formula (I)-(VII).



Pref. ethers include geranyl butyl ether, carvyl ethyl ether, 8-p-cymeryl ethyl ether, fenchyl ethyl ether and bornyl methyl ether. The parent patent claimed method for augmenting or enhancing the aroma and taste of a foodstuff or chewing gum by addn. of 0.5-100 ppm

of a pinocarvyl aliphatic ether of formula $\text{Z}-\text{OX}$ where Z is (I) and X is $\text{CH}_2 \equiv \text{CH}$, $\text{CH}_2\text{CMe}=\text{CH}_2$, $\text{CH}_2\text{CH}=\text{CH}_2$ or $\text{CH}_2\text{CCl}=\text{CH}_2$. 5.9.78 as 939896 Div. ex 4131687 (47pp927)

ETHY ★ D25 84056B/46 ★ US 4173-579
Sulphonic acid salt prepn. from sulphonated olefin - by reaction with a base in successive non-aq. and aq. stages

ETHYL CORP 01.04.75-US-564095 (26.02.74-US-445959)

E17 (06.11.79) C07c-143/16

6-30C Olefins sulphonated with 0.5-2 mols SO_3 per mol

olefin are converted to sulphonic acid salts by (a) reaction with anhydrous alkali metal oxide, hydroxide or carbonate or ammonium carbonate to convert some of the sulphonated mols., including all the free sulphonic acids, into sulphonic acid salts, so forming an intermediate and (b) reacting the intermediate with water or aq. ammonium or alkali metal oxide, hydroxide or carbonate to convert addnl. sulphonated mols. into sulphonic acid salts.

The salts are useful in detergent compsns. The intermediate is free of water or diluent and is thus economic and stable for shipment and storage. Step (b) can be carried out immediately or at a later date. 1.4.75 as 564095 (9pp1406)

FMCC D25 53024B/29 = US 4173-622
Uniform small zeolite A crystals prodn. - by seeding sodium aluminium silicate gel, useful in detergents and water softeners

FMC CORP 03.01.78-US-866302

E33 (06.11.79) *EP--2-960 C01b-33/28

Uniform eolite A crystals of $< 10 \mu\text{m}$ are mfd. by (a) prepg. seed crystals by comminuting eolite A to a number average particle size of $< 0.5 \mu\text{m}$ and clusters are broken up; (b) prepg. an Na Al silicate gel contg. 88-98 mol. % water and free of nucleating particles; (c) uniformly distributing seed crystals throughout the gel; (d) keeping at $> 70^{\circ}\text{C}$ until crystallisation of the gel is complete and (e) sepg. the prod.

The gel contains, on an anhydrous basis, 26-62 mol. % Na_2O , 10-37 mol. % Al_2O_3 and 24-50 mol. % SiO_2 . The quantity of seed crystals added is such that when the gel is depleted and crystal growth terminates, the seed crystals have grown to the desired size. 3.1.78 as 866302 (7pp974)

BADI ★ D25 84129B/46 ★ ZA 7804-238
Liq. detergent-bleach concentrate of high alkalinity - contg. alkali metal hypochlorite, alkali metal salt of alkylated di:phenyl oxide sulphonic acid alkali metal hydroxide and chloride

BASF WYANDOTTE CORP 27.07.77-US-819261

(20.06.79) C11d-03/39

See Also

D15 DT 2917460

D23 US 4173585



CPI INDEXES

ALERTING PATENTEE INDEX (III)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

In Country Alerting Bulletin only

M22
*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502-292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or # sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U A97D15M14
*645 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
*654 49862X A88H01Q4
*655 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A-M cumulations of from a quarter up to 5 years are available as COM.

CALI
Nitrile rubber smooth rolled sleeve for well impression packer - also contg natural rubber, hydrated 49862X/26 *US 3963-654
CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01
Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying earth in dams 49433X/26 *DT 2554-327
CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02
CANA
Emulsifying agents of microbial origin - used esp. for oil spills, are made by cultivating a species of 48076X/26 *CA -990-668
CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180
Europe	150
France	740
Germany, W. unexamined	1050
Japan unexamined	845*
Netherlands unexamined	240
PCT	40
Research Disclosure	20
South Africa	100
Sweden	260
United Kingdom unexamined	600
	<u>3325</u>

Slow publishing

Canada	450
Germany, E.	100
Germany, W. examined	465
Japan examined	340*
Netherlands examined	60
Soviet Union	1200
Switzerland	260
United Kingdom examined	300
United States	1200
	<u>4375</u>

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140
Denmark	120
Finland	60
Norway	80
Portugal	30
	<u>430</u>

Slow publishing

Austria	125
Czechoslovakia	180
Hungary	35
Israel	40
Italy	155
Rumania	25
	<u>560</u>

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MV
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

- ABBO 20.03.78 ABBOTT LABORATORIES A96 B04 D16 J04 = J5 4128-396
Stable reagents for hepatitis testing - 69922B/39
- *ABHE= 27.09.77 AS BELO HEAT MASS D14 *SU -650-602
Device for roller dryer product removal - 83829B/46
- AGEN 30.04.75 AGENCY OF IND SCI TECH A97 D15 H03 = J7 9033-594
Carboxymethylated edible yeast for collecting oil on water - 96743X/52
- AGEN 02.05.75 AGENCY OF IND SCI TECH D16 H03 = J5 1132-650
Oil absorbent prodn. esp. for oil spillages - 83596B/46
- *AGEN 02.05.75 AGENCY OF IND SCI TECH D16 H03 *J7 9033-595
Oil absorbent prodn. esp. for oil spillages - 83596B/46
- AGEN 02.05.75 AGENCY OF IND SCI TECH D15 H03 (D16) = J7 9033-596
Discharged oil treating agent - 00946Y/01
- *AGEN 29.03.78 AGENCY OF IND SCI TECH A97 B07 D16 J04 *J5 4128-482
High strength microcapsule contg. enzyme, hormone, medicine, etc. - 83157B/46
- *AGEN 30.03.78 AGENCY OF IND SCI TECH D15 *J5 4129-751
Treating sulphide waste water contg. organic cpds. - 83395B/46
- *AGEN 30.03.78 AGENCY OF IND SCI TECH D15 *J5 4129-752
Treatment of waste water contg. COD components, colouring, sulphide(s) - 83396B/46
- *AGRI= 21.07.77 AGRIC MICROBIOLOGY C03 D16 *SU -649-387
Strain *Verticillium Dahliae* kleb 214, causing wilting of cotton plants - 83722B/46
- *AHSC 13.07.78 AMER HOSPITAL SUPPL CORP B04 D16 *BE -877-709
Enzymatic assay of tri:glyceride in biological fluid - 82609B/46
- AIRL 03.02.78 AIR LIQUIDE L' A97 D22 = FR 2416-016
Deodorant compsn. or plant for animal waste fertilisers - 60144B/33
- AJIN 01.09.76 AJINOMOTO KK D15 E16 H03 (E33 E34) = J7 9033-798
Removing oil floating on sea by gelation - 32706A/18
- AJIN 01.02.78 AJINOMOTO KK B03 D16 E13 = FR 2416-264
Fermentative prodn. of L-proline - 58379B/32
- *AJIN 28.03.78 AJINOMOTO KK D16 E19 J04 *J5 4128-393
Determining volatile substances in e.g. fermentation liquor - 83124B/46
- *AJIN 28.03.78 AJINOMOTO KK A89 B05 D16 E16 *J5 4128-394
L-Glutamic acid and L-glutamine determ. - 83125B/46
- *AJIN 03.04.78 AJINOMOTO KK D23 E13 (D13) *J5 4130-503
Heterocyclic phenol cpd. AOS - 83503B/46
- ALBE/ 03.02.78 ALBERTINI F D15 J01 = FR 2416-042
Filter for liq. with suspended fine particles - 60166B/33
- ALBR 07.02.78 ALBRIGHT & WILSON LTD D25 E19 = FR 2416-261
Prepn. of conc. surfactant mixt. forming liq. lamellar phase - 47415B/26
- ALBR 28.03.78 BUSH BOAKE ALLEN LT D13 #NO 7801-064
Flavouring agent pepper cinnamon or turmeric emulsion prepn. - 70165B/39
- *ALCN 03.05.78 ALCAN FOLIEN GMBH A97 D25 G02 *DT 2819-501
Aluminium bottleneck foil or label - 82734B/46
- *ALCN 03.05.78 ALCAN FOLIEN GMBH D25 G03 *DT 2819-510
Labelling container e.g. with decorative aluminium bottleneck foil - 82735B/46
- ALFA 31.01.78 ALFA-LAVAL AB D16 E17 = FR 2416-263
Continuous prodn. of ethanol - 60966B/33
- *ALLI/ 01.02.78 ALLIBERT A S A L A32 D21 F02 L01 *FR 2416-074
Rounding and smoothing the ends of fibres - 82865B/46
- ALMI= 06.02.78 AS LATV MICROBIOL INST A97 C03 D13 #FR 2415-967
Feed-concentrate powder polymer coating - 68219B/38
- *ALTA= 01.09.77 ALTAI DAIRY CHEESE D13 *SU -650-571
Block-shaped cheese press - 83825B/46
- *AMAK/ 01.04.78 AMAKAWA I D15 J03 *J5 4130-479
Electrolytic prodn. of ionised water - 83491B/46
- AMCY 30.03.78 AMERICAN CYANAMID CO B03 D16 = DK 7901-324
Antibiotics produced by *Nocardia* fermentation - 75558B/42
- *APUK/ 22.01.76 APUKHTIN B A D14 *SU -650-826
Plastic material, e.g. animal feed extruder - 83884B/46
- ARBR- 11.12.74 ARBROOK INC D22 E17 = US 4173-653
Oxydiacetaldehyde contg. disinfectant compsn. - 48302X/26
- *ASAE 31.03.78 ASAHI DENKA KOGYO D21 *J5 4129-150
Fluid shortening prepn. - 83358B/46
- *ASAH 31.03.78 ASAHI CHEMICAL IND KK B03 C02 D16 *J5 4130-584
2,6-Di:oxo-hexa:hydro-1,3-di:subst.-pyrimidine derivs. - 83522B/46
- *ASCH= 20.09.77 AS USSR CHEM PHYS D16 *SU -651-029
Portable microbial culture incubator - 83904B/46
- *AXFO/ 03.05.78 AXFORD H G B04 D16 *DT 2917-180
Multiple inoculation of bacteria samples - 82821B/46
- BACB 09.01.78 BACILLOFAB DR BODE CO A60 D22 E16 G02 (E13 G03) = J5 4129-124
Synergistic preservative compsns. - 52775B/29
- BADI 18.08.76 BASF AG D15 = DS 2637-108
Lowering heat and odour evolution during effluent treatment - 16080A/09
- *BADI 27.07.77 BASF WYANDOTTE CORP D25 *ZA 7804-238
Liq. detergent-bleach concentrate of high alkalinity - 84129B/46
- BADI 06.10.77 BASF AG A26 D15 E16 H07 (A97 D22) = ZA 7805-635
Poly:alkylene poly:amine prepn. - 31930B/17
- *BADI 22.04.78 BASF AG A97 D25 (A13 D22) *DT 2817-785
Storage stable iodinated block copolymer for disinfectant detergents - 82636B/46
- *BADI 05.05.78 BASF AG D23 E15 G02 (G03) *DT 2819-594
Octyl-cyclohexane perfume cpds. contg. 2,2,3,4 tetra:methyl-butyl gp. - 82749B/46
- BAEN- 05.05.78 TETRA WKE BAENSCH G D15 = DT 2819-636
Treating water for aquariums using cation exchanger - 66384B/37
- BAUM- 15.12.77 BAUMGARTNER PAPIERS D18 F04 = ZA 7806-786
Cigarette filters prodn. - 29786B/16
- *BAUM- 07.07.78 BAUMANN-BELTRON D15 *BE -877-562
Submersible mat for air injection into bubble bath - 82566B/46
- BECK- 21.12.76 NATURIN-WERK BECKER A97 D12 (A25) = DS 2657-833
Polyurethane casings for boiled sausages - 47957A/27
- BEEC 01.11.77 BEECHAM GROUP LTD B03 D16 = ZA 7806-114
Pseudomonic acid C from *Pseudomonas fluorescens* fermentation - 54894B/30
- BEEC 31.03.78 BEECHAM INC B05 D21 E16 = DK 7901-341
Oral hygiene compsn. for control of dental plaque and gingivitis - 75699B/42
- *BEKI 10.01.77 BELO KIROV TECH D16 *SU -650-644
Yeast cells prodn. appts. - 83831B/46
- BEST- 10.11.77 MASCH BESTA D15 = DT 2818-749
Reception bunker for rubbish partic. from waste water screens - 61889B/34
- *BIOC- 28.04.78 BIOCHEM DESIGN SPA D16 *BR 7902-668
Accelerated fermentation and distn. of conc. sugar substrates - B/46
- BIOT- 11.02.78 GES BIOTECHN FORSCH D16 E13 H01 = BR 7900-826
Oil extrn. by flooding with water - 61639B/34
- BIOT- 31.03.78 GES FUR BIOTECHNOL B04 D16 = DK 7901-312
Forming hybrid bacteria - 73965B/41
- *BIWA- 04.05.78 BIWATER SHELLABEAR D15 *ZA 7804-650
Water treatment and storage unit - 84131B/46
- *BLOK/ 07.07.76 BLOK A D15 *US 4173-419
Rotary mixer for sludge and flocculating polymer - 83991B/46
- *BMIC= 10.01.77 BELO BELGIPROBIOSIN D16 *SU -650-644
Yeast cells prodn. appts. - 83831B/46
- *BOEF 02.05.78 BOEHRINGER MANNHEIM GMBH A89 B04 D16 *DT 2819-298
Substrate for serum alpha-amylase determination - 82716B/46
- BRAX/ 28.04.78 BRAXTON E J B04 D16 = BR 7902-616
Adsorption to obtain trace constituents esp. urokinase from urine - 66356B/37
- BRAX/ 28.04.78 BRAXTON E J B04 D16 = DT 2915-624
Adsorption to obtain trace constituents esp. urokinase from urine - 66356B/37
- BRAX/ 28.04.78 BRAXTON E J B04 D16 = NL 7903-282
Adsorption to obtain trace constituents esp. urokinase from urine - 66356B/37
- BRIM 15.04.76 BRISTOL MYERS CO B03 D16 = GB 1555-636
Musettamycin and marcellomycin antibiotics - 57458Y/32
- BRPE 03.01.74 BRITISH PETROLEUM LTD D15 H05 = DS 2461-727
Oil-containing effluent purification - 48087W/29
- *BRPE 05.04.78 BRITISH PETROLEUM LTD D15 H05 J01 *BR 7900-531
Sepn. of oil-water emulsion using oil-water streams - B/46
- BRTA 24.09.71 BRIT AMER TOBACCO LTD D18 = DS 2246-787
Cigarette mfr - 23067U/17
- BUCH 24.08.77 BUCHERGUYER MASCH D16 = ZA 7804-696
Large horizontal container drive - 18245B/10
- BURK/ 03.05.78 BURKLIN W D16 (D15) = DT 2819-360
Composting material depository - 68454B/38
- CARL- 08.05.73 CARLE & MONTANARI D13 = DS 2421-145
Continuous cooling and working of caramel - 83769V/48
- CARL- 31.03.78 CARLE & MONTANARI D11 #DK 7801-429
Wafer cutting and feeding machine - 58110B/32
- CARO 11.06.75 CARBORUNDUM CO D15 E36 J04 = GB 1555-811
Granular active carbon prepn. from black lignite granules - 96600X/52
- CARO 17.06.75 CARBORUNDUM CO D15 E36 = GB 1555-812
Granular active carbon prepn. from low grade bituminous coal - 00303Y/01
- CASE/ 03.02.78 CASEY J A D17 = BR 7900-668
Precipitation of impurities from cane sugar juice - 09795B/05
- *CDCR- 09.04.76 CDC RESEARCH INC D21 E12 (E36) *US 4173-453
Non-toxic topical hair colouring compsns. - 83998B/46
- CELA 10.01.68 CELANESE CORP A97 D18 (A11) = J7 9034-079
Tobacco replacement material - 30314Q/00
- CELA 15.07.69 CELANESE CORP A11 D18 (A97) = J7 9034-080
Tobacco substitute - 06275S/03
- CELA 13.03.78 CELANESE CORP A88 D18 (A11 A32) = J5 4128-070
Cellulose acetate foam cigarette filter rod - 68589B/38
- CHCC 19.01.77 CHISSO CORP A97 D18 F04 (A18) = US 4173-504
Synthetic fibre tobacco filters - 55363A/31
- CHEM 10.03.78 CHEM WERKE HULS AG B05 D22 E15 = J5 4128-548
Tetra:chloro-cyclo:butenone prodn. from hexa:chloro-cyclobutene - 70150B/39
- CHEM- 15.07.76 CHEMAP AG D16 = US 4173-516
Animal and human tissue cells cultivator - 06659A/04

- *CHEM = 11.05.77 CHEMISATION DES BUR A96 D21 E17 (A23) *SU -649-432
Moisture stable hair lacquer compsn. - 83735B/46
- *CHUG 31.03.78 CHUGOKU KOGYO KK D15 *J5 4128-976
Treatment of faeces and urine - 83261B/46
- *CHUI 29.03.78 CHUGAI RO KOGYO KAISHA D15 E31 J01 M14 *J5 4128-158
Treating chromium-contg. sludge - 83105B/46
- *CHUV = 03.10.77 CHUVASH AGRIC INST D14 *SU -650-603
Fruit grading and gauging machine - 83830B/46
- CIBA 09.09.70 CIBA GEIGY CORP B05 D22 E14 = US 4173-577
Substd anilino-phenyl acetylhydroxamic acids - 17936T/11
- CIGA 21.04.78 CIGARETTE COMPONENT LTD D18 F07 = BR 7902-479
Cigarette filter additives carried on preimpregnated threads - 64740B/36
- CIGA 23.03.79 CIGARETTE COMPONENT LTD D18 F07 = GB 2020-158
Cigarette filter additives carried on preimpregnated threads - 64740B/36
- *CLIN- 09.02.78 CLINE-BUCKNER INC D22 *US 4173-604
Fragrance-deodorant concentrate vapour generator - 84066B/46
- CLOR- 06.02.78 CLOROX CO D25 E34 = FR 2416-294
Built aq. bleaching compsns. - 36993B/19
- COLG 30.12.74 COLGATE PALMOLIVE CO D25 = CA 1065-228
Washing auxiliary for textiles - 54439X/29
- COLG 02.12.76 COLGATE PALMOLIVE CO A97 D25 E34 = ZA 7706-947
Washing powder based on sodium tri:poly-phosphate particles - 26992A/15
- COLG 28.03.77 COLGATE PALMOLIVE CO A60 D25 E11 F06 (A23) = ZA 7801-293
Antistatic textile softening compsn. esp. for nylon - 55126A/31
- COLG 28.03.77 COLGATE PALMOLIVE CO D25 E34 F06 = ZA 7801-317
Conc. non-gelling textile softening compsns. - 55106A/31
- COLG 28.03.77 COLGATE PALMOLIVE CO B05 D21 E11 = ZA 7801-516
Long chain amine mono:fluorophosphate salts - 65315A/37
- COLG 31.03.77 COLGATE PALMOLIVE CO D25 E19 = ZA 7801-513
Stain removing compsn. prior to detergent washing - 55155A/31
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 F07 = DK 7901-137
Disposable tampon or towel - 56316B/31
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 = DK 7901-138
Absorbent pad for sanitary towel, disposable napkin, etc. - 69951B/39
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 = DK 7901-140
Mfg. absorbent pad for sanitary towel, disposable napkin, etc. - 69952B/39
- *COLP- 25.07.78 COLPAK PTY LTD A97 D12 *ZA 7804-217
Sausage skin - 84128B/46
- CORP 09.06.76 CPC INTERNATIONAL INC D17 E13 = CA 1065-313
Saccharide separation by chromatography - 00403A/01
- *CROM- 02.09.76 CROMAC CHEM CO A97 D22 E36 (A14 E14) *CA 1065-254
Protective film-forming teat dip for dairy animals - 82614B/46
- *CSIR 13.02.78 COMMONWEALTH SCI IND D15 *J5 4128-980
Drain water treatment process - B/46
- *CUXS- 25.10.75 CUXSON GERRARD & CO D22 *GB 1555-769
Easy-fasten surgical bandage - 82911B/46
- *DAAG 11.07.69 DAINIPPON SEITO KK A91 C04 D17 E34 *J7 9034-058
Removal of potassium from sugar soln. - 83615B/46
- *DAUC 12.12.70 DAIICHI SEIYAKU KK D13 E19 *J7 9034-068
Preventing discolouration of fresh vegetables - 83617B/46
- *DEBA- 17.08.78 DEBAG DEUT BACKOFEN D11 *DS 2836-118
Hot air circulation baking oven - 82626B/46
- *DEGM 06.02.78 DEGEMONT SA D15 J01 *FR 2416-043
Band filter - 82861B/46
- DEGS 18.11.77 DEUTSCHE GOLD & SILBER D21 M26 = ZA 7806-272
Yellow gold alloy - 22149B/12
- DEGS 10.03.78 DEUTSCHE GOLD & SILBER D25 E34 = GB 2020-259
Sodium percarbonate particles coated with dehydrated sodium perborate - 66331B/37
- DEGS 10.03.78 DEUTSCHE GOLD & SILBER D25 E34 = J5 4127-900
Sodium percarbonate particles coated with dehydrated sodium perborate - 66331B/37
- *DEVE- 09.05.78 MACH DEVENTER G BV D15 J01 *GB 2020-189
Appts. for sepg. oil and water - 82928B/46
- *DNII 31.03.78 DAINIPPON INK INST CHEM D15 E19 *J5 4129-755
Treatment of waste water - 83397B/46
- *DNIN 31.03.78 DAINIPPON INK CHEM KK D15 E19 *J5 4129-755
Treatment of waste water - 83397B/46
- DOWC 07.04.75 DOW CHEMICAL CO A96 D22 F07 G02 (A14) = CA 1065-294
Water absorbent, cross linked acrylic fibres and films - 79344X/43
- DOWC 14.06.76 DOW CHEMICAL CO A11 B04 D25 (A96 A97 B07) = CA 1065-312
Low mol. wt. cellulosic ethers and esters treated with sulphur dioxide - 89955Y/50
- DSME 16.11.77 DE SMET J EXTRACTION SA D17 J01 = ZA 7806-368
Continuous extrn. by diffusion into solvent esp. for sugar mfr. - 23370A/13
- *DUGG/ 23.02.76 DUGGINS RS D16 *US 4173-656
Rapid ageing of alcoholic liquors - 84086B/46
- *DURA/ 03.05.78 DURAN V D11 *DT 2910-502
Dumpling preparation - 82785B/46
- DUSK- 31.03.78 DUSKIN FRANCHISE KK A97 D25 E19 F06 (A84) #J5 4130-606
Fibrous cleaning material impregnated with an oiling compsn. - 18301A/10
- DYNN 29.04.78 DYNAMIT NOBEL AG D15 E33 F09 L02 = DT 2819-004
Directly usable alkaline aluminate prodn. in high yield - 66375B/37
- DYNN 29.04.78 DYNAMIT NOBEL AG D15 E33 F09 L02 = NL 7903-374
Directly usable alkaline aluminate prodn. in high yield - 66375B/37
- *EBAI 29.03.78 EBARA INFILCO KK D15 J01 L02 *J5 4128-476
Incinerated waste residue treatment, including solidification - 83153B/46
- *EBAI 29.03.78 EBARA INFILCO KK D15 L02 *J5 4128-477
Incinerated waste residue treatment - 83154B/46
- EGER/ 29.03.78 EGER G D16 = DK 7901-271
Mono:karyons prodn. from di:karyotic Basidiomycetes strains - 71712B/40
- *EISA 31.03.78 EISAI KK D13 *J5 4129-141
Increasing viscosity of, or solidifying, hydrous liq. foods - 83357B/46
- ELCL 03.01.75 UK ELECTRICITY COUNCIL D15 J03 M11 = CA 1065-272
Electrolytic treatment of dilute cyanide solutions - 56287X/30
- *ELIL 12.08.69 ELI LILLY & CO B02 C02 D16 *US 4173-702
7-Substd.-valero-amido-7-methoxy-3-cephem-4 carboxylic acid - 84108B/46
- *ENTE- 07.03.74 ENTENMANN'S INC D15 *US 4173-532
Waste water treatment - 84035B/46
- *ENVI 30.09.76 ENVIROTECH CORP D15 *US 4173-534
Thickener unit for primary and secondary sewage sludge - 84037B/46
- *ESSI 03.02.78 ESSILOR INT D22 *FR 2416-492
Electrically heated steriliser for contact lenses - 82892B/46
- *ESSO 07.11.77 EXXON PROD RES D15 H01 *US 4173-533
Removing suspended oil droplets from water - 84036B/46
- *ETHY 26.02.74 ETHYL CORP D25 E17 *US 4173-579
Sulphonic acid salt prepn. from sulphonated olefin - 84056B/46
- *EURO- 26.04.78 EUROCOM EST A96 D22 (A97) *DT 2818-276
Biological parts fixture - 82659B/46
- *FANG/ 06.07.79 CHENG SAUANG FANG D14 *BR 7904-259
Automatic orange juice extractor - B/46
- FARB 08.03.77 BAYER AG D13 = GB 1555-647
Treating extracted sugar beet husks to give good colour - 65294A/37
- FARB 17.03.78 BAYER AG D25 E33 = J5 4127-924
Comminution of white toner used in washing powder - 70211B/39
- FARB 26.04.78 BAYER AG B02 C02 D13 E13 (D22) = DT 2818-263
Imino-acetamido beta-lactam antibiotic derivs. - 79405B/44
- *FARE= 03.01.73 FARE EAST DALTEKHRYB D12 *SU -475-143
Industrial fish-filleting machine - 83644B/46
- *FARE= 14.02.77 FARE FISHING INST A97 D15 H05 J01 *SU -649-658
Purificn. of petroleum-contaminated aq. waste - 83765B/46
- FARH 22.12.71 HOECHST AG A97 D12 (A23 A32) = DS 2163-764
Synthetic sausage casing prodn - 38646U/28
- FARH 11.02.78 HOECHST AG D15 = BR 7900-798
Sewage purification with admixed sludge in activation reactor - 61636B/34
- FARH 11.02.78 HOECHST AG D15 = BR 7900-799
Sewage purification with admixed sludge in activation chamber - 61635B/34
- FARH 14.02.78 HOECHST AG A96 B07 D21 (A14) = BR 7900-893
Thickening cosmetic, pharmaceutical compsns. etc. - 61669B/34
- FARH 11.03.78 HOECHST AG D13 E12 = J5 4129-121
Potassium sorbate granulation - 68433B/38
- *FARH 11.05.78 HOECHST AG D25 *BE -876-146
Washing and cleaning prod., esp. washing powder - 82551B/46
- *FERM= 21.09.77 FERMENT PROD RES D16 *SU -651-022
Continuous microbial culture growing - 83901B/46
- FINN- 28.02.78 FINNPIPETTE OSMO SU B04 D16 J04 = J5 4130-195
Automatic measurement of agglutination test samples - 64904B/36
- FIRM 13.05.76 FIRMENICH SA B05 D23 E15 (D13) = US 4173-584
(2)-(N)-alkyl-cyclopentanone derivs. - 85082Y/48
- FIRM 06.05.77 FIRMENICH SA D23 E14 = US 4173-550
Perfume compsns. contg. 3-phenyl-cyclopentenone - 82568A/46
- FIRM 04.11.77 FIRMENICH SA B07 D13 E13 (B03) #DT 2749-511
Tetra:methyl-oxa-spiro-deca:diene cpds. - 34615B/18
- FMCC 03.01.78 FMC CORP D25 E33 = US 4173-622
Uniform small zeolite A crystals prodn. - 53024B/29
- FMCC 28.04.78 FMC CORP D25 E19 F06 (D22) #NL 7804-587
Crystalline percarboxylic acids prepn. from carboxylic acids - 68934A/39
- *FODD= 03.02.75 FODDER IND RES INST C03 D13 *SU -649-396
Preserving biological activity of components of fodder premixes - 83725B/46
- *FOOD= 19.09.77 FOOD SUPPLY EQUIP D13 *SU -650-570
Homogeniser for milk (and other emulsions) - 83824B/46
- *FORM- 02.11.77 FORMAX INC A88 D14 *US 4173-127
Frost removal appts. for cryogenic freezing tunnel - 83964B/46
- *FREI/ 15.09.78 FREIJM D14 E36 *ZA 7805-263
Fruit and vegetable preservation - 84140B/46
- FREN 30.09.74 FREUND INDUSTRY LTD B07 D14 J01 = J7 9033-237
Granulating and coating apparatus - 37160X/20

- FREU 31.01.78 FREUDENBERG, CARL FA A96 D21 = FR 2416-009
Hair- and skin-care cosmetic - 61583B/34
- FRNG 24.02.78 FRINGS H FA D16 J01 = J5 4128-986
Ultrafiltration circuit with recirculation - 64839B/36
- *FUJI- 31.03.78 FUJI ZOKI SEIYAKU B04 D16 J04 *J5 4129-189
Alcohol-ferri:cytochrome oxidn.-redn. enzyme prepn. - 83365B/46
- *FUJI/ 29.03.78 FUJIMURA N D22 E36 J03 *J5 4128-491
Ozone generator, for sterilisation and killing insects in food store - 83161B/46
- *FUJI/ 29.03.78 FUJIMURA N D22 E36 J03 *J5 4128-492
Ozone generating electric discharge pipe for sterilising food store - 83162B/46
- FULH 27.06.75 FULLER H B CO A96 D22 (A18) = GB 1555-531
Sanitary towel with components held by pressure sensitive adhesive - 02418Y/02
- *GANT= 27.09.77 GANTSEVICH VEG PRES D14 *SU -650-602
Device for roller dryer product removal - 83829B/46
- GENE 08.11.77 GENERAL ELECTRIC CO B04 D16 = ZA 7806-304
Recombining plasmid for transformation of bacteria - 35257B/19
- GENE- 08.11.77 GENENTECH INC B04 D16 = ZA 7806-305
Recombining plasmid for transformation of bacteria - 35257B/19
- GENE- 08.11.77 GENENTECH INC B04 D16 = ZA 7806-306
Recombining plasmid for transformation of bacteria - 35257B/19
- *GENE= 01.03.77 GENETICS MICROORGAN B04 D16 *SU -649-436
Gamma-globulin prodn. for medical and veterinary use - 83739B/46
- GENO 03.02.78 GENERAL FOODS CORP C03 D13 (D12) = FR 2416-280
Proteinaceous fibres having meat-like consistency - 42430B/23
- *GERE 01.05.78 GENERAL REFRACTORIE CO D15 (D25) *DT 2917-460
Synthetic crystalline analcime zeolite useful as water softener - 82831B/46
- *GESL 00.00.77 KERNFORSCHUNGS KARLSRUHE D15 *DT 2819-572
Waste liquor purificn. using alumina doped with carbon di:oxide - 82744B/46
- GESL 10.06.77 KERNFORSCHUNGS KARLSRUHE D15 E33 = DT 2819-573
Treating waste water using aluminium oxide - 20342B/11
- GIAM/ 27.04.78 GIAMMARCO G D15 J01 = DT 2916-993
Steam desorption of gases from liq. - 81176B/45
- GIUL- 26.11.77 GIULINI CHEMIE GMBH D21 = ZA 7806-614
Dentifrice contg. fine poly:phosphate granulate - 42569B/23
- *GLAS/ 28.04.78 GLASS H D12 *DT 2818-710
Meat tenderising machine - 82678B/46
- GLAX 26.04.78 GLAXO LTD A97 B04 D16 = DT 2916-736
Acremonium chrysogenum strains for cephalosporin prodn. - 80819B/45
- GLAX 26.04.78 GLAXO GROUP LTD A97 B04 D16 = NL 7903-251
Acremonium chrysogenum strains for cephalosporin prodn. - 80819B/45
- *GODB- 30.03.78 GODBITEN KONDITORI D11 *SW 7803-568
Cake icing machine with rotating nozzle - B/46
- GRAC 01.02.78 GRACE W R CO B02 C02 D16 = FR 2416-230
Fermentative prodn. of monordene - 40690B/22
- *GROZ= 08.06.77 GROZNYI PETRO INST D16 E31 F09 G01 *SU -649-683
Bleaching of clay suspensions for paper industry - 83782B/46
- HABE/ 22.07.76 HABER N B04 D16 E24 J03 (J04) = CA 1065-274
Electromolecular propulsion of cpds. in semiconducting media - 03968Y/03
- HABE/ 25.08.76 HABER N B04 D16 E24 J03 (J04) #GB 1556-024
Electromolecular propulsion of cpds. in semiconducting media - 03968Y/03
- *HAFF/ 25.04.78 HAFELE J A82 D11 (A26) *DT 2818-001
Pastry baking tin - 82641B/46
- *HAYE/ 26.07.76 HAYES J F D15 K07 L02 *US 4173-546
Treating radioactive caesium-contg. waste - 84041B/46
- HEIN/ 29.04.78 HEIN L D17 = BR 7902-592
Continuous sugar centrifuge - 82709B/46
- *HEIN/ 29.04.78 HEIN L D17 *DT 2819-135
Continuous sugar centrifuge - 82709B/46
- HENK 22.05.75 HENKEL CORP A97 D11 E19 = CA 1065-181
Emulsified gluten prodn. of good dispersibility - 52102Y/29
- HENK 12.05.77 HENKEL KG AUF AKTIEN D21 E14 = J5 4129-133
Antiinflammatory agents for cosmetics - 82130A/46
- HENK 23.03.78 HENKEL KG AUF AKTIEN D21 E23 = NO 7900-734
Hair dyeing compsns. - 72134B/40
- HENK 25.03.78 HENKEL KG AUF AKTIEN D21 E13 = NO 7900-733
Hair dyeing compsns. - 72133B/40
- HENK 24.04.78 HENKEL KG AUF AKTIEN A97 D25 E19 F06 (A25) = BR 7902-488
Liquid washing product for hand or machine washing - 79104B/44
- HENK 26.04.78 HENKEL KG AUF AKTIEN D23 E13 (D21 D25) = BR 7902-530
Tri:methyl-tetra:hydro-pyranone isomer perfumes - 79417B/44
- HENK 26.04.78 HENKEL KG AUF AKTIEN D23 E13 (D21 D25) = DT 2818-244
Tri:methyl-tetra:hydro-pyranone isomer perfumes - 79417B/44
- *HIEJ 29.03.78 HITACHI PLANT ENG CONST D15 *J5 4127-875
Reverse osmosis appts. for sepg. components in waste or sea water - 83028B/46
- HILB 23.12.77 HILLS BROS COFFEE INC D13 = BE -877-701
Coffee bean roasting process - 73554B/40
- HITA 28.02.75 HITACHI KK D15 = J5 1099-686
Treating waste water by reverse osmosis - 31920A/17
- HITA 28.02.75 HITACHI KK D15 = J7 9033-463
Treating waste water by reverse osmosis - 31920A/17
- *HITA 31.03.78 HITACHI KK D15 *J5 4129-744
Estimation of pH of mixed water in mixing chamber - 83392B/46
- *HITA 31.03.78 HITACHI KK D15 J04 *J5 4130-088
Measuring alkalinity of water - 83413B/46
- HOFF 27.03.78 HOFFMANN-LA ROCHE AG D13 E13 (E24) = J5 4130-570
1,4-dioxa-spiro (4,5)decane derivs. - 40517B/21
- *HOFF/ 13.04.78 HOFF G D15 H03 J01 *GB 2020-265
Removing oil from water surface - 82940B/46
- *HOHN 29.03.78 HOHNEN OIL KK D13 *J5 4127-907
Vegetable cooking oil - 83045B/46
- *HOLK 26.04.78 HOLSTEIN & KAPPERT MASC D15 *DT 2818-236
Saturation of drinks with carbon di:oxide - 82654B/46
- HUBE 20.12.77 HUBER J M CORP D21 E33 = ZA 7801-413
Abrasive silica compsn. for dentifrice paste - 67037A/38
- HUSQ 03.02.78 HUSQVARNA AB D13 = FR 2415-973
Protein-contg. food prodn. - 61730B/34
- *HYDR= 26.10.76 HYDROLYSIS IND RES D15 *SU -649-661
Biological purificn. of industrial aq. waste - 83766B/46
- ICIL 07.04.75 IMPERIAL CHEM INDS LTD D15 J01 = CA 1065-508
Flotation treatment of waste water and sewage - 79361X/43
- ICIL 15.12.75 IMPERIAL CHEM INDS LTD D23 E14 = SU -649-307
(Ortho)-hydroxy-araldehydes prepn. - 39814Y/23
- *ICIL 02.06.77 ICI AMERICAS INC D16 E17 (D17) *US 4173-514
Mannitol-rich aq. mannitol-sorbitol solns. - 84026B/46
- ICIL 02.08.77 IMPERIAL CHEM INDS LTD A97 D16 E13 (D17) = ZA 7804-219
Enzyme fixed to support - 08018B/05
- ICIL 01.11.77 ICI AUSTRALIA LTD C03 D13 = ZA 7805-845
Chemically hardened animal feed blocks - 37609B/20
- ICIL 22.12.77 IMPERIAL CHEM INDS LTD C02 D13 = ZA 7806-788
Treatment of ruminants with aplasmomycin or related cpds. - 52996B/29
- *ICIL 13.02.78 ICI AUSTRALIA D15 *J5 4128-980
Drain water treatment process - B/46
- ICIL 30.03.78 ICI AMERICAS INC D17 E17 = J5 4129-168
Mannitol-rich solns. prepn. from glucose - 75700B/42
- ICIL 30.03.78 ICI AMERICAS INC D17 E17 = J5 4129-169
Mannitol-rich soln. mfr. from glucose and mannose and/or fructose - 75701B/42
- IIZU/ 12.07.74 IIZUKA C C03 D16 = J7 9033-994
Plant growth promoter - 23566X/13
- *INFL 27.01.78 INT FLAVORS & FRAGR INC D25 E15 *US 4173-543
Improving aroma of solid or liq. detergent - 84040B/46
- *INFL 27.01.78 INT FLAVORS & FRAGR INC B07 D13 E15 (B05) *US 4173-711
3-(2-Chloroallyloxy)-2(10)-pinene - 84112B/46
- *INFL 10.08.78 INT FLAVORS & FRAGR INC D23 E15 (D21 D25) *US 4173-585
Tri:methyl-3-cyclopentenyl-alkenyl- and alkylidene- cycloalkanone(s) - 84058B/46
- INGR- 29.11.77 INGREDIENT TECH CO D17 (D13) = ZA 7806-580
Agglomeration of powdered solids, e.g. carbohydrate(s) - 42722B/23
- INME- 03.02.78 IND MECC TRE-P D18 = FR 2416-267
Continuous skin fleshing machine with two opposing sections - 60265B/33
- INTT 06.02.78 ITT IND INC D15 F09 = FR 2416-199
Dual bacteria-contg. waste water e.g. sulphite liquor treatment - 60158B/33
- *ISHI 29.03.78 ISHIKAWAJIMA-HARIMA HEAV D15 *J5 4128-478
Fresh water prodn. from e.g. sea or waste water - 83155B/46
- ITII- 01.02.78 ICEBERG TRANSPORT I D15 H01 = FR 2416-159
Self stabilising floating tower - 58336B/32
- *IVAN= 20.12.76 IVANOVO PAINT FINIS D22 F07 *SU -651-072
Device for cutting gauze into bandages - 83938B/46
- JAGA 06.09.72 JGC CORP D15 = J4 9044-975
Appts. for evaporating sea water - 83577B/46
- *JAGA 06.09.72 JGC CORP D15 *J7 9033-236
Appts. for evaporating sea water - 83577B/46
- *JAPG 30.03.78 NIPPON ZEON KK D15 J01 *J5 4128-984
Fluid sepn. appts. e.g. for blood dialysis - 83265B/46
- JARV- 13.11.78 JARVIS PROD CORP D12 #ZA 7806-370
Reciprocating blade butchery saw - 29291B/15
- JEYE- 21.03.78 JEYES GROUP LTD A97 D25 = J5 4130-607
Preparing tablets for cleaning lavatories - 54534B/30
- JOBB 23.12.77 SOC JOB ANC ETAB BARDOU A88 D18 F04 (A11) = ZA 7806-190
Mfg. synthetic fibre sheet for cigarette filter tips - 18063B/10
- JOHJ 21.03.78 JOHNSON & JOHNSON A94 D22 F04 (A96) #ZA 7801-647
Water absorbent and retentive matted fibre material - 75430B/42
- JOHJ 28.04.78 JOHNSON & JOHNSON D22 = BR 7902-537
Catamenial tampon with increased absorptive capacity - 79123B/44

- JOHJ 05.05.78 JOHNSON & JOHNSON A97 D21 E11 (D25) = GB 2020-289
Novel phospho-betaine(s) and phosphitane(s) - 80842B/45
JOUR/ 12.07.77 JOURDAN LJ D14 = FR 2415-971
Onion tailing machine - 09317B/05
- *KAKE 30.03.78 KAKEN CHEM KK A97 C03 D16 *J5 4129-119
Miticide effective against e.g. citrus red mite and animal parasites - 83346B/46
KAME- 27.09.76 KAMEDA SEIKA KK D13 = J7 9034-070
Crispy glossy rice cake formation - 37660A/21
KANE 19.04.76 KANEBO KK D11 = CA 1065-183
Non-fried cooked porous noodles - 76157Y/43
*KANE 28.03.78 KANEBO KK A96 D21 (A14) *J5 4129-137
Nail enamel compsn. - 83355B/46
*KANF 02.05.75 KANEGAFUCHI CHEM KK D16 H03 *J7 9033-595
Oil absorbent prodn. esp. for oil spillages - 83596B/46
*KANK- 27.02.78 KANKYO ENG KK D15 *J5 4129-749
Treating waste water from waste reclamation - 83393B/46
*KANK- 27.02.78 KANKYO ENG KK D15 *J5 4129-750
Treating waste water from waste reclamation - 83394B/46
KANT/ 19.10.70 KANTOR FS B04 C03 D16 = DS 2152-068
Biological container tray - 27955T/18
KAOS 28.04.78 KAO SOAP KK D25 E34 = DT 2915-980
Stabilising sodium percarbonate - 81188B/45
KAOS 28.04.78 KAO SOAP KK D23 E15 = DT 2917-152
8-Exo-hydroxymethyl-endo-tri:cyclo(5.2.1.02,6) decane(s) - 81193B/45
*KAOS 04.05.78 KAO SOAP KK D23 E15 *DT 2918-107
Tri:cyclo-alpha,beta-unsatd. aldehyde perfume - 82849B/46
KAOS 04.05.78 KAO SOAP KK D23 E15 = GB 2020-277
Tri:cyclo-alpha,beta-unsatd. aldehyde perfume - 82849B/46
KARL/ 06.01.75 KARLSON EL D15 J01 = CA 1065-509
Deionization appts including endless belt ion exchangers - 70456W/42
*KARS/ 18.05.78 KARSTEL CJ D15 *ZA 7802-840
Water purificn. - 84120B/46
*KASH- 31.03.78 KASHIMA BOEKI KK B04 D16 *J5 4129-117
Antitumour compsn. contg. dead fungal bodies - 83344B/46
KAUK- 02.07.76 KAUKAS O AB B01 D23 E15 = CA 1065-303
Separation of sterols - 62891Y/35
*KDPO= 05.01.78 KRASD POLY D14 *SU -650-660
Food suspension centrifugal separator - 83844B/46
KEIL/ 25.11.77 KEIL W A91 D15 J01 = ZA 7806-645
Water softening appliance - 33443B/18
KEND 15.11.76 KENDALL CO D22 = CA 1065-222
Folded fenestrated surgical drape - 36341A/20
*KEND 01.12.76 KENDALL CO D22 F04 *US 4173-131
Knitted bandage with chain stitch warps - 83966B/46
*KESL/ 04.05.78 KESLING PC A96 D21 *GB 2020-220
Tooth positioning and retaining device - 82935B/46
*KHPO 19.10.77 KHARKOV POLY D14 *SU -650-599
Animal feedstuffs mixer and granulator - 83828B/46
*KIFO= 10.05.76 KIEV FOOD IND TECH D17 *SU -651-031
Sugar juice carbonator - 83905B/46
*KIFO= 26.09.77 KIEV FOOD TECH INST D16 *SU -651-024
Hops bitter substance extractor - 83903B/46
KINJ- 27.06.77 KINJIRUSHI WASABI D12 = J5 4011-274
Food mfr. from animal or fish bones - 83616B/46
*KINJ- 27.06.77 KINJIRUSHI WASABI D12 *J7 9034-060
Food mfr. from animal or fish bones - 83616B/46
*KLEP/ 11.01.78 KLEPPE E D12 *NO 7800-095
Processing shrimps or prawns - B/46
KNHS 10.04.78 HOOGO VENS IJMUIDEN BV C04 D15 H09 = GB 2020-186
Ammonia and ammonium salt removal from waste water - 77650B/43
*KOBM 27.03.78 KOBE STEEL KK D15 *J5 4127-868
Solidifying ash obtd. by burning sewage mud - 83023B/46
*KOLO/ 23.03.77 KOLOSHA SN D16 *SU -651-023
Mechanical foam breaker - 83902B/46
KONE 29.03.76 KONTES GLASS CO A88 D15 = GB 1555-630
High purity water distillation plant - 72825Y/41
KRAT 25.04.78 BIZERBA-WERKE KRAUT KG D12 = DT 2818-024
Stabilising animal carcasses suspended on balance - 64755B/36
KRAT 25.04.78 BIZERBA-WERKE KRAUT KG D12 = NL 7902-298
Stabilising animal carcasses suspended on balance - 64755B/36
KURE 08.10.76 KUREHA KAGAKU KK A92 D13 = GB 1555-827
Preserving konjak flour - 41469A/23
*KYOW 24.03.78 KYOWA HAKKO KOGYO KK B03 D16 *J5 4128-547
Cpd. FU-10, prepd. by cultivating Micromonospora strain - 83190B/46
*KYOW 29.03.78 KYOWA HAKKO KOGYO KK B04 D16 *J5 4129-187
Choline oxidase prodn. - 83363B/46
- LABA- 29.03.78 LABATT J LTD D11 #J5 4129-151
Dry powdery gluten prod. for baking - 57789Y/33
LAND- 31.03.78 LANDSTINGENS INKOE A96 D21 (D22) = DK 7803-629
Disinfecting skin ointment based on alcohol - 14251B/08
- *LEDY/ 03.01.77 LEDYUKHIN A M A91 D15 J01 *SU -649-444
Iron oxide removal from cation exchanger used in water softening etc. - 83740B/46
*LEEP= 20.09.77 LENGDEPID MICROBIO D16 *SU -651-029
Portable microbial culture incubator - 83904B/46
LICL- 31.03.78 LIC LANDSTINGENS INKOPSC A96 D21 (D22) = SW 7803-646
Disinfecting skin ointment based on alcohol - 14251B/08
LICN 19.10.77 LICENTIA PATENT GMBH D15 J04 K08 = US 4173-719
Liquid irradiation device - 33503B/18
*LIOC 31.03.78 LION DENTIFRICE KK D23 E15 *J5 4129-138
Perfume compsn. contg. sabinene hydrate - 83356B/46
*LIOC 02.04.78 LION DENTIFRICE KK D13 E14 *J5 4130-485
Octyl-phenone deriv. antioxidant for food - 83493B/46
*LIOC 02.04.78 LION DENTIFRICE KK D13 E14 *J5 4130-486
Prod. of antioxidant for foods - 83494B/46
*LIOY 28.03.78 LION FAT & OIL KK A96 D21 (A11) *J5 4127-882
High polymer emulsification agent - 83035B/46
*LIOY 28.03.78 LION FAT & OIL KK A96 D21 E12 *J5 4129-135
Hair treatment compsn. - 83353B/46
LIOY 30.03.78 LION FAT & OIL KK D25 E16 F06 = J5 4129-009
Textile detergent compsn. having softening activity - 75549B/42
LIVA= 06.02.78 LIVANY EXPER BIOCHEM WKS A97 C03 D13 #FR 2415-967
Feed-concentrate powder polymer coating - 68219B/38
LOGA- 06.02.78 LOGAN SRL A96 D21 E17 (A26) = FR 2416-011
Non-foaming emollient for shaving - 60235B/33
- MACL/ 08.11.77 MACLENNAN M E D12 (D16) = ZA 7806-207
Mycelial meat analogues and extenders - 37610B/20
MAGN- 05.12.77 MAGNUSON ENG INC D14 = ZA 7806-395
Peeling cherries or tomatoes by beds of contra rotating rolls - 40373B/21
*MAGU- 26.04.78 MAGURIT GUSTAV RITT D12 *DT 2818-348
Meat band saw machine - 82660B/46
MALF/ 10.02.78 Malfanti JB D14 (D22) = BR 7900-852
Sterilising and blanching food prod. in small pieces - 61869B/34
MANS 16.05.77 MANNESMANN AG D15 M24 = DS 2722-710
Steelworks cooling water purificn. - 86369A/48
MAUG 09.03.78 AUGSBURG NURNBERG AG D15 J01 = J5 4127-870
Water collector from atmospheric air - 68206B/38
*MCDD 03.05.76 MCDONNELL DOUGLAS CORP B04 D16 *US 4173-515
Broth medium for detecting group D enterococci - 84027B/46
MEDI= 06.02.78 MED TECHN RES INST A97 C03 D13 #FR 2415-967
Feed-concentrate powder polymer coating - 68219B/38
*MEIJ 03.04.78 MEIJI SEIKA KAISHA B04 D16 *J5 4130-501
Antibiotic BN-2229-F substance - 83501B/46
MEIP 10.02.76 MEIJI MILK PRODS KK D23 (D13) = J7 9034-062
Preventing deterioration of oil and fat-contg. foods - 68015Y/38
MEIT 03.05.78 MEITO SANGYO CO KK B04 D16 #DT 2819-384
Lipase prodn. from Alkaligenes microorganism - 48599A/27
*MERI 14.12.71 MERCK & CO INC B02 C02 D22 *US 4173-703
N-Tri:methyl:silyl 3-carbamoyl:oxy:methyl-3 cephem-4-carboxylate(s) - 84109B/46
MERI 10.03.78 MERCK & CO INC A97 D16 = J5 4129-184
Pretreating Sephadex (RTM) granules used for cell culture - 66344B/37
*METG 28.04.78 METALLGESELLSCHAFT AG D15 J09 *DT 2818-803
Oxidative slime combustion in fluidised bed furnace - 82685B/46
METT 26.04.78 M & T CHEMICALS INC A41 D15 E11 F06 = DT 2915-072
Tri:alkoxy-silane cpds. - 75330B/42
METT 26.04.78 M & T CHEMICALS INC A41 D15 E11 F06 = NL 7903-128
Tri:alkoxy-silane cpds. - 75330B/42
MEYH- 10.05.78 MEYHALL CHEMICAL AG A11 C03 D17 H01 = BE -876-110
Phosphated locust bean gum soluble in cold water - 61444B/33
MILE 27.03.78 MILES LABORATORIES INC A91 D16 (A26) = DK 7901-223
Preparing aggregate of bacterial cells esp. streptomyces olivaceus - 54547B/30
MILE 27.03.78 MILES LABORATORIES INC A91 D16 (A26) = J5 4129-183
Preparing aggregate of bacterial cells esp. streptomyces olivaceus - 54547B/30
MILE 27.03.78 MILES LABORATORIES INC A91 D16 (A26) = NO 7900-984
Preparing aggregate of bacterial cells esp. streptomyces olivaceus - 54547B/30
MILE 27.03.78 MILES LABORATORIES INC A91 D16 (A26) = SW 7902-150
Preparing aggregate of bacterial cells esp. streptomyces olivaceus - 54547B/30
*MILK= 10.09.76 MILK IND RES INST D13 *SU -649-393
Full cream curd cheese contg. curd and fat emulsion base - 83724B/46
MINN 14.07.75 MINNESOTA MINING CO D21 = GB 1555-463
Hair bleach, dry powder compsn. - 29537Y/17
MINN 17.03.78 MINNESOTA MINING CO A96 B07 D22 G03 (A14 A81) = SW 7902-262
Control of bleeding of internal mammalian lesions - 79535B/44
*MINO- 19.01.79 MINORA FORSCHUNGS D22 E33 *DS 2902-079
Animal esp. cat litter material - 82631B/46
MISK 03.10.73 MITSUBISHI KAKOKI KAISHA D15 E36 J01 = J7 9033-461
Treatment of water from wet waste gas desulphurisation process - 72722X/39

- *MITN 27.03.78 MITSUBISHI GAS CHEM IND D16 (D13) *J5 4129-182
Bacterial culture of *Micrococcus aquaticus* - 83361B/46
- *MITO 28.03.78 MITSUBISHI HEAVY IND KK D15 *J5 4128-161
Deodorising waste water from e.g. sea food processing - 83107B/46
- MITP 30.03.78 MITSUBISHI PETROCH KK B04 D16 = J5 4129-186
Collagenase microbiological prodn. - 75570B/42
- MITU 20.08.74 MITSUBISHI CHEM IND KK B05 D16 E16 = J7 9034-076
L-amino-chloro-pentenoic acid prepn - 27140X/15
- MITU 20.08.74 MITSUBISHI CHEM IND KK B05 D16 E16 = J7 9034-077
Amino-methylpimelic acid prodn - 27139X/15
- MITU 20.08.74 MITSUBISHI CHEM IND KK B03 D16 E13 = J7 9034-078
Novel amino acids prodn - 27143X/15
- *MITU 28.02.78 MITSUBISHI CHEM IND KK C03 D13 E13 (D16 D17) *J5 4129-179
Decomposition of lignin-contg. waste - 83359B/46
- *MITU 27.03.78 MITSUBISHI CHEM IND KK A96 C03 D13 *J5 4129-130
Acceleration of fibrous material digestion in animals - 83350B/46
- *MOCA= 16.08.76 MOSC CANNING WKS D13 *SU -649-401
Prophylactic pectin contg. drink - 83730B/46
- *MOEC= 11.07.77 MOSC ECONOMIC ACAD D13 *SU -649-400
Storage stable mayonnaise prepn. - 83729B/46
- *MOFA= 16.08.76 MOSC FATS RES INST D13 *SU -649-401
Prophylactic pectin contg. drink - 83730B/46
- *MOFA= 11.05.77 MOSC FATS RES INST A96 D21 E17 (A23) *SU -649-432
Moisture stable hair lacquer compsn. - 83735B/46
- MONA 05.05.78 MONA INDUSTRIES INC A97 D21 E11 (D25) = GB 2020-289
Novel phospho-betaine(s) and phosphitane(s) - 80842B/45
- *MONS 27.12.76 MONSANTO CO B05 D13 E14 *US 4173-562
Alpha-L-aspartyl-L-phenylalanine methyl ester hydrohalide prepn. - 84052B/46
- MORG 30.08.71 MORINAGA MILK KK D13 E17 = DS 2220-769
Casein protein concentrate - 69190T/43
- MORN- 23.02.78 MORNING TREAT COFFE D13 #BR 7801-095
Packaging ground coffee in individual porous bags - 28504A/15
- *MOSU 26.11.76 MOSCOW LOMONOSOV UNIV B05 D16 E16 *SU -644-833
L-ascorbic acid microbiological synthesis - 83665B/46
- *MOVA= 01.06.76 MOSC VACCINE SERA B04 D22 *SU -649-434
Preservation of erythrocyte for diagnostic use - 83737B/46
- *MSCA- 05.12.77 MSCAN METAL CANADA D11 *US 4173-215
Steam chamber for foods - 83971B/46
- *NATT 05.05.78 NAT STARCH & CHEM CORP A96 D21 (A13 A14) *DT 2917-504
Aerosol hair spray compsns. - 82835B/46
- *NATY 03.05.78 NABISCO INC D11 *GB 2020-160
Prodn. of whole wheat food esp. breakfast cereal - 82918B/46
- NEST 06.02.78 SOC PROD NESTLE SA D13 = FR 2415-969
Improving consistency of reconstituted purees esp. of vegetables - 47198B/26
- *NIAU- 28.04.78 NIHON AUTOMATIC MAC C04 D15 L02 *DT 2917-123
Treatment of waste water contg. (in)organic impurities - 82817B/46
- NICH- 18.07.75 NICHIREKI CH IND KK D15 K07 L02 = J7 9033-459
Heavy metal or radioactive material-contg. sludge treatment - 18765Y/11
- NICH- 18.07.75 NICHIREKI CH IND KK D15 K07 L02 = J7 9033-460
Sludge treatment - 18766Y/11
- *NIHZ 31.03.78 NIPPON ZOKI PHARM KK B04 D16 *J5 4130-502
Material having specified amino acid compsn. - 83502B/46
- *NIOC 31.03.78 NIPPON OIL KK D15 H07 J04 *J5 4130-192
Measuring salt content in lubricating oil, cooling water etc. - 83419B/46
- *NIPT 31.10.77 NIPPON TENSAI SEITO KK D16 (D11) *J5 4129-181
Bread yeast prepn. - 83360B/46
- *NIRA 30.03.78 UNITIKA KK A96 B04 D16 *J5 4129-185
Preservation of fixed urokinase or streptokinase enzyme - 83362B/46
- NISB 13.01.77 JAPAN TOBACCO AND SALT A97 D18 F04 (A18 A35) = DS 2801-239
Tobacco smoke filters - 57089A/32
- *NISB 29.03.78 JAPAN TOBACCO & SALT PUB D18 E13 *J5 4129-197
8-Hydroxy-3-(3,5-dimethoxyphenyl)-2-benzopyran-1-one - 83366B/46
- *NISB 31.03.78 JAPAN TOBACCO & SALT PUB D18 E15 *J5 4129-198
Tobacco flavourant - 83367B/46
- *NISB 31.03.78 JAPAN TOBACCO & SALT PUB D18 E13 *J5 4130-531
5,6-Epoxy-3-hydroxy-beta-ionol derivs. - 83514B/46
- *NISS 27.03.78 NISSHIN FLOUR MILL KK C03 D13 *J5 4130-394
Feedstuff for cultivation of fish - 83452B/46
- *NISS 27.03.78 NISSHIN FLOUR MILL KK C03 D13 *J5 4130-395
Feedstuff for cultivation of fish - 83453B/46
- NITT 29.03.78 NITTO CHEM IND KK A41 D16 E16 = J5 4129-190
(Meth)acrylamide prepn. by (meth)acrylonitrile hydrolysis - 75565B/42
- *NMHB 29.07.78 NORDISCHER MASCHINE D12 *DS 2833-366
Pig's head clamping fixture - 82625B/46
- NORV- 30.11.77 NORVIDAN ENG APS D14 = ZA 7806-717
Ring mould press for fodder pellets - 42688B/23
- NOVO 06.02.78 NOVO IND A/S D13 = FR 2415-968
Decolourised blood human foodstuffs - 58024B/32
- *NRAN= 02.03.77 N RANCHES RES INST C03 D13 *SU -649-397
Fodder blend for young ruminants e.g. calves - 83726B/46
- NREN 25.10.74 NIPPON WATER TREATM KK A91 D15 F09 J01 = J7 9033-462
Decolourising lignin contg waste liquor - 44884X/24
- *OIKAW/ 28.03.78 OIKAWA S D15 *J5 4128-160
Removing malodorous components from night soil - 83106B/46
- OREA 02.02.78 L'OREAL SA A96 B04 D21 (D22) = FR 2416-008
Conserving aq. dispersions of liposome microcapsules - 58011B/32
- OREA 06.02.78 L'OREAL SA D21 E19 = FR 2416-235
Non-irritant eye make/up remover - 84085A/47
- OREA 17.03.78 L'OREAL SA B03 D21 E13 (B07) = J5 4129-092
Surface active derivs. of tetra:oxo-cyclododecane - 79372B/44
- *ORIO/ 06.02.78 ORIOL J R A88 D13 *FR 2415-966
Thin wall plastic moulds for cast frozen ice foodstuffs - 82853B/46
- PATE- 26.09.72 PATERSON CANDY INT D15 J01 = DS 2348-175
Sludge separation tank - 25365V/14
- PERM- 24.03.78 PERMELEC ELECTRODE D15 E36 J03 M13 = SW 7902-664
Electrode for aq. metal halide soln. electrolysis - 72055B/40
- PERS 28.04.78 PERSONAL PRODUCTS CO D22 = DT 2917-181
Catamenial tampon with increased absorptive capacity - 79123B/44
- PERS 28.04.78 PERSONAL PRODUCTS CO D22 = NL 7903-305
Catamenial tampon with increased absorptive capacity - 79123B/44
- PETR- 03.02.78 PETRIS EFTF I/S D13 = FR 2415-965
Chewing gum contg. sorbitol as sweetener - 58020B/32
- PFIZ 18.11.77 PFIZER INC B05 D16 E17 = ZA 7806-487
2,5-Di:keto-gluconic acid preparation - 38984B/21
- PFIZ 28.08.78 PFIZER INC D23 E13 (D13) = US 4173-572
Gamma pyrone(s) esp. maltol and ethyl maltol prepn. - 34952A/20
- PHIM 25.04.78 PHILIP MORRIS INC D18 (D15) = BR 7902-556
Removal of nitrate from tobacco materials - 79461B/44
- *PLAC 15.11.78 MAX PLANCK GES WISSENSCH A96 D22 *BE -877-580
Transparent dressing, esp. for wounds, based on a hydrophilic gel - 82572B/46
- *PLAN= 21.07.77 PLANTS PROTECTION RES IN C03 D16 *SU -649-387
Strain *Verticillium Dahliae* kleb 214, causing wilting of cotton plants - 83722B/46
- POLA 09.06.75 PFW BEHEER D12 E13 = CA 1065-328
Bis tetrahydrofuryl and tetrahydrothienyl sulphide cpds. - 96240X/52
- POLA 20.03.78 POLAK'S FRUTAL WORKS INC D23 E15 (D21 D25) = J5 4130-540
Nitrile cpds. with a 1-methyl-4 isopropyl:cyclohexane carbon skeleton - 69926B/39
- *POTA= 05.07.77 POTATO FOODSTUFFS D13 *SU -649-399
Prepn. of dry potato products - 83728B/46
- *POTA= 27.09.77 POTATO FOOD PRODS D14 *SU -650-602
Device for roller dryer product removal - 83829B/46
- PROC 19.02.70 PROCTER & GAMBLE CO D22 = DS 2107-723
Disposable diaper fastening system - 55284V/31
- *PROC 29.06.77 PROCTER & GAMBLE CO D25 *J5 4130-509
Cationic surfactant - B/46
- PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 (A25) = NL 7815-014
Anionic, nonionic and quat. ammonium surfactant contg. liq. detergent - 02338B/02
- PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 (E33) = NL 7815-015
Anionic, nonionic and quat. ammonium surfactant contg. solid detergent - 02339B/02
- PROC 18.07.77 PROCTER & GAMBLE CO D25 E19 = NL 7815-017
Antistatic, fabric softening detergent additive - 08409B/05
- *PROC 23.12.77 PROCTER & GAMBLE CO D25 *J5 4129-010
Storage-stable washing detergent compsn. - B/46
- PROJ- 17.08.77 PROJEKTIERUNG CHEM D17 = ZA 7804-634
Sugars and opt. cellulose and lignin extrn. from vegetable material - 14176B/08
- PROM- 02.02.78 PROMIH SA D16 = FR 2416-266
Appts. for inoculating or transferring microbiological cultures - 60278B/33
- PROT- 11.03.77 PROTER SPA B02 C02 D16 = GB 1555-939
Recovery of cephalosporin C from aq. soln. - 80831A/45
- PURD 28.04.78 PURDUE RESEARCH FOUNDATI D14 = DT 2917-191
Appts. for macerating cut forage crops e.g. hay - 81173B/45
- *PYNN/ 27.04.78 PYNNONEN P D15 *DT 2917-206
Water purification filter - 82823B/46
- *RALS 21.02.78 RALSTON PURINA CO A97 D12 *US 4173-657
Gelled fish prod. contg. vegetable protein - 84087B/46
- RALS 01.05.78 RALSTON PURINA CO D13 = DT 2916-296
Eliminating foreign matter from vegetable protein esp. soya - 66381B/37
- *RAMB/ 06.02.78 RAMBAUD M E M D13 *FR 2415-970
Sterilising and packing food prod. into plastic sack - 82854B/46
- RATI- 01.02.78 RATIONALISIER HALLE D16 = FR 2416-265
Accelerating the maturing of spirits - 39132B/21
- REAK- 13.03.78 REAKTOR-BRENNELEMEN D15 E31 K05 M25 = J5 4127-898
Simplified process for recovering uranium cpds. - 52597B/29

REAK-

- REAK- 16.03.78 REAKTOR-BRENNELEMEN D15 E31 K05 M25 = J5 4128-495
 Uranium cpds. recovery from waste solns. - 54518B/30
 REED/ 19.10.77 REED C W D15 #CA 1065-146
 Power plant having condenser with hot well - 79069Y/44
 * REID/ 26.06.78 REID J P D14 *US 4173-051
 Food article washing device - 83954B/46
 RENJ 07.11.77 RENGCO LTD D14 J01 = ZA 7806-179
 Sealable container for preserving food and flowers - 58509B/32
 RESE 26.03.76 RESEARCH CORP C01 D22 E12 = CA 1065-311
 Sucrose organo-tin derivs. - 52230Y/30
 RESE 26.04.78 RESEARCH CORP B04 D16 K08 = DT 2822-842
 Protease free coenzyme/a -synthesising protein complex - 00008B/01
 RESE 26.04.78 RESEARCH CORP B04 D16 K08 = NL 7806-621
 Protease free coenzyme/a -synthesising protein complex - 00008B/01
 RHON 14.03.78 RHONE-POULENC INDUSTRIES D25 E12 = J5 4128-488
 Sequestrant for washing compsns. contg. peracid salts - 68133B/38
 RHON 14.03.78 RHONE-POULENC INDUSTRIES A35 D15 E36 J02 = J5 4130-477
 Contactor for substances in different phases - 68134B/38
 RHON 03.05.78 RHONE-POULENC INDUSTRIES A88 D15 J01 (A25) = DT 2917-869
 Semipermeable membrane partic. for ultrafiltration - 80832B/45
 RHON 03.05.78 RHONE-POULENC INDUSTRIES A88 D15 J01 (A25) = GB 2020-299
 Semipermeable membrane partic. for ultrafiltration - 80832B/45
 RHON 03.05.78 RHONE-POULENC INDUSTRIES A88 D15 J01 (A25) = GB 2020-300
 Poly(aryl)ether:sulphone(s) mixt. compsns. - 80833B/45
 RIES/ 09.12.77 RIESS G A96 D21 = ZA 7806-450
 Dental surgical implant for securing crowns, bridges etc. - 24021B/13
 RIES/ 01.06.78 RIESS G A96 D21 = ZA 7806-453
 Dental surgical implant for securing crowns, bridges etc. - 24021B/13
 *RIKA 30.03.78 RIKAGAKU KENKYUSHO B03 D13 E13 *J5 4130-512
 Selectively benzylated sugar derivs. prodn. - 83506B/46
 *RITP 30.01.78 SYBRON CORP A96 D21 *US 4173-219
 Dental tray for applying fluoride gel to teeth - 83972B/46
 *RITP 03.02.78 SYBRON CORP A96 D21 *US 4173-505
 Dental tray comprising laminated polyethylene and polyurethane - 84023B/46
 *ROCI= 26.03.76 ROST CIVIL ENG D23 (D14) *SU -650-661
 Oil or fat mfr. plant air purification unit - 83845B/46
 *ROHM 20.12.73 ROHM & HAAS CO B03 C02 D22 *US 4173-643
 Combinations of 4-isothiazolin-3-one(s) with quat. ammonium salts - 84082B/46
 ROHM 30.09.76 ROHM & HAAS CO A91 D23 = GB 1555-870
 Removing organic Lewis acids from water immiscible liquids - 25224A/14
 *ROHM 23.08.78 ROHM & HAAS CO A91 D15 J01 *ZA 7804-808
 Ion exchange desalination process - B/46
 ROUS 31.03.78 ROUSSEL UCLAF B02 C02 D22 = DK 7901-308
 7-thiazolyl-acetamido-cephalosporin oxime derivs. - 73876B/41
 ROUS 31.03.78 ROUSSEL UCLAF B03 D21 E13 = DK 7901-309
 Thenoyl peroxide used as pharmaceutical and cosmetic - 75745B/42
 ROUS 31.03.78 ROUSSEL UCLAF B02 C02 D22 = SW 7901-203
 7-thiazolyl-acetamido-cephalosporin oxime derivs. - 73876B/41
 RTMN 04.05.76 ROTHMANS PALL MALL CANA D18 E15 = CA 1065-127
 Fluid application to absorbent material - 83274Y/47
 *RUYS/ 26.04.78 RUYS J J D13 *NL 7804-456
 Cheese making with addn. of powdered cheese - 83621B/46
 *SAGA 31.03.78 SAGAMI CHEM RES CENTRE A60 D23 E15 G02 *J5 4130-530
 Liq. chloro-cyclopentene derivs. prepd. from cyclopentadiene - 83513B/46
 SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 = US 4173-707
 Cyclopentanol derivs. - 14431B/08
 SALA- 31.03.78 SALA INT AB D15 J02 = SW 7803-691
 Apparatus for dissolving gases in liquid - 82521B/45
 *SANB 24.03.78 SANKYO CHEM IND KK B05 D13 E17 *J5 4128-515
 Prodn. of L-malate for medicines and foods - 83177B/46
 SANO 08.07.75 SANDOZ LTD B04 C03 D16 = US 4173-629
 Antifungal antibiotic S 31794/F-1 - 06057Y/04
 *SANW 31.03.78 SANWA KAGAKU KENKYUSHO B04 D16 *J5 4129-117
 Antitumour compsn. contg. dead fungal bodies - 83344B/46
 SATA/ 02.03.76 SATAKET D13 = GB 1555-579
 Rice husking and polishing unit with humidification - 65267Y/37
 *SCHA- 25.04.78 SCHARF W GMBH D16 *DT 2818-013
 Red grape juice fermentation vat - 82642B/46
 SCHL- 18.04.77 SCHLEICHER & SCHULL D15 J01 = US 4173-364
 Mounting and sealing high pressure membrane cell - 76695A/43
 *SCHM/ 28.04.78 SCHMIDT G D12 *DT 2818-722
 Carcass rib scraping tool - 82680B/46
 *SEEH/ 26.04.78 SEE H D14 *DT 2818-230
 Smoking basket for food, e.g. sausages - 82653B/46
 *SEIB/ 21.12.77 SEIBOLD A D12 *DT 2756-959
 Dehydrated air-dried meat mfr. - 82632B/46
 *SEKI 27.03.78 SEKISUI CHEM IND KK D15 *J5 4127-873
 Semipermeable membrane prodn. - 83027B/46
 SERO- 27.04.76 LAB SERO BIOLOGIQUE D22 E14 = GB 1555-637
 (4,4')-Bis-formyl-polyhalo-diphenoxy alkanes - 77509Y/44
 SHEL 02.06.76 SHELL INT RES MIJ BV D23 E17 = GB 1555-551
 Undecenals prepn. for use as perfume components - 91399Y/51
 *SHEL 12.05.78 SHELL INT RES MIJ BV D23 E15 *BE -876-161
 Ester(s) of (1,5)-di:methyl-bi:cyclo-(3.2.1)octanol-8 - 82556B/46
 *SHIA 30.03.78 SHINKO PFAUDLER KK C01 D15 *J5 4129-756
 Dephosphorisation of waste water contg. organic phosphorus cpds. - 83398B/46
 *SHIA 31.03.78 SHINKO PFAUDLER KK C01 D15 *J5 4129-757
 Dephosphorisation of waste water - 83399B/46
 SHIO 22.03.73 SHIONOGI KK B05 D16 = DS 2413-963
 2-keto-l-gulonic acid prodn. - 69910V/40
 *SHIO 15.03.74 SHIONOGI KK B02 D16 *J5 0123-885
 7-Amino-de:acetoxyccephalosporanic acid prepn. - 82974B/46
 *SHIS 28.03.78 SHISEIDO KK D21 E37 *J5 4129-134
 Three-liq. type hair bleaching agent - 83352B/46
 *SHMA/ 11.10.76 SHMANENKOV N A C03 D13 *SU -649-398
 Combined fodder for lactating cows - 83727B/46
 SIEI 01.02.78 SIEMENS AG D15 J04 = FR 2416-359
 Automatic dosing of predetermined quantities of several liquids - 42427B/23
 SIEI 01.02.78 SIEMENS AG D15 E19 J04 = FR 2416-472
 Automatic determ. of organic substances in water - 40684B/22
 SIEI 01.02.78 SIEMENS AG D15 J04 = FR 2416-473
 Determn. of dissolved organic solids content in water - 42426B/23
 SMIN 26.04.78 SMITH & NEPHEW PHAR A96 D22 = DT 2916-698
 Water soluble terpolymers contg. piperidinium methyl units - 66366B/37
 SMIN 26.04.78 SMITH & NEPHEW PHAR A96 D22 = NL 7903-292
 Water soluble terpolymers contg. piperidinium methyl units - 66366B/37
 *SNAM 12.05.78 SNAMPROGETTI SPA A96 B04 D16 *BE -876-204
 Reduction of phenylalanine levels in blood and other media - 82559B/46
 *SORN/ 13.07.79 SORNIN S M D21 *BE -877-711
 Plastic core for soap tablet to prevent waste - 82610B/46
 SQUI 22.03.78 SQUIBB E & SONS INC B04 D16 #J5 4128-501
 Antibiotic polymyxin F - 51561A/28
 STAL 26.08.68 STALEY A E MFG CO D16 = J7 9034-059
 Enzymic saccharification of starch hydrolysate - 12826R/08
 STAM 02.03.77 STAMICARBON BV D15 (D16) = GB 1555-646
 Effluent water treatment to remove nitrogenous and organic materials - 63415A/36
 STBR 10.06.72 STANDARD BRANDS INC D17 E13 (D16) #SU -649-328
 Fructose from glucose soln -by passage under specific - 65799T/41
 STER 10.11.77 STERLING DRUG INC D15 = ZA 7806-064
 Treating waste water by biological oxidn. and carbon adsorption - 35262B/19
 *STOM= 18.05.77 STOMATOLOGY RES INS A96 B05 D21 (A14) *SU -649-431
 Dental canal filling paste compsn. - 83734B/46
 STON/ 07.03.68 STONE J S D15 = DS 1911-377
 Aeration apparatus - 17175T/11
 SULZ 04.04.77 SULZER BROS LTD D15 E36 = GB 1556-005
 Processing water using ozone in basic conditions - 74614A/42
 SUMO 30.03.78 SUMITOMO CHEMICAL KK D23 E14 = J5 4130-544
 1,1,3,4,4,6-Hexa:methyl-1,2,3,4-tetra:hydro naphthalene prepn. - 75544B/42
 SUMO 31.03.78 SUMITOMO CHEMICAL KK A88 D15 J01 (A14 D13) = J5 4130-482
 Acrylonitrile polymer semi-permeable membrane treatment - 70294B/39
 SUMO 25.04.78 SUMITOMO CHEMICAL KK A96 B04 D16 #NL 7804-416
 Carriers for enzyme immobilisation - 80990B/45
 *SUMQ 28.03.78 SUMITOMO METAL IND KK D15 *J5 4127-871
 Water purificn. appts. regeneration - 83025B/46
 SUNN- 17.02.78 SUNNYLAND FARMS INC D14 = ZA 7806-644
 Nut cracking machine with stored energy hammer - 09702B/05
 SUNR 26.11.74 SUNTORY LTD D16 E17 = CA 1065-268
 Alcohol prodn. from cereals - 53248X/28
 *TAIK- 29.03.78 TAIKO KOGYO KK D15 J01 M12 *J5 4128-157
 Simultaneous treatment of waste acids and sludges - 83104B/46
 TAKE 07.11.77 TAKEDA CHEMICAL IND KK D14 J01 = ZA 7806-179
 Sealable container for preserving food and flowers - 58509B/32
 TAKE 24.03.78 TAKEDA CHEMICAL IND KK B02 C02 D16 = J5 4128-598
 20-Demethyl-maytansinoid derivs. - 72173B/40
 TANA 12.02.76 TANABE SEIYAKU KK D13 E13 (E17) = J7 9034-063
 Antioxidants for oils, fats and foodstuffs - 69892Y/39
 *TANA 29.03.78 TANABE SEIYAKU KK C03 D22 E14 F09 *J5 4129-103
 Antiseptic, anti:mould compsn. for wood - 83336B/46
 *TANB 25.03.78 TOKYO TANABE KK C03 D13 *J5 4130-393
 Feedstuff for crustacea, e.g. shrimps, lobsters, crabs, etc. - 83451B/46
 *TEKH= 20.02.76 TEKHENERGOKHIMPROM D15 J09 *SU -647-504
 Waste water thermal decontamination cyclone furnace - 83668B/46
 TETR- 05.05.78 TETRA W U BAENSCH D15 = GB 2020-266
 Treating water for aquariums using cation exchanger - 66384B/37
 THAL 27.04.78 VEB SCHWERMASCH THALMANN D23 = DT 2902-743
 Pressure steaming of linseed - 58169B/32
 *TOAG 29.03.78 TOA GOSEI CHEM IND LTD A81 D16 *J5 4128-486
 Excavating process using stabilising liq. - 83159B/46

*TOAG 29.03.78 TOA GOSSEI CHEM IND LTD A81 D16 *J5 4128-487
Compsn. for ground-excavating stabilising liquor - 83160B/46

*TODA/ 03.05.78 TODA S A92 D13 *DT 2819-323
Packaged hard boiled egg - 82717B/46

*TOFF/ 04.05.78 DELLA TOFFOLA F D16 J01 *DT 2917-810
Self-cleaning disc filter esp. for wine - 82846B/46

TOOH 22.04.77 QUEENS UNIV KINGSTON ONT B03 D13 E13 = GB 1556-007
L-Sucrose useful as non-nutritive sweetener - 61925A/35

TORA 10.08.77 TORAY IND INC A96 D22 J01 (A35 A88) #GB 1555-605
Sterilising dialyser contg. semipermeable membrane - 25641A/14

TOXF 13.01.77 TOHO BESLON KK A97 D18 F04 (A18 A35) = DS 2801-239
Tobacco smoke filters - 57089A/32

TOXN 25.03.78 TOYO JOZO KK B04 D16 J04 = SW 7902-648
Reagent for assay of pyruvate - 73838B/41

*TOXN 28.04.78 TOYO JOZO KK A96 B04 D16 E13 *DT 2917-001
Carrier-bound di: sulphide cpds. of benzothiazole and pyridine N/oxide - 82813B/46

*TOYM 29.03.78 TOYOBO KK B04 D16 J04 *J5 4128-793
Determn. of alpha- keto: glutaric acid - 83226B/46

*TOYM 29.03.78 TOYOBO KK B04 D16 J04 *J5 4128-794
Determn. of activity of glutamic oxalacetic trans amylase - 83227B/46

*TOYM 29.03.78 TOYOBO KK B04 D16 J04 *J5 4128-795
Determn. of activity of glutamic pyruvic trans-amylase - 83228B/46

*TOYM 29.03.78 TOYOBO KK B04 D16 E17 (B05) *J5 4129-188
Hydroxy-glutaric acid dehydrogenase - 83364B/46

*TUCH- 05.05.78 FA TUCHENHAGEN O D13 *DT 2819-554
Milk sampler - 82739B/46

TURE/ 27.04.78 TUREAUD K E A96 D21 (A14) #NL 7804-513
Plastic jaw impression spoon - 48082A/27

*UDAI= 26.07.71 UKR DAIRY IND INST D12 *SU -443-529
Domestic animal electric stunner - 83641B/46

*UFIS= 09.06.77 UKR FISHERIES RES B04 C03 D16 *SU -649-380
Vaccine for preventing or curing erysipelas infection of fish - 83721B/46

*UFVA= 24.06.77 UFA VACCINE SERA B04 D22 *SU -649-435
Purified preserved erythrocyte suspension prodn. - 83738B/46

*UMEA= 17.10.77 UKR MEAI DAIRY IND D12 *SU -650-597
Small animals e.g. rabbits electrical stunning device - 83827B/46

*UNBI 09.07.79 UNIV OF BIRMINGHAM B04 D16 J04 *BE -877-591
Appts. for luminescence assay of antigens, nucleotide(s) etc. - 82576B/46

*UNIC 23.11.77 UNION CARBIDE CORP D15 *US 4173-531
Nitrification-denitrification of waste-waters - 84034B/46

*UNIC 09.05.78 UNION CARBIDE CORP A97 D12 *BE -876-120
Conc. aq. smoke flavour compsn. for coating tubular food wrapping - 82544B/46

*UNIC 09.05.78 UNION CARBIDE CORP A97 D12 *BE -876-121
Wrapping for food products esp. sausages - 82545B/46

UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = GB 2020-157
Wrapping for food products esp. sausages - 82545B/46

UNIC- 07.02.78 UNI-CHARM CORP A96 D22 = FR 2416-006
Diaper or sanitary towel comprising absorbent plies - 60198B/33

UNIL 28.02.68 UNILEVER NV D13 = J7 9034-002
Margarine fat-phase of specified dilatation - 67921V/39

UNIL 15.10.76 UNILEVER LTD A96 B05 D21 (A25) = GB 1555-796
Compsn. for treating acne contg. an alkyl lactate - 28816A/16

UNIL 17.03.77 UNILEVER LTD D13 = ZA 7801-561
Prepn. of composite foods, esp. sweets such as peach melba - 67073A/38

UNIL 31.10.77 LEVER BROTHERS CO D25 E19 = US 4173-539
Fabric softener compsn. - 33373B/18

UNIL 01.02.78 UNILEVER NV D25 = FR 2416-262
Spray dried detergent powder compsn. prodn. - 56302B/31

UNIL 14.02.78 UNILEVER NV A97 D25 = BR 7900-855
Detergent and esp. dishwashing compsn. - 61747B/34

UNIL 14.02.78 UNILEVER NV A97 D25 = SW 7901-275
Detergent and esp. dishwashing compsn. - 61747B/34

UNIL 14.03.78 UNILEVER BV D13 = J5 4129-147
Jojoba oil coating agent for foods - 68612B/38

UNIL 31.03.78 UNILEVER NV D13 #J5 4129-166
Ice cream compsn. contg. caroub and/or tara gum - 25249A/14

*UNIL 28.04.78 UNILEVER NV D11 *NL 7804-577
Dutch pastries prodn. - 83626B/46

*UNIL 11.05.78 UNILEVER NV D25 (D24) *BE -876-210
Prepn. of spray dried soap contg. washing powders - 82563B/46

*URAL= 14.09.77 URAL THERM TECH RES D15 *SU -643-716
Cavitation preventer for steam turbine supply system pump - 83661B/46

*UROS/ 06.02.78 UROSEVIC M D21 *FR 2416-010
Compsn. for treating hair and scalp to promote regrowth - 82856B/46

*USDC 26.04.78 US SEC OF COMMERCE D16 *BR 7902-574
Rapid continuous fermentation process and appts. - B/46

UYFL- 05.04.78 UNIV FLORIDA D21 L02 = GB 2020-197
Inorganic dental or surgical implant - 77620B/43

UYNE- 07.07.75 UNIV OF NEBRASKA D13 = CA 1065-306
Extracting edible protein from Phaseolus spp. beans - 25762B/13

VENT- 10.05.77 VENTREX LAB INC B05 D16 E14 K08 (B03 E13) = GB 1555-832
Labelled tri- and tetra-peptide(s) - 70639A/39

VEVG- 06.02.78 VER VAN GEBRUIKERS D15 = FR 2416-200
Anaerobic treatment plant for effluent - 58028B/32

*VIME= 06.01.76 VILIN MECH AUTOM D15 J03 M11 *SU -617-913
Heavy metal ions removal from aq. wastes - 83652B/46

*VINC/ 03.02.78 VINCENT M C03 D13 *FR 2415-972

Mixing milk powder with hot water to feed calves etc. - 82855B/46

*VIRT- 16.05.78 VIRTIS CO INC B07 D14 J08 *US 4173-078

Shelf arrangement for freeze dryer - 83958B/46

*VISA 18.07.72 VISKASE LTD A97 D12 (A14) *GB 1555-801

Method of forming sausage without separate casing - 82912B/46

*VOTE= 05.10.77 VORON TECHNOL INST D11 *SU -650-596

Bread baking dough proving unit - 83826B/46

WARN 02.02.78 WARNER-LAMBERT CO A97 D13 = FR 2415-964
Sugarless centre-filled chewing gum - 45645B/24

*WARN 01.05.78 WARNER-LAMBERT CO A97 D13 *DT 2917-722
Prepn. of chewing gum base compsns. - 82842B/46

WEAR- 06.02.78 WEAR-EVER ALUMIN IN D13 = FR 2415-991

Portable popcorn appliance - 60190B/33

*WELA 29.04.78 WELLA AG D21 E24 *DT 2819-036

Multistep hair-dyeing using phenol derivs. - 82700B/46

WERN 03.02.78 WERNER & PFLEIDERER D11 = FR 2415-963

Multideck baking oven - 60053B/33

WETR- 15.10.76 WETRIFIN AG D14 = US 4173-126

Whipped cream dispensing cabinet - 30547A/17

WIEL/ 01.10.76 WIELAND D D13 = US 4173-178

Carbon di:oxide injector for carbonated drinks - 27139A/15

*WIEN/ 00.00.78 WIENEKE F C03 D13 *DT 2819-363

Straw processing and dehydration - 82721B/46

WINT 11.02.78 WINTERSHALL AG D16 E13 H01 = BR 7900-826

Oil extrn. by flooding with water - 61639B/34

WIST- 28.04.78 WISTAR INST B04 D16 = DT 2840-039

Producing antibodies specific for malignant tumours - 80773B/44

WITT/ 26.04.78 WITTENBORG P E D13 = DT 2910-923

Prepn. of beverages in vending machines - 81185B/45

*YAMA 30.03.78 YAMANOUCHI PHARM KK B04 D21 *J5 4129-136
Anti:dental plaque compsn. - 83354B/46

*ZENK- 31.03.78 ZENKOKU NOGYO KYODO D23 E12 *J5 4130-605
Preventing oxidn. of fats or oils - 83532B/46

314-Q AD	J4 8070-776 U49	J5 1082-722 X36	00946-Y DH	62891-Y BDE	CA 1065-313 B46	32706-A DEH	DS 2801-239 B46
IL 6900-136 Q00+	GB 1412-800 W45	FR 2293-946 X43	J5 1132-653 Y01	US 4044-031 Y35		J5 3030-476 A18	
U -336-852 X04+	US 3950-469 X17	BR 7508-157 X43	J7 9033-596 B46	DT 2729-868 A03	06659-A D	J7 9033-798 B46	61925-A BDE
U -58-831 X09	DS 2163-764 B46	SW 7604-577 Y48+		SW 7707-461 A07	DT 2722-921 A04		BE -866-171 A35
A 6900-115 R36		ZA 7602-174 Y50+	02418-Y AD	SF 7702-054 A12	OE 7605-213 A06	34952-A DE	NL 7804-309 A45
IL -79-431 S17	25365-V DJ	GB 1499-448 A05	DT 2628-890 Y02	FR 2356-669 A14	FR 2358-463 A16	BE -860-699 A20	DT 2816-268 A45
GB 1244-441 S34	DT 2348-175 V14	OE 7509-374 A26	BE -843-372 Y03	J5 3025-600 A16	GB 1546-554 B21	DT 2750-553 A21	SW 7804-594 A48
CH -514-293 T03	FR 2200-032 V25	CA 1039-183 A41	NL 7606-963 Y03	DL -131-471 A32	DS 2722-921 B36	NL 7712-427 A22	NO 7801-388 A50
CA -895-112 T13	ZA 7307-308 V40	US 4173-653 B46	FR 2317-346 Y16	CA 1065-303 B46	US 4173-516 B46	SW 7711-964 A25	J5 3132-515 B01
CA -931-851 U35	GB 1403-091 W33		GB 1555-531 B46			NO 7703-868 A27	BR 7802-499 B02
U -505-328 Y13+	DS 2348-175 B46	53248-X DE		65267-Y D	16080-A D	BR 7707-529 A27	FR 2387-994 B04
DS 1900-491 B29+		J5 1061-688 X28	03968-Y BDEJ	DT 2706-837 Y37	DT 2637-108 A09	J5 3063-381 A28	ZA 7802-282 B25
7 9034-079 B46+	55284-V D	GB 1503-760 A11	BE -845-787 Y03	BR 7701-026 Y45	DS 2637-108 B46	DK 7705-020 A29	GB 1556-007 B46
	CA -951-051 V31	US 4092-434 A29	ZA 7605-067 Y35+	US 4133-257 B04		SF 7703-367 A30	
2826-R D	NL -155-720 A11	CA 1065-268 B46	DT 2638-993 A05	DS 2706-837 B05	19601-A ADEF	ZA 7706-744 A46	63415-A D
BE -737-923 R08	DS 2107-723 B46		NL 7609-925 A06	GB 1555-579 B46	US 4075-375 A10	US 4126-624 A48	BE -864-340 A36
DT 1942-748 R10		54439-X D	J5 3012-781 A11		J5 4130-606 B46+	PT -67-234 A49	NL 7702-236 A38
NL 6912-964 R10	67921-V D	DT 2556-253 X29	BR 7605-832 A15	68015-Y D		FR 2385-710 B02	NL 7802-124 A38
FR 2016-403 R35	CH -552-345 V39	CA 1065-228 B46	FR 2358-926 A16	J5 2096-754 Y38	23370-A DJ	FR 2387-973 B04	DT 2809-094 A38
FR 3630-844 T05	DS 1692-539 W45		US 4146-454 B15+	J7 9034-062 B46	BE -860-875 A13	GB 1543-897 B15	SW 7802-276 A41
GB 1268-081 T12	NL -161-201 B36	56287-X DJM	CA 1065-274 B46		BR 7807-521 B32+	DL -134-349 B19	J5 3110-251 A44
CA -910-829 T41	J7 9034-002 B46	DT 2600-084 X30	GB 1556-024 B46+	69892-Y DE	FR 2409-072 B35	US 4173-572 B46+	FR 2382-405 A49
DS 1942-748 B45		FR 2296-597 X45		J5 2099-242 Y39	ZA 7806-368 B46		GB 1555-646 B46
17 9034-059 B46	69910-V BD	J5 1125-674 X51	06057-Y BCD	J7 9034-063 B46		36341-A D	
	DT 2413-963 V40	ZA 7507-840 Y07	DT 2628-965 Y04		25224-A AD	US 4080-963 A20	65294-A D
6275-S AD	NL 7403-911 V41	GB 1483-126 Y33+	BE -843-845 Y04	72825-Y AD	BE -859-251 A14	CA 1065-222 B46	BE -864-630 A37
BE -753-481 S03	FR 2222-434 W03	CA 1065-272 B46	NL 7607-326 Y05	DT 2713-620 Y41	DT 2743-443 A15		DT 2709-965 A38
NL 7010-487 S04	J4 9117-680 W19		NO 7602-267 Y09	US 4089-749 A27	NL 7710-694 A16	37660-A D	NL 7802-488 A39
DT 2034-798 S06	J7 5021-559 W33	72722-X DEJ	J5 2010-493 Y10	GB 1555-630 B46	FR 2366-043 A26	J5 3041-458 A21	J5 3109-971 A44
FR 2051-760 S29	GB 1413-775 W46	J5 0061-057 X39	SF 7601-878 Y12		BR 7706-325 A34	J7 9034-070 B46	FR 2382-866 A50
ZA 7004-808 T09	US 3922-194 W50	J7 9033-461 B46	DK 7602-927 Y14	76157-Y D	US 4125-550 A47		GB 1555-647 B46
GB 1296-473 T46	CA 1005-006 Y08		FR 2316-966 Y16	DT 2659-027 Y43+	GB 1555-870 B46	41469-A AD	
CA -919-543 U06	CH -590-922 Y36	79344-X ADFG	PT -65-328 Y42	NL 7700-363 Y44+		J5 3047-556 A23	65315-A BDE
CH -535-020 U25	NL -159-990 B17	BE -840-443 X43	ZA 7604-071 A12	J5 2128-254 Y49	25249-A D	GB 1555-827 B46	BE -865-368 A37
J7 9034-080 B46	DS 2413-963 B46	NL 7603-638 X43	OE 7604-924 B22	FR 2348-657 A06+	BE -859-322 A14+		DT 2812-117 A42
		NO 7601-176 X48	US 4173-629 B46	J5 3020-445 A14	DT 2744-614 A16+	47957-A AD	SW 7802-885 A45
7175-T D	83769-V D	SF 7600-940 X52		GB 1522-284 A34+	NL 7710-960 A17+	DT 2657-833 A27	DK 7801-268 A46
GB 1266-572 T11	NL 7406-055 V48	J5 1132-262 Y01	18765-Y DKL	US 4098-906 A36+	SW 7711-172 A20+	DT 2660-262 B03+	J5 3119-803 A47
DS 1911-377 B46	DT 2421-145 V50	DT 2614-662 Y05	J5 2012-755 Y11	DS 2659-027 B31+	DK 7704-413 A24+	DS 2657-833 B46	US 4105-759 A51
	FR 2228-436 W09	FR 2307-011 Y06	J7 9033-459 B46	CA 1065-183 B46+	FR 2366-799 A27+		FR 2385-681 B02
7936-T BDE	DL -111-153 W19	US 4076-673 A11+			US 4145-454 B14+	48082-A AD	ZA 7801-516 B46
BE -772-333 T11+	GB 1433-564 X18	US 4154-898 B22+	18766-Y DKL	77509-Y DE	PT -67-121 B15+	DT 2754-278 A27+	
DT 2144-641 T13	US 4054-271 Y43	GB 1549-994 B32	J5 2012-756 Y11	BE -853-940 Y44	ZA 7706-808 B28+	J5 3085-990 A35+	67037-A DE
NL 7112-085 T13	DS 2421-145 B46	CA 1065-294 B46	J7 9033-460 B46	NL 7704-611 Y46	J5 4129-166 B46+	DK 7705-810 A35+	BE -864-872 A38
U4 7006-175 T15				DT 2717-515 Y46		BE -866-149 A35+	NL 7802-800 B27
ZA 7105-999 T24	48087-W DH	79361-X DJ		J5 2131-546 Y50	25641-A ADJ	FR 2374-889 A39+	DT 2811-097 B27
FR 2106-398 T31	DT 2461-727 W29	BE -840-493 X43	29537-Y D	CH -605-517 A41	DT 2742-588 A14	PT -67-960 B15+	BR 7801-523 B30
CA -908-192 T36	BE -824-088 W29	NL 7603-577 X43	FR 2317-910 Y17+	FR 2397-387 B16	SW 7709-189 A18	ZA 7802-315 B20+	DK 7801-141 B32
DL -92-460 T46	NL 7417-001 W29	DT 2614-881 X44	GB 1555-463 B46+	GB 1555-637 B46	FR 2365-348 A25	DL -136-923 B43+	NO 7800-865 B32
GB 1331-181 U39	SW 7500-016 W34	NO 7601-132 X48			US 4148-606 B17	NL 7804-513 B46+	NO 7900-502 B32
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ABSTRACTS

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Section D:

FOOD DETERGENTS

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COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	13 NOV - 19 NOV 79	876,216 - 876,394
-Non Delayed	16 NOV 79	877,712 - 877,857
BRAZIL	6 NOV 79 + 13 NOV 79	7,801,412 - 7,808,287
CANADA	6 NOV 79	1,065,551 - 1,066,000
DENMARK	29 OCT 79	7,801,462 - 7,901,451
W. GERMANY		
-DAS	15 NOV 79	1,442,853 - 2,916,189
-OLS	15 NOV 79	2,656,810 - 2,919,776
EUROPE	14 NOV 79	5,136 - 5,426
FRANCE*	7 SEP 79 (BOPI 12 OCT 79)	2,416,632 - 2,417,242
UNITED KINGDOM	21 NOV 79	1,556,031 - 1,556,450 2,020,521 - 2,020,950
JAPAN		
-Unexamined	— 11 OCT - 17 OCT 79	47,004,833 - 54,062,957 54,130,649 - 54,133,900
-Examined	25 OCT - 31 OCT 79	79,034,121 - 79,035,200
NETHERLANDS	5 NOV - 11 NOV 79	7,804,673 - 7,903,567
NORWAY	29 OCT 79	7,704,437 - 7,903,013
RES. DISCLOSURE	NOVEMBER 79	187,001 - 187,062
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SOVIET UNION	—	497,880 - 652,314
SWEDEN	5 NOV 79	7,803,693 - 7,908,161
UNITED STATES		
-Reissues	13 NOV 79	Re30,143 - Re30,150
-Patents	13 NOV 79	4,173,792 - 4,174,541
PCT	15 NOV 79	7,900,892 - 7,900,970

*Printed patents actually published early - mid November, 1979

Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Other Classes	Publication Date	Main CPI Class for Section	Latest Priority	Earliest Disclosure Basic Patent	Accession No	Earliest Priority	Patent No	IPC
MEDA-				A89			69369W/42	=US 3964-992		
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)										
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)										
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26										

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

WINK D11 89000V/52 = DS 2328-250
Front-loading back-discharging multi-zone baking oven - hot gas heating by radiator layout ensuring uniformity of temperature
WINKLER FA KG 02.06.73-DT-328250
(15.11.79) *DT2328-250 A21b-01/26

A conveyor baking oven has an endless apron plate or wire mesh conveyor in each deck. Each deck is heated by hot gas which is circulated through radiators along the top and bottom of each deck. The radiators are subdivided at right angles to the longitudinal axis of the oven and are connected alternately to the left or to the right vertical shaft for the circulation of the hot gases.

The direction of motion of the hot gases in two adjoining radiator chambers is thus opposite. The short flow paths result in small temp. differences between inflow and outflow and in very uniform quality and browning of the prods., even when the baking time is long. 2.6.73 as 328250. (4pp39)

GENM D11 ✓ 97977X/52 = GB 1556-034
Breeding material compsn. and prepn. - by subjecting a mixt. of flour, yeast and whey, as essential ingredients, to raised temps. in an elongated zone

GENERAL MILLS INC 16.10.75-US-623129
(21.11.79) *US3997-673 + A231-01/17 A23p-01
Bread crumbs are prepd. by subjecting a flour and flavouring agent mixt. to a gaseous fluid pressure of at least 15 psi at a temp. $\geq$ 250 °F to fuse the mixt., and propelling the mixt. while still under pressure and heat through an elongate zone to sub-divide the mixt.

Pref. either wheat or rice flour is used in amts. of 85 to 97 wt. % of the mixt. From 0.5 to 2% yeast is pref. present in the mixt. Other ingredients pref. include NaCl, dehydrated whey, monosodium glutamate and vegetable protein. 18.10.76 as 043106 (10pp1376)

EISA ★ D11 ✓ 85338B/47 ★ J7 9023-977
Prepn. of puddings - by placing aq. xylose soln. opt. contg. sugar in a vessel, adding conventional pudding material and heating
EISAI KK 25.02.72-JA-018965
(17.08.79) A231-01/18

Aqueous xylose solution or a mixed solution of xylose and sugar is placed in a vessel for pudding and then pudding material is poured into the vessel, followed by heating. Pudding materials include conventional starting materials for preparation of pudding. 25.2.72 as 018965 A231-1/187 (17.8.79) EISAI KK (2pp22) (J48087060)

KFOO = ★ D11 85651B/47 ★ SU -651-769
Baking tray greaser - has bath filled with oil and rocking plate with wick and scoop to transfer oil from bath to tray surfaces
KAZA FOOD IND DES 30.04.75-SU-130699
(18.03.79) A21b-03/16

Device for greasing trays, in the baking and confectionery sections of the food industry, comprises a bath for the greasing material, mounted so that it can move and into which a working unit, to which a wick is connected, is partially immersed. The uniformity with which the surfaces of the trays are greased is increased and amount of material used is reduced, by making the working unit as a curved plate which is able to rock about and to which a scoop is fastened. The wick is arranged so that the whole surface is disposed above the level of the greasing material, while the scoop is installed so that the wick is pressed against the working unit.

Parmuzin, M.I., Pastukhov, V.M. Bul. 10/15.3.79.
30.4.75. as 130699 (4pp29)

AMCA D11 07767B/04 = US 4173-823
Electrically heated food transporting carton - with resistance coating on corrugated paper board substrate contacted by removable plug used esp. for pizzas

AMERICAN CAN CO 18.07.77-US-816444 (23.06.78-US-918690)
Q77 + R41 (13.11.79) *US4134-004 + H01c-07
An electrical resistance heater is mfd. by laying a strip of electrically conductive material on a sheet of electrically resistive material in such a pattern that the strip has spaced, parallel parts and interconnecting parts; and converting the parallel strips into electrodes for the resistive material and the interconnecting strips into terminals by severing the interconnecting part and the resistive material underlying it, and severing the resistive material along a region adjacent the interconnecting strip and to the side of it between the parallel strips.

The heater is used for a carton for packaging a pizza. It is cheap, dispensable and can be energised through the cigarette lighter terminal of an automotive electrical circuit. The parent patent claimed the food carton. 23.6.78 as 918690 Div. ex 4134004 (4pp976).

BAST - ★ D11 ✓ 85756B/47 ★ US 4173-942
Automatic pizza making machine - uses wobble action of support plate at top of rotating shaft to distribute sauce
BASTIAN BLESSING 09.02.78-US-876271
P42 (13.11.79) B05c-05 B05c-13/02

Machine applies a coating of sauce onto a pizza which rests on a support plate beneath a dispensing nozzle fed by a peristaltic pump delivering a metered quantity of the sauce. The support plate rests on a rotating plate which induces a wobble in the pizza plate although this is prevented from rotating.

A vertical rotating shaft has a radial arm with a horizontal pivot which engages the rotating plate and thus rotates it. A spring urges the rotating plate to a horizontal position but the weight of the sauce compresses the spring so that the rotating plate is no longer horizontal. When this plate rotates it tilts the pizza plate to induce a wobble.

The sauce is distributed over the surface of the pizza as a uniform layer. 9.2.78 as 876271 (7pp295).

WESS / ★ D11 85888B/47 ★ US 4174-408
Dry powder mix for batter - contg. flour, dried buttermilk, dried cream and dried eggs
WESSELSKI FA 12.09.77-US-832652
(13.11.79) A21d-10/04

A dry mix for batter contains 87-95 wt. % farinaceous ingredient(s), 3-7 wt. % dried buttermilk, 1-4 wt. % dried cream and 1-3 wt. % dehydrated eggs.

The mixt. can be stored indefinitely, and is mixed with liquid before use. It forms an adherent, sealing coating which on deep frying forms a crisp golden crust. It may be frozen onto frozen food and remain intact.

The farinaceous material is esp. wheat flour. Salt and pepper and spices, seasonings and colouring etc. may be added. 12.9.77 as 832652 (4pp955).

D12: MEAT; FISH PROCESSING

BORD D12 12699R/08 #DS 1942-905
Packaging film consisting of a plasticised vinyl chloride - (co) polymer containing an antimisting and ant adhesive
BORDEN INC 22.08.69-BE-737870 (22.08.69-DT-942905)
A15 (15.11.79) *BE-737-870 +C08j-05/18 C08k-05/10 C08l-27/06 C08l-31/04

Polyvinyl chloride and/or acetate film is stabilised against mould and adhesion. The additives comprise (a) plasticiser, (20-60 pts.wt. to 100 pts.wt. polymer or copolymer); (b) a partial ester of a 2-6C water-soluble polyol and a 12-18C alkanolic acid and/or adducts of these partial esters, (1 mole), with 2-3C alkene oxides (3-30 moles); and (c) adducts of an alkylphenol, (1 mole), with 2-4C alkene oxides, (3-50 moles), such that (b)+(c) contribute ≥ 4 pts.wt. per 40 pts.wt. (or more) of plasticiser.

The prods. are used in the packing industries, esp. for foods. 22.8.69 as 942905. (5pp047)

PROC ★ D12 84541B/47 ★EP ---5-290
Liq. crystalline food additive emulsion - contains specific emulsifier, water and additive, esp. flavour precursor for meat analogues
PROCTER & GAMBLE CO 28.04.78-US-900956
A97 E19 (14.11.79) A23l-01/34
D/S: E(BE,DT,FR,GB,IT,NL,SW).

Food additive compsn. comprises (a) ≥ 1 emulsifier (I); (b) water at (I): water ratio 1:10 - 10:1 (1:8-8:1) and (c) food additive, i.e. ≥ 1 flavouring agent, colouring or lipid. The compsn. is in a liq. crystalline state which is stable from 98-200°F. (I) is a polyglycerol fatty acid monoester; dicarboxylic acid monoacyl glycerol ester; a sucrose fatty acid monoester or phospholipid.

In (I) the fatty acid is pref. 14-18C, or (I) is lecithin. The flavour is esp. a flavour precursor, and if a lipid is used this is pref. a natural triglyceride used together with an additional non-polar oil-soluble emulsifier (II).

The additive is used esp. in meat analogues contg. texturized protein, lipid and binder. The emulsion has low calorie content, is stable during cooking and is esp. useful for delivering flavour precursors which react at the water-oil interface during cooking to develop the flavour. The compsn. may be incorporated into a food or beverage or laminated onto the outside of the prod.

17.4.79 as 200191 (22pp1251).

(G) ISR:GB1120447;LU--52481; FR1600330; FR1170141; FR1537452;US3752770;US3982881.

LUCH- ★ D12 84594B/47 ★EP ---5-398
Working platform facilitating cutting animal carcasses - for butcher's meat by moving up and down around carcass suspended from conveyor runway

LUCHAIRE SA 27.04.78-FR-012509

(14.11.79) A22b-05/20

D/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

Working platform for manipulating and cutting an animal carcass comprises a moving platform and operator's tool(s). An adjacent overhead runway conveys suspended carcasses to be processed.

The platform can be raised and lowered on a vertical axis inside a supporting structure in which the carcass can be suspended. The carcass can hang through a hole in the platform so that the platform can move up and down around the carcass.

The supporting structure pref. sits astride the conveyor runway. The platform is pref. surrounded by a safety rail with gap(s) through which the suspended carcass can pass.

Used for cutting up slaughtered animal carcasses for butchers meat, e.g. skinning and trimming, cleaning breast bone and chump ends, evisceration and removal of offal.

A single operator can process a complete carcass. Man-handling is reduced and power tools can be arranged readily to hand.

26.4.79 as 400271 (17pp448)
(F) ISR: ---

MIT ★ D12 85395B/47 ★J7 9034-821
Preventing discolouration of meat - by keeping in sealed vessel with oxygen-absorbing agent and removing from vessel in moisture-contg. atmos.

MITSUBISHI CORP 05.03.75-JA-026842

E34 (E14 E17) (29.10.79) A23l-01/27

Method comprises placing meat in a sealed vessel together with an oxygen-absorbing agent (I), and taking out the meat into oxygen-contg. atmos. in the presence of moisture. (I) is e.g. oxalic acid, pyrogallol or Na sulphite, dithionite or hydrogen sulphite. 5.3.75 as 026842 A23l-1/27; 1/31 (29.10.79) MITSUBISHI CORP. (4pp83) (J51104061)

MIT ★ D12 85396B/47 ★J7 9034-822
Preservation of cooked meat - by drying and placing in sealed container with oxygen-absorbing agent

MITSUBISHI CORP 26.06.75-JA-079839

E34 (29.10.79) A23b-04

Method comprises drying (by heating) boiled or steamed meat and, placing the hot meat in a sealed container together with an oxygen absorbing agent (I). (I) is e.g. sodium sulphite, sodium hydrogen sulphite, sodium thiosulphate, sodium dithionite or sodium pyrosulphite. 26.6.75 as 079839 A23b-4/00 (29.10.79) MITSUBISHI CORP. (3pp83) (J52003856)

VOLK- D12 11035W/07 =SU -651-772
Automatic fish filleting machine - completing cut of fishbones from flesh to spine by cutting edges of guide plates

VEB VOLKSWERFT STRA (SCHM/) 28.02.74-DL-176855

(18.03.79) *DL-109-798 A22c-25/16

An automatic fish filleting machine first cuts the body open, spreads out the two sides and cuts the fishbones clear from the flesh up to the spine in two stations. Two spine cutters sever the spine from the flesh and two guide plates direct the fish to two vertical cutters which perform the final cut into two fillets. This machine can be used for all sizes of fish and produces a minimum of waste.

Schmidt, U. Bul. 10/15.3.79. 29.1.75. as 104273 (4pp)

UNIC ★ D12 85865B/47 ★US 4174-368
Curved sausage casing prodn. - by plasticiser treatment, inflation, deformation and neutralisation of plasticiser

UNION CARBIDE CORP 31.07.78-US-929341

A97 (13.11.79) B29d-07/22

Curved regenerated cellulose casings are prepd. by (a) contacting the casing with a swelling agent in sufficient concn. and for a time sufficient to plasticise it, (b) inflating the casing with an inert fluid; (c) passing the inflated plasticised casing around and in contact with a cylindrical surface; (d) contacting the casing with a neutralising agent while it is in contact with the cylindrical surface; (e) removing the casing from the surface; and (f) washing, plasticising and drying the casing.

The casings are used to make annular sausages. The process is efficient and economically attractive.

The cellulose swelling soln. is pref. a 15-25% soln. of LiOH, NaOH or KOH, or a soln. of K thiocyanate, or may be liquid ammonia. The neutralising agent is e.g. H₂SO₄, HCl, citric or acetic acids. The inert fluid is pref. air. 31.7.78 as 929341 (5pp955).

BECK- D12 46971Y/27 =US 4174-436
Polyurethane films for sausage casings - contain a high proportion of 6C linear aliphatic gps.

NATURIN-W BECKER 31.12.75-DT-559318

A97 +P73 (A25) (13.11.79) *BE-850-017 A22c-13 B32b-27/40 C08g-18 42

Polyurethane elastomer which exhibits thermoplastic properties on processing, consists of base units derived from the reaction of ≥ 1 high mol. wt. diol, ≥ 1 diisocyanate and ≥ 1 low mol. wt. glycol as a chain extender. Both the base units are derived from both the high mol. wt. diol and the diisocyanate contg. linear 6C-aliphatic units. The equiv.

ratio of diol to diisocyanate units is 1:3.5-70, and the quantity-wt. ratio is 1:0.4-4.0. The equiv. ratio of glycol to diol is 5-70:1. The chain extender comprises ≤ 50 mol. % of linear 6C-aliphatic units.

The elastomer prep. is esp. used for making mono- and multi-layer food casings, esp. sausage casings, by extrusion. The casings can be boiled and scalded without folding or wrinkling when cooled. 20.7.78 as 926541 Div. ex 4123589 (+23.12.76 - US - 753694) (7pp931).

See Also

D13 GB 1556439

D25 US 4174289

D13: OTHER FOODSTUFFS

ZNEM- ★ D13 84175B/47 ★BE-876-343
Cooking fat giving good browning - contains lecithin, galactose and aspartic acid and/or glutamic acid

ZUID NED MELKIND 19.05.78-NL-005463
(19.11.79) A23d

The fat contains lecithin or a lecithin-contg. substance together with galactose and aspartic acid and/or glutamic acid. The galactose may be added in the form of an at least partially hydrolysed protein powder from which the salts and protein are opt. removed. Galactose and amino-acid may be added together in the form of butter milk powder in which the sugar and protein are at least partially hydrolysed.

The fats give excellent browning when used for frying and baking. The combination of galactose and aspartic acid is pref., since although the combination of galactose and glutamic acid gives better browning, there is a risk of too intensive browning taking place, which borders on blackening. 18.5.79 as 876343 (7pp513) (F1)

STOP- ★ D13 ✓ 84211B/47 ★BE-877-807
Stable anti-haemorrhagic vitamin/k adducts with other vitamin cpds. - used pharmaceutically and in foods and feedstuffs

STOPPANIL SPA 21.07.78-IT-026008
B05 C03 (16.11.79) A23k A61k C07a

Novel stabilised adducts (I) of vitamin K type cpds. (II) are prep. by reacting (II) with a compatible cpd. (III) having vitamin activity. (III) contain a quaternisable N atom in a moiety of formula $-N=C$ (where the N atom forms part of a 5-6 membered monocyclic heterocycle contg. 1 or 2 N atoms or of two condensed 5-6 membered rings (aromatic or heterocyclic) contg. one or more N, S or O atoms) or $N-C(R_1)-C(R_2)-C(R_3)-C(R_4)-$ (where the C atoms form part of an aliphatic or aromatic structure, R_1-4 are each H, aliphatic or aromatic gps. of functional gps).

(II) is pref. menadione sodium bisulphite (IIa). (III) is pref. a pyridine, purine or thiazole deriv. an aminobenzoic acid, an aromatic or aliphatic amine or an amino acid.

(II) have antihaemorrhagic activity and are used as food and feed additives (esp. for poultry) and in human therapy. (I) are a stabilised form of (II) which has a high active material content, increased activity and additional activities due to the other vitamins. 20.7.79 as 877807 (15pp941)

AJIN D13 ✓ 52094S/32 = DS 2104-620
Sweetening agent dipeptide ester preparation

AJINOMOTO KK 26.06.70-JA-055722 (31.01.70-JA-008742)
B05 E14 (15.11.79) *DT2104-620 C07c-103/52

Prepn. of α -aspartyl-L-phenylalanine- and α -L-aspartyl-L-tyrosine-1-3C alkyl esters comprises reacting (a) a salt of L-asparaginic acid anhydride and a strong acid (I) with (b) an L-phenylalanine- or L-tyrosine-1-3C alkyl ester in a solvent at $< 60^\circ\text{C}$, and then isolating the respective α -L-aspartyl ester.

Pref. (I) is a hydrohalic- or sulphonic acid, or a strong carboxylic acid. Pref. the reaction temp. is $\leq 10^\circ\text{C}$. Reaction is pref. in the presence of a weak organic acid or a tert. amine, esp. as ≤ 10 mol./mol. ester.

Prods. are useful as sweetening agents. Direct process gives high yields, without the need to use masking material. Prods. are free of bitter-tasting β -isomers. 1.2.71 as 104620 (+23.2.70-JA-015401) (7pp936)

TRIO- D13 40545T/25 = DS 2158-104

Oral iron preps for young pigs - based on group frozen peat

TRIO TURFSTROOIS NV (TRI-) 23.12.70-NL-018715

C03 (15.11.79) *BE-776-445 A61k-33/26 + A61k-35/10

Prepn. of a peroral Fe-contg. prep. for young pigs comprises mixing (a) ≥ 1 resorbable ferrous salt with (b) ground, frozen black peat or smoky peat from virgin high moor in a wt. ratio (a):(b) of 10-20:500-800 pref. 10-12:600-720. Ferrous salt is e.g. $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$.

Prepns. have good dispersion properties and are readily accepted by young pigs. Used to treat Fe deficiency in pigs with a large degree of dependence on the sow's milk. 24.11.71 as 158104. (3pp936)

SCHO/ ★ D13 84266B/47 ★DT 2820-081
Stable, aromatised carbohydrate food flavouring material prep. - by contacting amorphous, anhydrous sugar, pref. lactose, with aromatising material (NL 14.11.79)

SCHONERT K 08.05.78-DT-820081
(15.11.79) A23I-01/22

An amorphous sugar, (I), is used in the prep. of an aromatised carbohydrate, (A), by treating an anhydrous sugar with an aromatising material (II). (I) is pref. cont-acted with (II), or a mixt. of (II), as a vapour or liq. (I) includes water-contg. sugars which have not exceeded the max. of their water vapour-sorption-time curve. The sugar can be aromatised directly on formation of the amorphous phase, without previous sepn. (I) is esp. lactose, partic. freeze- or spray-dried lactose. 8.5.78 as 820081 (10pp200)

TOSE- ★ D13 84314B/47 ★DT 2820-579
Continuous fatty emulsion prodn. - by stirring oil and stabiliser with water and mixing with oil and seasoning
TOSENO-BETRIEB GR D 11.05.78-DT-820579
(15.11.79) A23I-01/24

Semi-solid fatty elumnsions (50% mayonnaise) is produced by mixing emulsifier, thickener, stabiliser and oil and by stirring in a metered amt. of water. After a stay in a swell battery the mixt. receives further oil and seasoning additives in a main mixer and is finally processed in an emulsifier.

This creates a compact low-cost plant which produces 50% mayonnaise continuously and is suitable even for medium and small establishments. 11.5.78 as 820579 (9pp39)

URBA/ ★ D13 84321B/47 ★DT 2820-719
Food seasoning and mixing drum - without inside mixing mechanism, and adjustable for operation in vertical plane
URBASCH G 12.05.78-DT-820719
P28 (15.11.79) A23I-01 A47j-43/04

A drum to apply seasoning to chicken and other meat before frying or grilling or to mix dough is rotatable. The inside of the drum has no mixing mechanism. A horizontal trunnion bearing allows the drum to be swivelled from the horizontal to a 45° up to 45° down position.

This saves the manual labour for seasoning which has to be massaged into the meat and requires much skilled manpower in large restaurants. 12.5.78 as 820719 (12pp)

FRAL/ ★ D13 84364B/47 ★DT 2821-139
Alcohol-contg. fruits prep. from fruits contg. sugar - by diffusing of sterilised fruits with fermented juice enriched in alcohol

FRALING R 13.05.78-DT-821139

(D16) (15.11.79) A23b-07

Fruits are brought in contact with fruit juices enriched in

alcohol for an interaction in which the sugar and aromatic materials of the fruits are exchanged for the alcohol contained in the enriched fruit juices. The fruit juice which then has a very low alcohol content is transferred to a fermentation vessel, in which, after the addn. of sugar, it is fermented into a fruit juice rich in alcohol. After filtration this is returned to an interaction vessel which is filled with fresh fruit, after the processed fruit has been removed and transferred for consumption, preserving, etc.

Method procudes alcohol fruits by using the sugar contained in the fruits without the expense of adding quantities of alcohol to them. 13.5.78 as 821139(13pp1045)

NEST ★ D13 ✓ 84384B/47 ★DT 2914-301
Protein esp. for children's diets and cheese mfr. - recovered from whey by heat-treatment and ultra filtration of denatured protein (NL 13.11.79)

SOC PROD NESTLE SA 11.05.78-CH-005134

(15.11.79) A23c-19/02 A23j-01/20 A23l-01/30 C07g-07

Protein recovery from whey comprises (a) heat-treatment of skim or raw whey to cause protein denaturing, and then (b) sepn. of the denatured proteins from the other non-fatty whey components by ultra-filtration.

The proteins can be used in prods. for children's nutrition and diets and in cheese mfr. Centrifuging is obviated. Residual caseins and fats can be recovered directly. Microbe population of prod. can be reduced and lysine is protected. Denaturing increases permeation yields in ultra-filtration by 70-300% at same temp. Residual lactose and salt contents are low. 9.4.79 as 914301(20pp200)

GENO ★ D13 84399B/47 ★DT 2917-289
Stable salad etc. dressing emulsion prepn. - with encapsulatable gum and encapsulating material addn. to emulsion solids mixt.

GENERAL FOODS CORP 12.05.78-US-905306

A97(A11) (15.11.79) A23l-01/24

Dry pressing mixt. contg. an encapsulatable gum, (I), in addn. to standard solid aromatisers, dyes and fillers, forms a viscous emulsion on manually mixing with an aq. soln. and with an edible oil. Quantity of (I) is such that a stable emulsion is formed, having viscosity 1-2.6 Pa.Sec. 24 hrs. after mixing.

The emulsions can be used as salad or other sauces. Gum hydration is inhibited or retarded on mixing. An emulsion oil- and aq. phase is formed before appreciable gum is dissolved. A stable emulsion is formed even under tolerance conditions, i.e. phase separation on standing is prevented.

(I) may be xanthan (prefd.) carboxymethyl cellulose, guar gum, tragacanth, karaya and/or propylene glycol alginate. 27.4.79 as 917289(17pp200)

CIBA ★ D13 84408B/47 ★DT 2917-753
Protein-contg. animal feed with balanced essential aminoacid content - produced by chemical hydrolysis of slaughter house, fishing industry or vegetable waste

CIBA GEIGY AG 02.05.78-IT-022915

C03 (15.11.79) A23k-01

New conc. and supplemented protein-contg. animal feed having balanced amts. of the essential amino acids is the prod. of the chemical hydrolysis of slaughterhouse wastes, wastes from the fishing industry and/or vegetable wastes. The hydrolysis is carried out by treating the starting material in the warm with an aq. soln. of a strong mineral acid, cooling, neutralising with a base, and recovering the hydrolysis prod. by filtration.

— Used as liq. or solid fodder for cattle, sheep, pigs, poultry, etc. Essential amino acids are present in balanced amts. thus ensuring optimal utilisation. 2.5.79 as 917753 (18pp280)

GERV- ★ D13 84607B/47 ★FR 2416-646
Cheese making process - commencing in upper chamber of a container and piercing the bottom to allow drainage to a lower chamber

CIE GERVAIS-DANONE 09.01.78-LU-078833

P13 Q34 (12.10.79) A01i-25 B65d-85/76

The container initially has a fluid tight bottom and is filled with milk. After formation of the curd a tool with pointed needles is lowered to perforated the bottom for drainage of the serum into a lower chamber. The tool is then

withdrawn.

A second tool with blades which lie adjacent the wall of container is raised, lowered and rotated to separate the curd from the wall and then withdrawn. Spoons are then inserted and caused to move. 16.12.78 as 036341(13pp)

ALZA D13 74740A/42 =GB 1556-149
Osmotically acting release device - whose walls are a laminate with a semipermeable and a microporous layer

ALZA CORP 07.04.77-US-785582

B07 C03 + P34 P73 (D21 D22) (21.11.79) *DT2814-709 A61k-09

B01d-13 + B32b-01/02

An osmotically driven dispenser for dispensing an agent into a liq. includes a wall permeable to the liq. and impermeable to the agent. This defines a chamber contg. the agent which has an outlet leading to the liq. The wall is a laminate of semipermeable lamina and a microporous lamina.

Pref. the microporous lamina is inert towards the agent. The semi-permeable lamina is on the outside. The microporous and the semi-permeable laminae are of cellulose diacetate or triacetate.

Drugs can be dispersed into water, such as KCl, lithium sulphate, sodium acetazolamide and thiophylline. 6.3.78 as 008821 (11pp1376)

PFIZ D13 ✓ 59399Y/34 =GB 1556-297
Foodstuff compsn. contg. fatty material and microbial protein - opt. with a milk protein, partic. useful for oven baked prod. treated meat prod. and drinks

PFIZER INC 18.02.76-US-659123

(D16) (21.11.79) *BE-851-561 A23j-03

Food compsn. contains vegetable protein and a protein binding agent. The binding agent contains 17-100 dry wt. % of microbial protein and 0-83 dry wt. % of ≥ 2 additional ingredients. The additional ingredients are egg white, soy flour and wheat gluten. The vegetable protein is pref. soy protein. The microbial protein is isolated from a yeast, a bacterium or a fungus.

Such food compsns. are esp. used in the snack food industry mixts. of microbial protein contg. 50% whey powder can replace milk solids and non-fat dry milk substit. Prods. have acceptable taste and textural characteristics. 17.2.77 as 006744 (12pp931)

RECU- D13 03952Y/03 =GB 1556-439
Protein concentrates from animal blood - by haemolysis and partial protein hydrolysis, useful for human and animal nutrition

SOC IND RECUP DECHE 20.08.75-FR-026197

C03 (D12) (21.11.79) *BE-845-046 + C07g-07

Prepn. of protein concentrate of animal origin is claimed which comprises burst red blood corpuscles and where the proteins are (partially) hydrolysed. The method comprises haemolysis of blood (pref. using alkali provided by liq. or gaseous NH₃, pH during haemolysis being ca 10) followed by hydrolysis (pref. by enzymatic digestion using an alkaline protease of *Bacillus Subtilis*, at 65 °C and pH 10.8). Compsn. is pref. sterilised and/or concentrated after hydrolysis. Method may include a defibrination treatment before haemolysis. Prod. may finally be dried.

Method enables blood to be stored without harm at collection point (i.e. at or near abattoir) and to be transported to hydrolysis installation at which sterilisation etc. may be performed. Utilisation of proteins in blood is afforded. 18.8.76 as 034429 (3pp963)

SOLL- D13 13111Y/08 =GB 1556-449
Regulating and conditioning system for chocolate - has rotating scrapers for top and bottom surfaces of each cooling chamber

SOLLICH KG 13.08.75-DT-536063

+ Q75 (21.11.79) *DT2536-063 + B01f-07/18

Chocolate and other materials contg. fats are conditioned in a machine which is made of cylindrical sections each defining a chamber and being stacked to form a cylinder; each chamber has top and bottom walls for heat transfer is connected to a recirculating transfer medium, and has two scrapers rotating about the cylinder axis which are axially sprung apart to sweep the top and bottom walls. In use materials are serially pumped through the chambers.

Pref. each scraper has arms radiating from a hub. Shelf-life of chocolate is increased. 25.6.76 as 026653

11pp1376)

BER-★ D13 84667B/47 ★GB 2020-544
Steam peeling fruit and vegetables - two applications of high pressure steam separated by pressure reduction
VAN DEN BERGH ENGG 26.07.78-EI-001503 (15.05.78-EI-000980)
(21.11.79) A23n-07

appts. is used in which the high pressure steam is collected on completion of an application for use in a subsequent application of high pressure steam. If desired further pressure reductions and steam applications can be carried out. The pref. time for the steam application is 5 to 15 secs., and for pressure reduction 3 to 4 secs. The pref. pressure of the steam is 8 to 12 atmospheres.

The process is used e.g. for potatoes or tomatoes. The method produces little cooking of the product and gives less defects and increased product yield compared with previous methods. 14.5.79 as 916606 (7pp295)

YASH/★ D13 85002B/47 ★J5 4132-247
Mfg. sterilant for food - by gasifying ethanol with e.g. carbon dioxide, adsorbing onto starchy granules and sealing in packages
YASHIMA S 04.04.78-JA-039504
(15.10.79) A23l-03/34

The sterilant is prepd. by gasifying ethanol with e.g. CO₂, N₂, etc., adsorbing it onto granules of starchy substance such as corn starch and sealing the granules in packages which may be perforated for use.

The granules of starchy substance are obtd. by granulating powdered starchy substance and making the granules porous by spraying soda at a pressure of 5 kg/cm² onto the starchy substance in the granulator and drying the granules under normal pressure. 4.4.78 as 039504 (4pp5)

SHIN-★ D13 85003B/47 ★J5 4132-258
Rapidly permeating liq. sugar in fruit - includes immersion in warm water contg. L ascorbic acid, sodium chloride and citric acid, and vacuum treatment, used for mfg. jam
SHINKA SHOKUHIN KK 03.04.78-JA-039000
(15.10.79) A23b-07/08 A23l-01/06

The method comprises (a) washing fruits, (b) if necessary, peeling them off, (c) cutting them into pieces or boring a hole in their centre, (d) immersing them in the warm water contg. a little L-ascorbic acid, NaCl and citric acid for a short time, (e) sealing them in a vacuum tank, (f) treating them under reduced pressure of 80-20 mm/Hg for a short time, (g) pouring the warm liq. sugar, in which a little L-ascorbic acid, NaCl and citric acid are combined, in the vacuum tank pref. under reduced pressure, (h) releasing the reduced pressure to normal pressure, (i) standing the mixt. for a short time while circulating the liq. sugar until the sugar concn. in fruits is increased to a prescribed level, (j) taking out fruits from the vacuum tank, (k) putting them in fluidised heat-transferring tank or steam-heating type double pan, (l) adding the same liq. sugar as used in (g) 10-30%, (m) heating the content to 80-90°C, (n) packaging them in cans, (o) pouring the warm liq. sugar which is combined with L-ascorbic acid and citric acid, in cans, (p) covering cans, (q) heat-sterilising them at 80-95°C and (r) cooling them with cold water.

An alternative method comprises (k') putting them in the vessels made of gas-barrier and perfume-holding material, (l') pouring the same liq. sugar as used in (o), at 10-35%, (m') vacuum-sealing the vessels, (n') heat-sterilising them at 80-90°C for 10-20 mins. and (o') cooling them with cold water.

Sugar-contg. fruits which keep aroma, taste, colour and texture like natural fruits and are highly preservative, can be prepd. economically by a simple process.
3.4.78 as 039000 (5pp5)

SAOK★ D13 85106B/47 ★J5 4132-599
Isolating sweet substances from Stevia rebaudiana Bartoni leaves - by contacting extract soln. with adsorbent resin, contacting with aq. slaked lime soln. and recovering glycoside(s)
SANYO KOKUSAKU PULP 04.04.78-JA-038802
A96 B03 E13 (15.10.79) A23l-01/22 C07g-03

Method comprises (1) contacting a Stevia-leaf extract soln. which is obtd. by extracting leaves of Stevia rebaudiana Bartoni with cold or hot water, with a non-polar syn-

thetic adsorbent resin (pref. a styrene/divinylbenzene copolymer having a porous, macroreticular structure), (2) contacting the resin with an aq. slaked lime soln. and (3) dissolving the adsorbed sweet substances composed of glycosides having steviol structure (typically stevioside) with a hydrophilic organic solvent (or water-contg. hydrophilic organic solvent).

Process is used to refine extract solns. to give purified glycosides.

In an example, 100 g of Stevia leaves were extracted with 1 litre of water (80°C) for 6 hrs., and then with 1 litre of water (80°C) for 1 hr. The extracted leaves were washed with 1 litre of water at room temp. The aq. solns. were combined and passed through a column packed with 400 ml. of macroreticular adsorbent resin. After washing the column with water, satd. aq. Ca(OH)₂ soln. (2.3 litres) was passed through the column to elute the adsorbed glycosides. 4.4.78 as 038802 (9pp173)

SEIS★ D13 85107B/47 ★J5 4132-600
Pectic acid alkali salt prodn. - by treating endocarp of citrus fruit with aq. acid, immersing in aq. alkali and adding alkali
SEISAN KAIHATSU KAGAKU 03.04.78-JA-039502
E12 (15.10.79) C07g-17

Process comprises (a) treating endocarp of citrus fruit with aq. acid at pH 1-3; (b) immersing the acid-treated endocarp in aq. alkali soln. of pH 10-5.12.5 to dissolve the pectins; and (c) adding alcohol to the alkali soln., to ppt. alkali salt of pectic acid.

In an example, 300 pts. wt. of washed orange endocarp was immersed in 1000pts. wt. of diluted aq. HCl (pH 2.5) with agitation for 2 hrs. The soln. was then made alkaline with 3N caustic soda soln. to pH 11.0, and then agitated for an additional 5 hrs. to extract saponified pectin from the endocarp. After removing insoluble residues by filtration, the alkali soln. was mixed with an equal vol. of methanol to ppt. Na salt of pectic acid (saponified pectin). The pptd. gel was collected by filtration, and then dried at 40°C for 5 hrs. in a forced-air oven to obtain 62 pts. wt. Na pectate contg. 10 wt.% moisture. 3.4.78 as 039502 (4pp173)

HOHN★ D13 85262B/47 ★J5 4133-503
Mfg. cooking oil for use on hot plates - by mixing liq. vegetable oil with phosphatide(s), propylene glycol soln. of arginine and opt. surfactant
HOHNEN OIL KK 07.04.78-JA-040959
(17.10.79) A23d-05/02

Liq. vegetable oil is mixed with > 0.5 wt.% (on the liq. vegetable oil) of phosphatide, > 1 wt.% (on the phosphatide) of propyleneglycol-soln. of arginine (e.g. propyleneglycol 4-5 pts. wt. and arginine 1 pt. wt.) and, if necessary, edible surfactant with heat and stirring, then the content of phosphatide in the liq. vegetable oil is adjusted to 0.5-5 wt.%, if necessary, by the addition of the liq. vegetable oil.

Colouration of oil (i.e., colouration (browning) of phosphatide by heating at > 150°C) and spattering of oil are reduced.

Phosphatides in bean oil, corn oil, cotton seed oil, rape seed oil, etc. are usable. They are effective for reducing spattering of oil. Liq. vegetable oil is e.g. ordinary refined liq. vegetable oil, e.g., bean oil, corn oil, rapeseed oil, cotton seed oil, sesame oil, olive oil, sunflower oil, sunflower oil, peanut oil, etc. 7.4.78 as 040959 (3pp170)

ZAID★ D13 85337B/47 ★J7 9022-903
Kasugamycin deriv. feedstock additive promoting growth acceleration - in livestock and poultry
ZH BISEIBUTSU KAGAKU KEN 15.12.71-JA-101050
B03 C03 (C02) (09.08.79) A23k-01/17 A61k-31/35

Pure or crude Kasugamycin deriv. KG-8 is homogeneously mixed with conventional feedstuff, to give a growth acceleration effect. The feedstuff is suitable for livestock, poultry, etc. 15.12.71 as 101050 A23k-1/17; A61k-31/35 (9.8.79)
ZH BISEIBUTSU KAGAKU KEN (8pp) (J48067058)

NAKA- ★ D13 85398B/47 ★ J7 9034-839
Preservation of miso with vinegar which has been semi-neutralised
- by addn. of egg shells, bi:carbonate or caustic soda
NAKANO SUMISE KK 12.08.75-JA-097210
(29.10.79) A231-01/20

Method of preserving miso comprises adding sufficient semi-neutralised vinegar (1) to the fermented soybean paste to give an acetic acid content of ≤ 0.5 wt.% in the mixt. (1) is prepd. by adding 0.3-0.9 pts. wt. of egg-shell, NaHCO_3 and/or NaOH to vinegar per 1 pt. wt. of acetic acid in the vinegar. 12.8.75 as 097210 A231-1/207
(29.10.79) NAKANO SUMISE KK (4pp) (J52021399)

LANN- ★ D13 B/47 ★ SF 7800-722
Machine for cutting up cauliflower
LANNEN TEHTAAT OY 06.03.78-SF-000722
(31.10.79) A23n

ESIT= ★ D13 85537B/47 ★ SU -649-755
Choosing microorganisms for joint cultivation in ferment prodn. - by determining their souring power proteolytic activity and nucleotide-synthesising activity, used in cheese mfr.
EAST SIBE TECH INST 05.05.77-SU-483645
(D16) (06.04.79) C12k-03

Choice of different microorganisms for joint cultivation to produce souring preparations used in mfr. of cheeses is based on determ. of their proteolytic activity, acidifying power and symbiotic relationship to other microorganisms. This method is improved by additionally determining the nucleotide-synthesising ability (by measuring the light absorption at $\lambda = 257-262 \text{ m}\mu$) of the acid-soluble fraction sepd. from the curd formed by the cultivation of the microorganisms on sterilised skimmed milk for 12-16 hrs. High nucleotide-synthesising ability indicates good symbiotic relationship. By this method, the biochemical activity of the mixed microorganism preparations, in particular the acid formation and the proteolytic activity, is increased. The maturing of the cheeses is accelerated.

Tsyrenov, V. Zh. and Vasileva, R. A. Bul. 8/28.2.79. 5.5.77. as 483645 (2pp70)

VLAD= ★ D13 85571B/47 ★ SU -650-598
Kefir having low fat content - is prepd. by keeping pasteurised milk at elevated temp., to effect swelling of proteins, and then souring
VLADIMIR MILK COMB 04.01.77-SU-442180
(07.03.79) A23c-09/12

Plants are protected from first autumn or late spring frosts by spraying with aq. suspension of chlorella culture, which forms on the surface of the plant a heat-insulating layer absorbing atmos. moisture.

Typical concn. is $50-80 \times 10^6$ cells per 1 ml. of aq. suspension. Under the action of sun and wind, the thin film of chlorella decomposes and is washed down, forming fertiliser for the plant.

Galeev, N. A., Prokopov, O. I., Ziyazetdinov, R. F. Bul. 9/5.3.79. 1.12.77. as 548967 (2pp938)

AGPH= ★ D13 85572B/47 ★ SU -650-600
Fat-contg. ingredient for poultry feed - is prepd. by mixing melted fat with flour and water, rubbing the mass on friction rollers and drying

AS GEOR PHYS-ORG CH 25.01.77-SU-446232
C03 (07.03.79) A23k-01/16

Fat-contg. component of feed for poultry is prepd. by mixing a floury substance with a molten fat and water to a doughy consistency, and mechanically working the dough to increase its porosity. This is effected by rubbing the dough on frictional rollers at $85-100^\circ\text{C}$ to dryness. Then the dough is comminuted, and more molten fat is admixed at $40-70^\circ\text{C}$. The final drying is performed at $60-90^\circ\text{C}$ for 4-6 hrs. By this method the calorific value of the product is increased and its flowability is improved.

Melikadze, L. D., Mandzhgaladze, I. T., Kvashali, N. F. et al. Bul. 9/5.3.79. 25.1.77. as 446232 (2pp70)

SARB/ ★ D13 85573B/47 ★ SU -650-601
Synthetic additive for animals fodder - is prepd. by melting carbamide and mixing with ammonium poly:phosphate(s)

SARBAEV A N 23.08.74-SU-054668
(03.79) A23k-01.22

Synthetic additive for animals fodder is prepd by melting carbamide and introducing ammonium phosphates into it. The loss of the amidic nitrogen is reduced (from 14.1% to 2.9%) by using ammonium polyphosphates, whose condensation degree corresponds to a molar ratio $\text{H}_2\text{O}:\text{P}_2\text{O}_5 = (1-2.5):1$. The ammonium polyphosphates are introduced in such a quantity that the biuret concn. in the melt is 20-45 wt.%. The melt is cooled to $120-130^\circ\text{C}$.
Sarbaev, A. N., Kdryakin, A. G., Polyakov, E. V. et al. Bul. 9/5.3.79. 23.8.74. as 054668 (3pp70).

AUTH= ★ D13 85653B/47 ★ SU -651-775
Convective drying of grapes - in stages using air at different temp. and with different moisture contents
AS UKR THERM PHYSIC (MLFO=) 03.02.77-SU-450939
(15.03.79) A23b-07/02

Method for convective drying of grapes, for use in the food ind. includes the steps of souring and drying. The process is intensified and final quality is improved by completing the drying in two stages.

In the first stage air is blown through the grapes at $85-90^\circ\text{C}$. The air has a moisture content of 60-80 g./kg. and the process takes 3-4 hours until the grapes have an absolute moisture content of 20-30%. The second stage takes 1-2 hours with the air temp. at $70-80^\circ\text{C}$, moisture content 5-15 g./kg. of dry air, and an absolute moisture content of the grapes 10-12%. The souring is carried out for 3-4 hours at an air temp. of $30-50^\circ\text{C}$, moisture content 5-15 g./kg. velocity 3.5-5 m./sec., to an absolute moisture content of 100-120%.

Kremnev, O. A., Borovskii, V. R., Mishnaevskii, L. M.-G. Bul. 10/15.3.79. 3.2.77. as 450939 (2pp29)

LEON/ ★ D13 85755B/47 ★ US 4173-925
Variable tilt rotating pot cooker and mixer - has outer non-rotating shell pivoting on fixed base and contg. pot rotated by motor attached to bottom of shell

LEON JL 16.05.78-US-906648 (23.05.77-US-799442)
P28 (13.11.79) A47j-27 B01f-09/02

Food-retaining pot is mounted coaxially within an enclosing outer shell and can be rotated about a vertical axis by the motor. A cover is mounted on the upper end of the shell and includes a bearing which engages the upper end of the pot. A vent is provided in the cover.

The shell has trunions which are received in a support bracket and allow the shell and pot to be tilted about a horizontal axis. Initially the shell is vertical and food is placed within the pot and the cover is applied. The shell is then tilted to induce mixing of the food within the pot. Pref. the shell can be locked in the tilted position. The shell may be provided with a conventional heating element.

The locking device for the shell can be released by an electrical signal from a control unit to return the pot to a vertical position. 16.5.78 as 906648 (10pp295).

USDA ★ D13 85826B/47 ★ US 4174-300
High activity copper-silica catalysts prepn. - useful for selective hydrogenation of tri:unsatd. tri:glyceride(s)
US SEC OF AGRICULTURE 30.01.78-US-873572
J04 (13.11.79) B01j-29

High activity selective catalysts are prepd. by (a) reacting Na silicate in aq. soln. with a copper salt to form a ppte.; (b) recovering the ppte.; (c) drying the ppte., and (d) heat treating the ppte. at $350-625^\circ\text{C}$. The improvement is that the drying step (c) is conducted under vacuum at room temp. or below.

The catalysts are useful for selective hydrogenation of linolenate in vegetable oils, esp. soybean oil. They have higher activity than known Cu chromite and Cu/silica catalysts and do not require expensive supports.

The Cu salt is e.g. the acetate, sulphate or nitrate. Pref. equimolar amts. of Cu and silicate are pptd., by dropwise addn. of the Cu salt soln. to the silicate, at $25-55^\circ\text{C}$. Residual Na ions are removed by conventional methods; pref. the moist ppte. is freeze dried i.e. frozen before application of the vacuum. Heat treatment is pref. carried out at $25-575^\circ\text{C}$, esp. 500°C , for 2 hrs. 30.1.78 as 873572 (4pp955).

IRG D13 36304X/20 = US 4174-313
Purifying proteins esp from sunflower kernels - by processing from suspension contg alkaline earth or magnesium salts and sodium sulphite (NL270476)

INST NAT RECH AGRON 23.10.74-FR-035594
(13.11.79) *DT2546-787 A23j-01/14

Purified sunflower seed protein isolates are obtd. from sunflower seed cake contg. substances having a mucilaginous consistency, by making a suspension of the cake with soln. of a calcium salt and a magnesium salt of vol. (in litres) of 10-15 times the wt. (in kg.) of press cake, plus sodium sulphate.

A conc. soln. of alkali is added to the suspension to solubilise the press cake protein, and the protein extract sep'd. from the insoluble residue. The protein extract obtd. is acidified to pH 4.5-5.5 to ppt. the proteins, which are sep'd. and washed.

The protein isolates obtd. are weakly pigmented and free from mucilaginous substances. The isolates have a nitrogen content of $\geq 16.0\%$ and are readily extrudable through extrusion dies without blocking. 6.4.78 as 894092 + 23.10.75 - US - 625036 (3pp931).

PROC ★ D13 85834B/47 ★ US 4174-314
Protein granule recovery from comminuted seed, e.g. soya bean - by density fractionation in aq. aliphatic polyol and carbohydrate soln.

PROCTER & GAMBLE CO 07.07.78-US-922922
C03 (13.11.79) A23j-01/14

Vegetable seed protein granules are recovered from comminuted vegetable seed material by suspending it in a soln. of an aliphatic polyol and a carbohydrate in water having a density of 1.0-1.4g/ml. and a water activity of <0.9 and then recovering the sep'd. protein granules. These may then be defatted with aq. alcohol.

Used in purificn. of protein material to remove off-flavours and flatulence inducing agents. The recovered protein may be used in food and meat analogue. 7.7.78 as 922922 (6pp916).

PROC ★ D13 85835B/47 ★ US 4174-315
Recovery of vegetable seed protein from the seed - using a soln. of water, an electrolyte and a carbohydrate

PROCTER & GAMBLE CO 07.07.78-US-922918
C03 (13.11.79) A23j-01/14

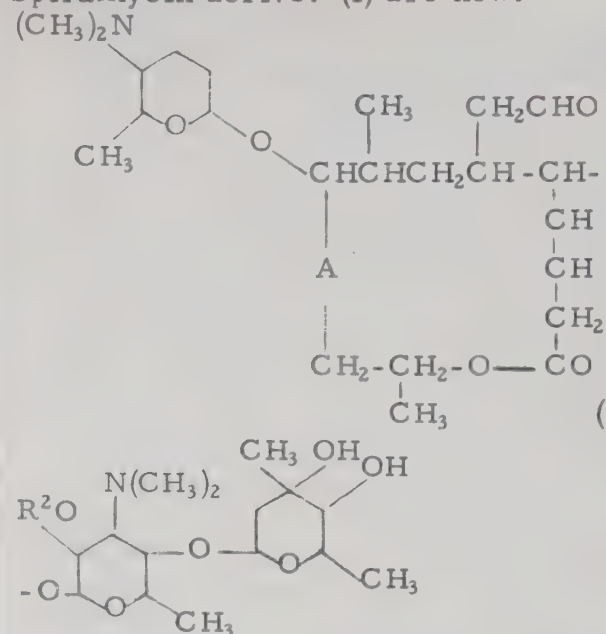
Vegetable seed protein granules are recovered from vegetable seed material by suspending the comminuted material having from 0-5% lipid in an ternary, single-phase soln. of water, a carbohydrate and an electrolyte selected from alkali metal halides and alkali metal phosphate at a concn. $>1\%$, the soln. having a density of about 1.2-1.5g/ml. and a water activity of <0.85 , and isolating the protein granules from the balance of the vegetable seed material.

Successful protein sepn. allows direct human consumption of protein formed in inedible or unpalatable material. 7.7.78 as 922918 (8pp476).

MAYB D13 42169A/24 = US 4174-391
Spiramycin di:carboxylic acid ester(s) - useful as antibacterial agents and animal growth promoters

MAY & BAKER LTD 08.12.76-GB-051257
B03 C02 (13.11.79) *BE-861-603 A61k-31/70 + C07g-11

Spiramycin derivs. (I) are new.



In the formula, R^1 is acetyl, propionyl or H; A is butenylene or butadienylene (double bonds being trans) and R^2 is CO-Z-CO-YR³ where Z is 1-6C (un)satd. alkylene, Y is S or O, and R^3 is 1-6C alkyl, 3-8C cycloalkyl, phenyl or 7-12C phenalkyl. A specific cpd. is the 2'-ethylsuccinate of the spiramycin I.

The cpds. are antibiotics partic. effective in treat-

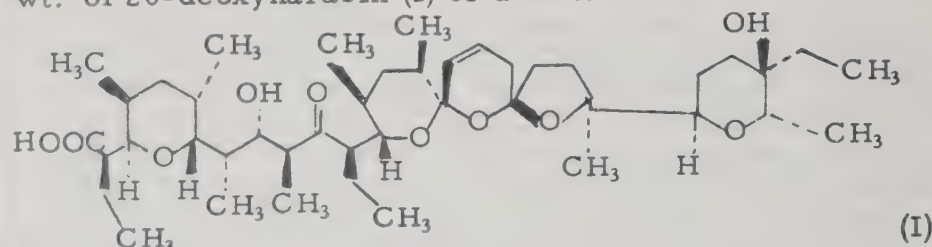
ing infections caused by Staph. aureus and pneumococcal and streptococcal infections, and also for treating mycoplasmosis in turkeys. The cpds. also have growth promoting activity and increase egg prodn. when given to poultry. They have less bitter taste than similar cpds. 6.12.77 as 857999 (10pp945).

ELIL ★ D13 85885B/47 ★ US 4174-404
20-Deoxy-narasin and 20-deoxy-epi-17-narasin - used for controlling swine dysentery, and coccidiosis, for increasing feed utilisation and as cardiotonics

ELI LILLY & CO 27.10.78-US-955448 (20.10.77-US-844087)

B03 C02 (13.11.79) A61k-31/35

Method of enhancing the contractile force of mammalian heart muscle in a warm blooded mammal comprises administering parenterally 30-500 pref. 100mcg/kg. body wt. of 20-deoxynarasin (I) or a salt.



Method of (a) increasing feed utilisation in ruminant animals, (b) preventing or treating coccidiosis in poultry; and (c) controlling swine dysentery comprises orally administering one of 20-deoxynarasin and its salts, 20-deoxy-epi-17-narasin and its salts and deoxynarasin antibiotic complex. 27.10.78 as 955448 Div. ex 4141907 (cf. 19939B/10) (+ 19.6.78 - US - 917636) (11pp954).

See Also

D16 EP ---5277

D16 J5 4132293

D23 BE 877779

D23 US 4174327

D16 GB 1556178

D16 J7 9034819

D23 DS 2315640

D25 US 4174289

D16 GB 1556345

D17 GB 1556400

D23 DS 2747765

D14: FOODSTUFF MACHINERY

TECN ★ D14
Drying-cooling unit for cereals

TECNAL PROJETOS ASS 20.03.78-BR-001681
(13.11.79) A23b-09

NEUM ★ D14 84260B/47 ★ DT 2819-921
Connector for two pipes or fitting for transporting milk etc. - is hinged with internal profile, clamped hydraulically for bolting over sockets

NEUMO ARMATURENFAB 06.05.78-DT-819921
Q67 (15.11.79) C12I-11 F16I-23/04

A clamping device which pulls together their ends faces

B/47 ★ BR 7801-681

against a sealing ring, makes a joint between two pipes or two pipe fittings. The inner dia. of the sealing ring corresponds to the inner dia. of the pipes, so that a joint is made without a gap and without any interference with the cross-section of the flow through the pipes.

Used for the making of tight joints in which there is no gap, between pipes, so that there is no possibility of the development of a source of infection in a line for transport - ing milk or similar. 6.5.78 as 819921 (16pp1045)

TRAN- ★ D14 84374B/47 ★DT 2840-029
Dispenser for liquids, pastes, flour, sand, roots - has stepping and auxiliary motor driven feeders controlled by detector
TRANSMATIC FYLLAN L 11.05.78-GB-018999
J04 Q35 (15.11.79) B65g-33/34 B65g-65/46

A stepping motor drives the feeder of a dosing device for materials capable of flow. The device comprises a hopper and the feeder is a worm or a pump which transfers the materials from the hopper. To regulate the speed of the stepping motor and to maintain a constant throughput, or to stop the motor after a predetermined quantity has been delivered, a detector for the material throughput or for the total delivery is provided. In the line of flow of the material, a feeder driven by an auxiliary motor making a single revolution is fitted. This is driven alternately to the feeder turned by the stepping motor.

Used for dispensing from a hopper all kinds of liquids and pastes, as well as powdered or granular masses such as flour, salt, sugar, sand, etc. The materials are delivered under constant conditions and with greater accuracy. 14.9.78 as 840029(15pp1045)

HOON- ★ D14 84417B/47 ★DT 2917-960
Washer and dryer esp. for fruit and vegetables - circulates and regulates water between inner and outer container
HOONET OGILIO SAS 04.05.78-IT-040068
P28 (15.11.79) A23b-07 A23l-01 A23n-13 A47j-43/24

A fixed container having first and second means of draining away water, and enclosing a second container which rotates on a fixed shaft forms an aggregate for washing and drying foodstuffs, esp. fruit and vegetables. The cylindrical surface of the inner container is perforated all over and the inner container can be connected to a source of pressurised water. Spray nozzles are fitted by which a flow of water can be introduced into the inner container so as to set up a swirling and turbulent motion.

The first means of drainage is arranged to maintain a constant water level in the first container, whilst the second means of draining regulates the exchange of water during the washing processes, and waste the water when washing is finished.

Provides a device by which both the washing and the drying processes can be carried out. The design makes it possible, with slight alterations, to cater either for domestic or commercial requirements. In the case of the domestic machine a thorough and efficient washing is achieved in a relatively short time. 4.5.79 as 917960(20pp)

CASS/ ★ D14 84608B/47 ★FR 2416-653
Installation to husk seeds and shell nuts esp. peanuts - combined shelling machine, vibrating screen and pneumatic winnower
CASSINA M 08.02.78-FR-003739
(12.10.79) A23n-05/*

The installation comprises a shelling machine, a screening and winnowing tray and an associated pneumatic suction separating. The shelling machine is pref. of the type in which a horizontal, cylindrical casing encloses a rotary beating drum with longitudinal channels. Material is discharged from the shelling machine on to a vibrator, perforated screening tray which passes under the suction head of a pneumatic separator.

The shelling machine casing is pref. split diametrically and hinged for easy access to the drum. The lower half of the casing is pref. perforated and interchangeable for lower halves with different sizes of perforation.

High, continuous output, e.g. 300kg/hr. of shelled nuts with very low percentage, e.g. about 4%, of breakages. The prod. is clean with thorough removal of debris and shells. The installation can be motor-driven or manually operated pref. by two new turning crank handles. 8.2.78 as 03739 (9pp448)

AUBE- ★ D14 84613B/47 ★FR 2416-676
Horizontal rotary drum hot water cooker for food prods. - employs counter current heat transfer to permit use of lower temp. water
AUBERT & CIE ETS 10.02.78-FR-003893
P28 (12.10.79) A23l-01/* A47j-27/14

Hot water cooker or blancher has a cylindrical, cooking drum which rotates about its longitudinal, horizontal axis. A coaxial, internal helical scroll conveys prod. through the drum by rotation.

Prod. travels from the upstream end of the drum countercurrent to heated water which passes through perforations in the scroll wall to overflow at the upstream end. At least one spiral of the scroll at the downstream end is unperforated while the corresponding section of the drum shell is perforated to drain away water conveyed in that direction with the prod.

Water overflowing at the upstream end and draining at the downstream end of the drum is pref. collected and recycled. Alternate spirals of the scroll pref. have a perforated annular control zone surrounded by an unperforated annular outer zone and vice versa.

Used partic for vegetables. The heat transfer efficiency obtd. from countercurrent flow is such that water of lower temp. can be used for cooking. There is a consequent saving in energy and reduced cost of cooking the prod. 10.2.78 as 003893(9pp448)

DOLV/ ★ D14 B/47 ★NO 7801-179
Ensilage appts.
DOLVAR 04.04.78-NO-001179
(29.10.79) A23k

FERM= ★ D14 85662B/47 ★SU -651-835
Free-flowing materials proportionator - has hopper with perforated walls of bottom section and balls agitated by solenoid
FERMENTATION PRODUC 27.07.76-SU-388793
J02 P64 (18.03.79) B01f-13/08 B28c-07/06

Device for proportionating free-flowing materials, such as salt, sugar, etc. in the food ind. as well as in the building materials ind. comprises a storage and delivery hopper contg. working bodies in the shape of balls, and an agitator. The efficiency of the device is improved by making the agitator as a vibrator contg. a core, with the bottom end of the hopper made as a truncated cone with perforations in the side surfaces. The core and its solenoid are adjacent to the bottom of the hopper on the outside
Voskanya, R.A. Bul. 10/15.3.79. 27.7.76. as 388793 (2pp29)

D15: WATER TREATMENT

WEIS- ★ D15 84189B/47 ★BE -877-725
Filtration agent for treating cloudy water and suspensions - which is mixture of porous organic cpds., esp. peat or compost
GEBRUEDER WEISS KG 17.07.78-DT-831384
(16.11.79) B01d C02c

The agent used partic. for municipal, industrial and other sludges, and which is subsequently dehydrated, comprises a mixt. of porous organic substances of high liq. absorption capacity and the particles of which are much larger than the sludge particles. A process for dehydrating

water as above comprises depositing on the screening band of an endless screen press, a 2-10 cm thick uniform layer of the agent which is then sprayed with the water in an amt. 5-10 times the amt. of the layer. The layer is then dehydrated under pressure, the agent being used in the manner of a sponge.

The process is esp. suitable for sludges which are difficult or impossible to flocculate. The water after recovery is of reduced viscosity and there is no redissolution of the suspended particles. 16.7.79 as 877725(8pp597)

BAEC- ★ D15 84206B/47 ★ BE-877-792
Treatment of mixed cow manure - by addn. of coagulating and flocculating agents, sepn. of solids and aerobic stabilisation of the liquor to give effluent of low BOD
BAECK ENGG NV 11.01.79-NL-000224
P11 (16.11.79) A01c
BE 862862 describes a process for treating mixed manure with a high liq. content in which the manure is first mixed with a coagulation agent and a flocculating agent and allowed to react. The mixt. is then decanted to give a solid phase and a liq. phase consisting mainly of water with a B.O.D. of ≤ 4000 mg/l.

The process is now modified for the treatment of mixed cow manure, whereby the liquor is subjected to aerobic stabilisation e.g. by aeration for 4-7 days, to give effluent water with a B.O.D. of ≤ 500 mg/l.

During the aerobic stabilisation, aerobic microorganisms develop which assimilate a large part of the organic material in the effluent water and convert it into single celled material, and this gives effluent liquor with a reduced B.O.D. 19.7.79 as 877792 Add to 862862(7pp513) (F1)

EVER- ★ D15 84213B/47 ★ BE-877-817
Treating biodegradable effluent anaerobically to recover methane - followed by catalytic oxidn., esp. ozonisation
EVERS & ASSOCIATES 21.07.78-GB-030756
C04 E17 H06 (16.11.79) C02c

Process comprises anaerobic treatment to reduce the biological oxygen demand and to produce a gas contg. methane which is recovered. The treatment liquor is then catalytic ally oxidised.

Process is applied for example pig and cattle muck, starch residues and wastes from distilleries and abattoirs. The process is economic and produces recyclable water, a fertiliser base having a negligible odour and the methane contg. gas. 20.7.79 as 877817 (13pp597)

DAGM- ★ D15 84223B/47 ★ BE-877-855
Water carbonator for drinks esp. from vending machines - includes submersible pump to circulate water across refrigerated surface
DAGMA DEUT AUTOMAT 07.11.78-DT-848146 (24.07.78-DT-832377)
(16.11.79) B01f C02d

The installation comprises a pressure vessel in which fresh water is injected with the gas while the water is being cooled by contact with a refrigerated surface. A submersible pump beneath the surface of the water is now used to create a continuous flow circulation within the vessel. The flow pref. follows a circular path about a vertical axis. The submersible pump is pref. a packaged unit comprising a pump complete with impeller and a drive motor connected to a power supply.

The pump inlet and outlet orifices face in opposite directions and arc pref. both located quite near to the refrigerated surface. The refrigerated surface is pref. in the form of a hollow cylinder contg. the pump and coaxial with the vertical axis, about which the water is circulated. The level of water in the vessel is pref. maintained at a constant level by a makeup supply. The makeup supply is pref. directed on to a splash plate in the gas space above the liq. level.

High efficiency cooling of water by constant circulation over refrigerated surface. The carbonating unit is inexpensive, compact and uses less energy bulkier and more expensive units. 24.7.79 as 877855 (21pp448)

VYRM- D15 59043W/36 = DS 2409-423
Eliminating iron, manganese, etc from water supply - filter bed in vessel treated in part with oxygenated water
VYRMETODER AB (SUPO-) 27.02.74-DT-409423
(15.11.79) *DT2409-423 C02b-01/26

Iron is removed from water by pptn. with the help of oxygen. The water to be treated is passed through a container contg. a filter material, e.g. sand. From time to time the waterflow is stopped and water contg. oxygen is passed through approx. half of the container.

The process is simple and not costly. 27.2.74 as 409423. (4pp068)

STEAG- ★ D15 84237B/47 ★ DS 2832-274
Aerator for water returned from turbine condenser - has adjustable venturi constriction formed by unequal-sided perforated pyramids
STEAG AG 22.07.78-DT-832274
(15.11.79) C02c-01/02 C02c-05/10

For the enriching of stretches of water with oxygen, esp. water used for cooling power station turbines, the effluents being returned to source are treated by means of an aerating device which incorporates a constriction of the cross-section in the inlet of the return pipe.

At the narrowest point of the constriction there are a number of drilled holes, so that in consequence of the underpressure created, air is sucked in from feed pipes connected to the holes, into the flow of water.

A pipe section having the constriction is threaded into the effluent line, and whilst being movable, it makes a seal with the inner surface of the return line. In front of and enclosing the pipe section, there is an open feed for the water returning from the condenser which flows over aerating elements projecting from the inner surface of the pipe section to form the construction.

To aerate the total flow of water irrespective to the quantities going through, thoroughly and automatically. At the same time, the regulation of the volume of air supplied is automated. 22.7.78 as 832274. (6pp1045)

ALHA/ ★ D15 84273B/47 ★ DT 2820-275
Membrane filter for microorganisms - with cellulose nitrate filter membrane supported by bosses between flat trays
ALHAUSER E 10.05.78-DT-820275
J01 (15.11.79) B01d-31

A membrane filter, esp. for the sepn. of microorganisms from liquids such as fully desalinated water in combination with ion exchange systems, holds the filter membrane between two flat trays. The membrane is supported across its surface by a grid of projecting bosses which face each other on the inside of the flat trays. Trays and bosses are pref. made of plastics.

The relatively larger free passage area of this filter results in a smaller and more compact design. The components can be replaced at low cost. 10.5.78 as 820275(9pp)

FARH ★ D15 84324B/47 ★ DT 2820-729
Granular fertiliser prodn. from organic sludge - by direct contact with hot gas in a fluidised bed
HOECHST AG 12.05.78-DT-820729
C04 (15.11.79) C02c-03 C05f-07

In the prodn. of granulated fertilisers from organic sludge from biological waste-water purificn. plants, the mechanically thickened sludge is brought into direct contact with hot ($>150^{\circ}\text{C}$) gas in high dilution in a mechanically stirred fluid bed zone with high angular momentum, and the granulated and dried prod. is removed from the fluid bed zone pneumatically by means of the waste gas and separated in a separator.

Drying by direct contact with hot gas at a high ratio of gas to moist sludge gives rapid evapn. of the liq. constituents to leave the solids in granular form. 12.5.78 as 820729(12pp280)

EURO- ★ D15 84340B/47 ★ DT 2820-818
Water softening media regenerating brine - produced from salt suspended from circulation container lid
EURO HAUSGERATE GMB 12.05.78-DT-820818
P28 (15.11.79) A47I-15/42

Brine soln. for the regeneration of water softening media, esp. in domestic dish washing machines, is prepd. in a container with a lid and an inlet and outlet of water. The lid is designed to support the salt which extends as a rock salt cone or loose in a basket to a certain depth. Most of the dissolving activity takes place in the upper part of the container.

This ensures that no water is formed above a satd. brine brine solution and the whole contents have a uniform salt concn. 12.5.78 as 820818(9pp39)

SZOL- ★ D15 84343B/47 ★DT 2820-844
 Thermal degasifier for boiler feed water - incorporates atomising, effervescing and re-boil stages inside domed feed water vessel
 SZOLNOKI VAS ES FAI 12.05.78-DT-820844
 (15.11.79) C02b-01/10

At least one degasifying stage is operated as a reboiling stage, in a process for the treatment of water, esp. of boiler feed water and water to be used as hot water. The degasifying process is carried out in a series of stages using steam, and, in at least one preliminary state, water which has already been degasified, is forced, by reduced pressure to rise and become intimately mixed with the steam. A number of preliminary stages are used for the degasifying process. The reduced pressure is brought about by the adiabatic expansion of primary steam.

Arrangement is designed to achieve the maximal utilisation of the steam, to secure optimal degasifying of the water in a plant occupying the minimum of space. At the same time, hot water for use can be produced from untreated water. The aggressive action of the gases when sepg. out on heating and deposits of scale in the heat exchangers are obviated. 12.5.78 as 820844(63pp1045)

GLMI- ★ D15 84371B/47 ★DT 2827-294
 Water filter and purifier - with activated carbon and softening salts between sintered quartz filters
 GLM ITALIA 04.05.78-IT-068023
 (15.11.79) B01d-35/02

A water filter and purifier for domestic use consists of two hemispherical shells contg. activated carbon and/or water softening salts between sintered quartz filters. The top is threaded for connection to a water tap and the bottom is threaded for connection to a jet splitter with spray adjustment or to another filter/purifier unit.

This is a handy appliance of attractive appearance which supplies purified water for all domestic purposes. 21.6.78 as 827294(15pp39)

SULZ ★ D15 84377B/47 ★DT 2852-316
 Drainage and filtration plant, esp. for water purificn. - with filter nozzles arranged below drain pipe and locked inseparably against backwash pressure (NL 13.11.79)
 GEBRUDER SULZER AG 10.05.78-CH-005066
 J01 (15.11.79) B01d-23/20 C02b-01

A number of containers for holding filtration material together with a support for filter nozzles through which the filter liquid passes, form a drainage and filtration assembly, esp. for the purificn. of water. Above the container bottom on which the filtration material rests, there is a drainage pipe system formed by ≥ 1 pipe. In the half of this pipe turned towards the container bottom, the filter nozzles are positioned, with their heads directly or indirectly lying on the bottom or close to it. Pref. the nozzles are arranged along the deepest mantle line of the pipe.

The filter nozzles do not cause dead zones in the mass of filtration material. The nozzles are arranged so that, irrespective of the pressure used for backwashing the filter material, they cannot become disengaged and allow unfiltered water to flow into the installation. 4.12.78 as 852316(12pp1045)

SARS D15 77583B/43 =EP ---5-193
 Asymmetric cellulose hydrate ultrafiltration membranes - with improved flow rate, protein retention and drying properties
 SARTORIUS GMBH 13.04.78-DT-816085
 A88 E36 J01 (A11) (14.11.79) *DT2816-085 +B01d-13/04 C08j-05/22
 D/S: E(BE, CH, FR, GB, IT, LU, NL, SW).

Asymmetric dry ultra-filtration membranes contain hydrophobised synthetic silica, which is added to the cellulose acetate casting soln. used to prepare the membranes before hydrolysis.

The cellulose hydrate membranes are more resistant to organic solvents than those of cellulose acetate. The silica prevents loss of flow rate and protein-retaining properties during hydrolysis, and allows the membranes to be dried out for storage after impregnating with glycerol without embrittlement or shrinkage.

11.4.79 as 101117 (18pp195).

(G) ISR: FR2355540; FR2195469; FR2099286; DT2419930; DT2621519; FR2255338; US3931067.

FARB D15 81028B/45 =EP ---5-203
 Purifying waste waters contg. nitro-hydroxy aromatic cpds. - by heating under pressure without oxygen or air
 BAYER AG 27.04.78-DT-818680
 E14 (14.11.79) *DT2818-680 C02c-05/02
 D/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

Waste waters contg. nitro-hydroxy-aromatic cpds. (I) and esp. their water-soluble salts, are purified by heating to 150-500 °C under pressure, pref. to 50-150 bar, in the absence of O₂ or air.

Waste waters, obtd. in the nitration of aromatic cpds. or in prepn. of (I), can be treated inexpensively, without the use of extractants, to reduce (I)-content to <20 (<10) ppm. The treated waste waters can be charged directly without dilution, to a biological purifying plant, without risk of destroying microorganisms. Deposition of dirt or cracking prods. on reactor walls is prevented.

17.04.79. as 101152 (14pp200).

(G) ISR: DT2616054; DT2553840; GB1467936; US3844914.

IHLE- D15 81000B/45 =EP ---5-235
 Disinfecting and/or removing algae from water - by mixing with UV-activated oxygen and/or halogen, esp. chlorine
 IHLE INGENIEUR GMBH 27.04.78-DT-818412
 +P34 (14.11.79) *DT2818-412 C02b-03/02 +A611-01 A611-03 C02b-01/34
 D/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

Before mixing with the water to be treated the additive (I), i.e. halogen and/or O₂, is brought to a zone close to the source of radiation, and is dissociated there by radiation. After flowing through this zone, (I) reaches a zone further from the radiation source, in which it is intensely mixed with the water.

Less halogen is needed to achieve the same high degree of disinfection. Proximity to the source of radiation increases the halogen temp. and promotes dissociation.

25.4.79 as 101245 (18pp200)

(G) ISR: FR-536615; FR--16443; US3649493; DT1517430; DT2551622; FR-454105; DT2327084; DS-890777; US3943044.

WACK ★ D15 84527B/47 ★EP ---5-262
 Mercury and its cpds. removal from waste industrial water - by adding reducing agent, settling, and filtration, esp. when treating water leaving chlorine mfg. plant
 WACKER CHEMIE GMBH 02.05.78-DT-819153
 E32 J03 (14.11.79) C01g-13 C02c-05/02 C22b-43
 D/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

The waste aq. solns. or effluents are treated with a reducing agent and fed into a settling tank so dirt and mercury particles fall to the base of the tank. The supernatant liq. in the tank is fed through a deep-bed filter contg. a filtration medium with grain size 0.02-2 mm, esp. 0.04-0.6 mm

The mercury collected in the deep-bed filter is periodically driven by reverse washing back into the settling tank so it can fall to the bottom of the latter; and the pref. filtration medium consists of silica sand.

A very simple process, using e.g. hydrazine or sodium borohydride as the reducing agent; and where no filtration aids need to be added to the waste water.

2.5.79 as 101329 (10pp1144).

(G) ISR: FR2279675, US4038071, FR2156895.

DAVY- ★ D15 84556B/47 ★EP ---5-319
 Recovery of uranium values from organic extractant - by multistage mixing with acidic aqueous stripping liquid using single settling tank after mixing
 DAVY INTOIL & CHE 12.04.78-US-895721
 E31 K07 M25 (14.11.79) C22b-60/02
 D/S: E(DT, FR, IT, SW).

Uranium values are recovered from an organic extractant phase contg. uranium as a dissolved complex by multistage mixing with an acidic aq. stripping phase, the pH in the first stage being fixed at a certain value and

ing increased in at least one of the subsequent stages
a value less than that at which precipitation of the U
lues would occur.

The degree of agitation in each stage is controlled so
at the dispersed droplets of one phase in the other sep-
ate completely into two layers under gravity after
mixing is stopped. The two phases are passed in co-
current from one mixing stage to the next.

Apparatus for the multistage mixing and final rec-
ery of the separated phases is also claimed.

The method is intended as part of a process for U
covery from its ores, e.g. the Bufflex, Eluex, Amex or
rlex processes.

By controlling the size of the droplets formed during
mixing so that the dispersion separates easily under
gravity, the need for separate settling tanks is avoided.
This not only saves space and reduces fire hazards ass-
ociated with the settling tanks but also avoids the hold
of large amounts of uranium in each stripping section
and reduces the amount of organic extractant required.

4.79 as 300550 (36pp909).

ISR:US3115388;US3241909;GB-860428;FR1382924;
3052513.

FRH ★ D15 84590B/47 ★EP ---5-390
aternised melamine glyoxal resins - useful flocculating agents
crude and waste water

SOC FRANC HOECHST 24.04.78-FR-012092

A21 (A97) (14.11.79) C02b-01/20 C02c-05/02 C08g-12/32
S: E(BE, CH, DT, FR, GB, IT, NL, SW).

Crude natural or effluent waters are treated with cationic
minoplast resins made by quaternizing a resin which has
been prep'd. by condensn. of melamine (opt. together with
small amts. of urea) with glyoxal or a mixt. of glyoxal
and HCHO. Pref. the resin is quaternized with dimethyl
phosphate.

The quaternized resins are stable on storage and give
cellent flocculation and decolourization of crude waters
with very low addns. of resin (e.g. 2-500 ppm). Organic
and mineral materials present in the water in suspension
emulsion are flocculated out in a form suitable for
recanting. The resins form less sludge than known
mineral flocculating agents and the sludges are easily
rewatered or incinerated. The resins are less sensitive
pH, do not introduce electrolytes into the water, do not
modify the pH, and are effective on their own without the
Edn. of additives such as activated silica.

4.79. as 400256 (15pp513).

ISR: FR2257548; FR1602233; US3484837; US3880753.

BOLI ★ D15 84603B/47 ★EP ---5-419
uminium sulphate soln. contg. polynuclear complexes - for
purifying water, sizing paper and dewatering plant material

BOLIDEN AB 03.05.78-SW-005135

E33 F09 J01 (14.11.79) B01d-12 C01f-07/74 C02b-01/20 C02c-
05/02 D21h-03/68

S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Compsn. is a soln. of $Al_2(SO_4)_3$ (I) and polynuclear com-
plexes of formula

$Al_m(OH)_n^{(3m-n)+}$ (m and n are integers; esp. the

ratio n:m is 2.3-2.7), having pH between 3 and highest
possible value without pptn. of $Al(OH)_3$.

Compsns. are prep'd. by dissolving (I) in water to give
soln. 0.02-2.3M in Al, then adjusting the pH with base
p > 2.9.

For purifying water, sizing paper and dewatering
plants, (e.g. sugar beet press residues). Compared with
(I) solns., they are more effective flocculating agents;
give larger increase in dry matter content of the beet
pulp during pressing, and a more rapid and effective
sizing of paper with resins.

5.79 as 850039 (24pp1251).

ISR: DT2617282; DT2554218; US3421976; US3540980;
US-619190; 1 Journal Reference.

BOLI ★ D15 84604B/47 ★EP ---5-420
Selective removal of uranium from substances - by alkaline
carbonate leaching of the powdered substance

BOLIDEN AB 08.05.78-SW-005209

E31 K07 M25 (14.11.79) C22b-03 C22b-60/02

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

Uranium contaminants are removed from substances
also contg. aluminium, magnesium, calcium and/or iron
by selective leaching using alkaline carbonate. The sub-
stance is finely divided and slurried in the aq. soln.
contg. 0.3-1.5 mol./l. carbonate ions and having an
oxidation potential of 0.3-1V, and after the leaching
process the leaching liquid has a pH of 8.5-10.5 at
0.2-2.0 MPa.

The method is useful for removing the radioactive
uranium content of a large number of industrial products,
including fertilisers and building materials, and is par-
ticularly useful for treating kerogen-contg. substances
such as slates and shales.

Alkaline leaching gives a selective removal of
uranium, without removing Al, Mg, Ca or Fe, at a
higher yield than acid leaching.

7.5.79. as 850040 (10pp909).

(E) ISR:GB-716597; US3175878; FR1092946;

DT2523933; DS1058489; DS1192633.

ICIL ★ D15 84625B/47 ★FR 2416-870
Treating water contg. salts using regeneratable ion exchange resin -
using more efficient regeneration method (J5 5.10.79)

ICI AUSTRALIA LTD (CSIR) 13.02.78-AU-003356

(12.10.79) C02b-01/40

The process comprises contacting the water with the resin
which is regenerated by countercurrent contact with hot
water in a regeneration vessel. Of the hot water used, 50-
90% is withdrawn as a hot salt effluent at an exit intermed-
iate between the resin inlet and outlet. The rest of the
water is cooled in a heat exchanger and is withdrawn by
an exit after countercurrent contact with the resin intro-
duced.

The process enables a substantial increase in the salt
content of the effluent above that obt'd. in normal function-
ing. The pref. amt. of hot water withdrawn at the inter-
mediate exit is 55.75%. 12.2.79 as 003472(9pp597)

KNVS D15 45410Y/26 =GB 1556-040
Water desalination by reverse osmosis - in stack with alternately
turned nodule plates and membrane lined porous discs (NL 15.6.77)

KERNENERGIE VERWERTUNG 13.12.75-DT-556210

(21.11.79) *DT2556-210 B01d-13

Appts. using reverse osmosis to desalinate water has a
stack of parallel module plates, adjacent plates being re-
latively rotated by 180°, extending between a water inlet
and a brine outlet; porous discs covered by membranes
sealingly secured between the edges of adjacent plates; and
a pair of channels extending through the stack.

The edges of the membranes extend out from the plates
and form outlet for desalinated water. The channels are
sub-divided by the membranes to define chambers of ident-
ical pressure throughout the stack.

The flow resistance is reduced. 29.10.76 as 045133
(8pp1376)

LITT D15 53212A/29 =GB 1556-050
Monitoring metal content of water - by trapping ions passing
through a porous polymeric membrane with a complexing agent

INVERESK RES INT 13.08.75-GB-033693

A89 E19 J04 R16 (A11 A14) (21.11.79) *US4092-117 G01n-
33/18 +B01d-13

Device for monitoring the metal content of a water system
comprises a container filled with organic liq. to an open-
ing closed by a selectively permeable membrane. The liq.
contains a trapping agent which combines with metal ions
which diffuse through the membrane from the water syst-
em, to form a complex soluble in the organic liq.

Pref. the trapping agent is dithizone, cupferron, acetyl-
acetone, dibenzoylmethane, thenoyltrifluoroacetone, 8-
hydroxyquinoline, benzildioxime or 1-(2-pyridylazo)-2-
naphthol. The organic liq. may be CCl_4 , benzene,
 $CHCl_3$, diethylether or isoamyl alcohol. The membrane
is suitably of regenerated cellulose, vinyl chloride, homo-

or copolymer, PVdF, acrylonitrile -PVC or PTFE.

Used esp. for monitoring pollution of rivers, seas etc. by toxic metals. The device is robust and fast acting and can be made selective to a desired metal. 9.8.76 (66pp)

TINT- ★ D15 84649B/47 ★GB 1556-082
Determination of pH and chlorine content of swimming pool water - using single appts. having separate analysis containers by mixing with colour-forming reagents

TINTOMETER GMBH 26.05.77-DT-U16628

J04 R16 (21.11.79) G01n-31/22

The device includes a casing formed with a row of 3 adjacent containers for separately receiving the pool water. Two of the containers receive reagents which produce colour reactions relating to the pH value and the Cl_2 ion (sic) concn. The third container is a reference container free of reagents.

The containers have a common wall and a fixed indicating screen which has differently shaded windows aligned with the reference container and corresp. transparent windows aligned with the other two containers.

The measurement of the two different parameters can be carried out simultaneously using a single appts. and thus the water analysis is simplified. 8.11.77 as 046404 (- pp295)

JONE- ★ D15 84651B/47 ★GB 1556-110
Apparatus for removing solids from sewage flow - employing a reciprocating screen for removing solids from filtering screen

JONES & ATTWOOD LTD 22.06.77-GB-026009 (24.04.75-GB-016979)

(21.11.79) B01d-35/02

Solid material is removed from sewage flowing in a duct using a first screen located in the duct to filter the solids from the liq. A second vertical screen is located adjacent to the first screen and includes a horizontal foot.

The second screen is reciprocated between a lower position in which it receives and retains the solids from the first screen, and an upper position in which the foot is located above the upper surface of the sewage flow. 22.6.77 as 026009 Add to 1511693 (4pp295)

BAEN- D15 36276Y/21 =GB 1556-213
Elimination of nitrogen cpds. from waste water - by downwards passage through biological treatment units in a suitable atmos.

TETRA-W BAENSCH U 26.11.75-DT-553050

(21.11.79) *BE-848-652 C02c-01/02

Method for removing organic N cpds., nitrates, nitrites and ammonium cpds. from water utilises biological processes. In the presence of a normal atmos. the water to be purified is passed downwards through a system (I) which ensures ammonification and nitrification, then in the presence of a N_2 atmos. it is passed through a system which physically expels O_2 and then once again in the presence of a N_2 atmos. is passed through a system which biologically reduces nitrates. After draining off the gases formed from the impurities, purified water is removed.

Specifically, (I) contains a porous body inoculated with an ammonifying or nitrifying bacterial culture. Method can be carried out in a shorter time with a lower energy consumption than known methods. 23.11.76 as 048810 (9pp927)

MECH- D15 67149Y/38 =GB 1556-240
Treatment of concentrated plating solns. and effluents - to render them nontoxic and simultaneously to recover metals

INST MECH PRECYZYJN 08.03.76-PO-187779

M11 P35 (M25) (21.11.79) *DT2702-085 C25d-21/20

Recovery of metals in the electroplating of articles includes treating the article in a plating bath to produce a plated article wetted with plated liq., and passing the wetted plated article on its emergence from the plating bath into a metal reclaiming bath to produce a metal-contg. ppte. and a residual liq.

The liq. of the metal-reclaiming bath comprises an aq. soln. of a precipitant selected from an aldehyde of formula $\text{R}_x\text{C}(=\text{O})\text{H}$ (where R_x is H or acyl); an aldehyde-releasing cpd. of formula $\text{R}_x\text{CH}(\text{OH})(\text{SO}_3)$; an aldehyde ammonium salt of formula $\text{R}_x\text{CH}(\text{OH})(\text{NH}_2)$; H_2O_2 ; and ozone.

Complete neutralisation of the effluents, e.g. cyanide and Cr (VI), is achieved. 15.11.76 as 047436 (8pp982)

BORW

D15

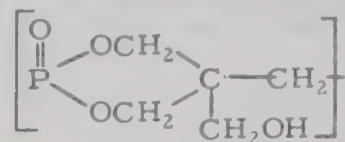
44422A/25 =GB 1556-3

Tris-hydroxymethyl-ethyl-phosphonic acid - prepd. from polyphosphonic acids; used in water treatment, corrosion inhibition, and to increase setting time of cement

BORG WARNER CORP 13.12.76-US-750101

E11 L02 M14 (21.11.79) *DT2755-551 C07f-09/38 C23f-11/ + C02b-05/06

3-Hydroxy-2, 2-bis(hydroxymethyl)propylphosphonic acid of formula $(\text{HOCH}_2)_3\text{C}-\text{CH}_2-(\text{P}=\text{O})(\text{OH})_2$ (I) is new. (I) is prepd. by hydrolysing a polyphosphonate having a repeating monomer unit of formula (II), hydrolysis pref. being accomplished by heating with



(II)

water at reflux temp. Pref. the polyphosphonate is prepd. by polymerisation of pentaerythritol phosphite.

(I) is used in aq. soln. as an inhibitor of corrosion of metal surfaces and as an inhibitor of the development of scale in cooling water. 12.12.77 as 051691 (4pp964)

CSIR ★

D15

84674B/47 ★GB 2020-56

Fluid pumping system for reverse osmosis appts. - with pressurised reject fluid used to assist piston action

COMMONWEALTH SCIENT ORG 27.10.77-AU-002224

J01 Q56 (21.11.79) B01d-13 F04b-09

A fluid pumping system includes a first fluid pump having a chamber with an inlet and an outlet, the outlet supplying the inlet of the reverse osmosis appts. There is a reciprocating piston within the chamber. A second fluid pump also has a chamber whose inlet is connected to the reject pressurised fluid outlet of the reverse osmosis appts, and a fluid outlet. It houses a second reciprocating piston. The two pistons are driven in opposite phase.

Valves control admission and discharge of the fluid from the chambers such that in operation the device pumps fluid under pressure through the first chamber to the reverse osmosis appts., and the pressurised reject fluid acts on the second piston to assist in the pumping action before being exhausted from the second chamber.

The system operates as a single-acting pump which delivers a pulsating flow of pressurised fluid to the inlet of the reverse osmosis appts. and simultaneously withdraws a pulsating flow of reject fluid appts. and simultaneously withdraws a pulsating flow of reject fluid in which the pulses are synchronised with the pulses of the delivery flow. The energy requirements of the system are reduced. 26.10.78 as 042138 (6pp295)

GELM- ★

D15

84675B/47 ★GB 2020-57

Filter element for cross-flow filtration - has layered construction with flow channel between impervious sheet and permeable membrane

GELMAN INSTR CO 16.05.78-US-906499

J01 (21.11.79) B01d-13

The filter element comprises a composite sheet having a layered construction in which a first sheet of flexible impervious material is spaced from a second sheet of permeable membrane material to define a flow channel between them. The composite sheet is folded into pleats along fold lines which define a flow axis and has a fluid opening at each of its ends between the first and second sheets transverse to the flow axis to permit flow through the channel along the flow axis.

Used in ultra-filtration systems and dialysis. The filter element has a high membrane surface-to-membrane vol. ratio and low susceptibility to blockage. It does not require a significant pressure drop for the discharge of permeate or filtrate and small areas can be easily isolated should leakage occur. 23.4.79 as 014079 (14pp67)

SUMI- ★

D15

84819B/47 ★J5 4131-34

Activated sludge treatment of waste water contg. nitrogen cpds. adjusting amt. of air supplied and COD load to carry out simultaneous nitrification and denitrification

SUMIKIN KAKO KK 31.03.78-JA-038499

(12.10.79) C02c-01/02

In activated sludge treatment of waste waters contg. ammonia, ammonium salts, organic nitrogen cpds. etc., the improvement comprises adjusting the amt. of air supplied such that the dissolved O_2 content in aeration vessel is 0.2 to 1 ppm, and simultaneously adjusting the COD load to $< 0.1 \text{ kg/kg}$. MLSS day, to carry out simultaneously

Nitrification and denitrification.

This obviates use of separate denitrification vessel. NO_2^- concn. is maintained under comparative low value, thereby inhibition on BOD bacteria, NO_2^- bacteria and on NO_3^- bacteria is prevented. It is not necessary to carry-out pH-adjustment in the aeration vessel for nitrification and denitrification and to add organic nutrients for denitrification. 31.3.78 as 038499 (4pp34)

AGEN ★ D15 84832B/47 ★ J5 4131-502
Removal of trace amts. of cadmium from soln. - by adding sodium ethylhexylsulphosuccinate, by adding bubbling through a gas and removing scum

AGENCY OF IND SCI TECH 03.04.78-JA-039013
E32 J01 M25 P41 (12.10.79) B03d-01/02 C02b-01/23 C02c-05
Method for sepg. Cd^{2+} from aq. soln. at 20-25°C and pH 6-9 (pref. 7), comprises adding 1-10 (2-6) equivalents sodium di(2-ethylhexyl)sulphosuccinate (SDSS). Air, nitrogen or another gas is bubbled through the treatment system at a rate 0.01-0.5 volumes (w.r.t. aq. soln.) per min. The SDSS complexes Cd^{2+} and is adsorbed by the bubbles and sepd. as scum from the aq. soln.

The scum is increased in stability by adding 0.5-20 (1-5) mg/l of a foaming agent to the soln. This prevents it redissolving and it is continuously removed from the system.

Greater than 90% of Cd^{2+} is removed from aq. solns. contg. 0.1-1.0 mg/l. 3.4.78 as 039013 (3pp53)

NITL ★ D15 84866B/47 ★ J5 4131-575
Semipermeable membrane appts. - comprises semipermeable tubes connected as reed screen

NITTO ELECTRIC IND KK 03.04.78-JA-039620
A88 J01 (12.10.79) B01d-13

Semi-permeable membrane appts. is constructed with a number of semipermeable tubes connected as reed screen. The appts. is related to spaghetti-like module of the tubing. The cpds. is produced easily without the following troubles seen previously. Semipermeability of cpds. fails by heat when both ends of tubes are treated with thermoelastic epoxyresin. Tubes are sometimes clogged with thermoelastic epoxyresin.

Specifically, the tubes are connected by tying with strings. The space in tubes is sealed at both ends by a suitable sealant. The dias. of tubes are usually 1-5 mm. 3.4.78 as 039620 (4pp42)

NITL ★ D15 84867B/47 ★ J5 4131-576
Composite, high strength, semipermeable tube prodn. - by winding porous tape spirally around semipermeable tube and adhering to tube by hot-melting

NITTO ELECTRIC IND KK 04.04.78-JA-039950
A88 J01 (12.10.79) B01d-13/04 B29d-23/12

Prod. of composite semipermeable tube (I), comprises rolling porous material-tape (II) spirally along outer surface or inner surface of semipermeable tube (III) and adhering the edges of (II) and the surface of (III) by hot-melting method.

As (I) is usually used under high pressure, (III) is reinforced by being supported with perforated FRP tubes, stainless tubes etc. However, in these reinforced (I), (III) and the reinforcing tubes are loose and (I) is damaged over long periods of use. (I) provided has high mechanical strength and can be used for long periods. As (II), fibrous sheet, cloth and perforated tapes of polyethylene, polypropylene, PVC, polystyrene, etc. are used. (III) must be made from a material, such as cellulose acetate, aromatic polyamide, polyacrylonitrile, polysulphone, ethylene-vinyl acetate copolymer, etc., that can be hot-melted. 4.4.78 as 039950 (4pp42)

NITL ★ D15 84868B/47 ★ J5 4131-577
Mfg. composite semipermeable tubes - by rolling tape of semipermeable membrane between two porous sheets, winding spirally and welding the edges together

NITTO ELECTRIC IND KK 04.04.78-JA-039951
A88 J01 (12.10.79) B01d-13/04 B29d-23/12

Mfr. of composite semipermeable tube (I) comprises rolling tape of semipermeable membranes sandwiched between two porous sheets (II) spirally and adhering the edge of the tape contacting or overlapping each other by hot-melting

method.

As semipermeable tube is used under high pressure, it is reinforced by supporting with pierced FRP tubes, stainless steel tubes and others. However, in these reinforced semipermeable tube, the semipermeable tubes and the reinforcing tubes are loose and it is damaged during long use. The present (I) has high mechanical strength and can be used for long periods of time.

As (II), tapes of fibrous sheet, cloth and pierced sheet of polyethylene, polypropylene, PVC, polystyrene, etc. are used. The semipermeable membrane must be made from a material, such as cellulose acetate, aromatic polyamide, polyacrylonitrile, polysulphone, EVA copolymer, etc. that can be hot-melted. The edges of the laminated tape are pref. adhered by ultrasonic welder. 4.4.78 as 039951 (3pp42)

JAPE ★ D15 84927B/47 ★ J5 4131-666
Prod. of sepg. membrane from acrylonitrile based polymer - by dissolving in DMF contg. formamide, forming membrane and removing solvent

JAPAN EXLAN KK 03.04.78-JA-039334

A14 J01 (A94) (12.10.79) C08j-05/18 C08j-09/28
Method comprises dissolving an acrylonitrile based polymer in DMF contg. formamide to form a film-forming soln. forming a membrane having a desired shape from the soln. while keeping the temp. of the soln. higher than the gelation temp. defined below and removing the solvent.

The membranes have excellent mechanical strength and a desired rate of permeation, efficiency of salt removal etc. They can be used as microfiltration membranes, ultrafiltration membranes, reverse osmosis membranes, etc.

The content of acrylonitrile in the polymer is ≥ 80 wt. %. The gelation temp. is measured as follows: 150-180 g of a stock soln. is placed in a beaker of ca. 5.5 cm dia. and ca. 11 cm height and the beaker is dipped in a water tank. The temp. of the tank is lowered at ca. 10°C/hr. At any point of this temp. decrease, a glass rod having dia. 3 mm and weighing 2.5 g (the top end being supported with a ring clamp) is placed vertically on the liq. surface. The rod sinks through the soln. and the time required to reach 5 cm depth from the surface is measured. The temp. at which the time above exceeds 5 sec. first is designated as the gelation temp. During the membrane formation, the soln. is pref. kept 1-50° higher than the gelation temp. 3.4.78 as 039334 (6pp119)

DAIL ★ D15 85010B/47 ★ J5 4132-352
Treating turbid water used e.g. in tunnelling or boring (oil) wells - by coagulation sedimentation treatment by adding sodium carboxymethyl-cellulose and aluminium salt

DAICEL KK (SANY) 06.04.78-JA-039741
A97 H01 J01 (A11) (15.10.79) B01d-21/* C02b-01/20 C02c-05/02

The turbid water is coagulation sedimentation treated by adding a Na CMC salt and adding a water-soluble Al salt, e.g. Al_2Cl_6 and alum etc., the amt. of which is 7-12 vol. times as that of CMC as 10%-soln. The water thus treated is adjusted to a pH of 5.0-9.0 (6.0-8.0), with water-soluble alkali matter, e.g. NaOH and $\text{Ca}(\text{OH})_2$ etc.

CMC is used in combination with the Al salt, to obtain a better coagulation sedimentation effect than that in the case of when Al salt is used only. The supernatant liquor is transparent after the treatment. The sludge is easily dewatered and so is easily transportable and suitable for use in land reclamation. Process is used for treating water used for washing minerals, etc. or in excavating tunnels or boring (oil) wells. 6.4.78 as 039741 (5pp34)

EBAI ★ D15 85011B/47 ★ J5 4132-353
Treatment of municipal sewerage - by sedimentation using calcium hydroxide and anionic polymer coagulant, followed by biological treatment

EBARA INFILCO KK 04.04.78-JA-038809
A91 (15.10.79) C02c-01/02

Municipal sewerage contg. domestic waste water, etc. is effectively treated by adding $\text{Ca}(\text{OH})_2$ and anionic polymer coagulant (e.g. acrylamide-type) to cause coagulation sedimentation and subsequently subjecting it to biological treatment. The amt. of $\text{Ca}(\text{OH})_2$ is ≥ 50 mg/l in terms

of CaCO_3 and $< 200\%$ of non-calcium bicarbonate alkalinity contained in sewerage, and the amt. of the anionic polymer coagulant is 0.2-0.5 mg/l.

Removal of suspended matter and BOD components is increased in the coagulation sedimentation procedure, and the subsequent biological treatment takes place under that state without any neutralisation; generation of difficult to filter surplus sludge is decreased and it becomes possible to carry-out nitrification of ammonia even under high BOD load. 4.4.78 as 038809 (3pp34)

TAKE ★ D15 85039B/47 ★ J5 4132-468
Treating gas contg. ozone - by contacting with prod. obtd. by burning compsn. contg. active carbon, clay and alkali(ne earth) metal cpd., then with active carbon

TAKEDA CHEMICAL IND KK 05.04.78-JA-040580

E36 J01 (15.10.79) B01d-53/34

Process comprises contacting gas contg. ozone, e.g. from waste water treatment, with an O_2 remover obtd. by burning a compsn. comprising active C, Clay and an alkali metal and/or an alkaline earth metal cpd. (and opt. a Mn cpd.) as its main components, and then contacting the resulting gas with an active carbon (on which a Mn (II) cpd. is opt. supported).

O_2 remover exhibits high efficiency and good heat stability, mechanical strength and water resistance. 5.4.78 as 040580 (6pp55)

JAPE ★ D15 85048B/47 ★ J5 4132-480
Mfg. acrylonitrile membrane e.g. for water desalting - by dissolving polyacrylonitrile in DMF, shaping into membrane, removing solvent using different solns. on both sides and stretching

JAPAN EXLAN KK 05.04.78-JA-040582

A88 J01 (A14) (15.10.79) B01d-13/04 C08j-05/18

Process comprises (i) dissolving acrylonitrile polymer in DMF soln. contg. formamide; (ii) shaping to a desirable form of membrane by keeping the soln. at above gelation temp.; (iii) removing solvent from the membrane by contacting one surface of the membrane with aq. soln. $< 15^\circ\text{C}$ contg. ≥ 20 wt.% of water soluble solvent which have compatibility with above mixt. solvent, and then removing solvent from the membrane by contacting other surface of the membrane with aq. soln. $> 0^\circ\text{C}$ contg. < 50 wt.% of water soluble solvent which have compatibility with the mixed solvent; and (iv) elongating the resulting solidified membrane.

Since both surfaces of the membrane are treated by different processes, the resulting membrane exhibits excellent water permeability, removing capacity of salt and mechanical strength. 5.4.78 as 040582 (8pp96)

NISY ★ D15 85049B/47 ★ J5 4132-481
Ethylene-vinyl-alcohol copolymer membrane for selective sepn. - produced by melt moulding elongation and wet heat treatment, then dipping copolymer into non solvent

NIPPON SYNTH CHEM IND 05.04.78-JA-040661

A88 J01 (A17) (15.10.79) B01d-13/04

An ethylene-vinyl alcohol copolymer membrane for selective sepn., is produced by melt moulding, elongation and wet heat treatment of ethylene-vinyl alcohol copolymer, then dipping it step by step into a non-solvent whose solubility parameter is 1.45 to 7.

The membrane has good mechanical strength and selective sepn. capability and is inexpensive. It can be used for the concn. of water contg. acid, alkali, organic substances and solvents, desalination of seawater and the treatment of plating waste water and pulp waste water.

In an example, ethylene-vinylalcohol copolymer, whose ethylene content is 30 mol.% and saponification value is 99 mol.%, was spun at 230°C by a 20 mm ϕ extrusion-type spinning machine. It was then elongated six times at 160°C , and wet heat treated with water and a small amt. of dimethyl sulphoxide, at 80°C for 2 sec. It was then dipped in a methanol (SP = 14.5) bath for 10 mins. and then dipped in an isobutyl alcohol (SP = 10.5) bath for 10 min. It was then dipped in a toluene (SP = 8.9) bath for 10 min. The outer and inner dias. of the resulting hollow fibre membrane was 300 and 250 μm respectively and its strength 3 g/d and young modulus 520 kg/mm^2 . 5.4.78 as 040661 (3pp96)

TOYM ★ D15 85055B/47 ★ J5 4132-487
Liq. sepg. membrane appts. - useful for reverse osmosis for e.g. sea water desalination, ultrafiltration, for helium or hydrogen purification etc.

TOYOBO KK 06.04.78-JA-040880

A88 E14 J01 (E36) (15.10.79) B01d-13

Liq. sepg. membrane appts. consists of selectively permeable membranes. Two bundles are arranged consisting of many hollow fibre membranes having hollow cores with many pores at the side walls, through the partition, accommodating one pair of the hollow fibre membrane bundles in the cylindrical container and a passage is provided passing from the outside of the container to the inlet of liq. of hollow fibre membrane bundles and the passage passing from the outside of the container to around part of the hollow fibre membrane bundles, to the partition.

Pref. hollow fibre membrane has always outer dia. of 10-1000 μm and hollow rate of 3 to 80%, and as material polymers such as cellulose, cellulose ester, cellulose ether, polyamide, silicone and vinyl series are included.

The liq. sepg. membrane appts. may be used for reverse osmosis process for desalination of sea water and underground water, ultrafiltration process for plating waste water for sepn. of paraxylene from mixed xylene, and gas transmission process for recovering of helium or purificn. of hydrogen. 6.4.78 as 040880 (5pp96)

NISY ★ D15 85056B/47 ★ J5 4132-489
Alpha:olefin-vinyl alcohol copolymer dialysis membrane mfr. - by forming membrane from mixt. of ethylene vinyl alcohol and saponified copolymer of olefin and vinyl acetate

NIPPON SYNTH CHEM IND 05.04.78-JA-040662

A88 J01 P34 (15.10.79) A61m-01/03 B01d-13/04

Mfr. α -olefin-vinyl alcohol copolymer dialysis membrane comprises making membrane from the mixt. of ethylene-vinyl alcohol copolymer (I) and saponified copolymer of α -olefin of 3-30C and vinyl acetate (I)/(II) = 95/5-5/95 wt. ratio), and dipping step by step in non-solvent whose solubility parameter is 14.5-7.

The membrane is used for blood dialysis, concn. of soln. contg. acid, alkali, organic substance and solvent, desalination of sea water, treatment of plating waste water, pulp waste water and dyeing waste water and concn. of natural fruits juice.

In an example, the mixt. of 90 wt.% of ethylene-vinyl alcohol copolymer whose ethylene content and saponification value is respectively 30 mol.% and 99 mol.%, and 10 wt.% of α -olefin-vinyl alcohol copolymer whose α -decene content and saponification value is respectively 5 mol.% and 99 mol.% was spun at 230°C by 20 mm dia. extrusion spinning machine and elongated to 6 times at 160°C , and dipped in the mixed soln. of water and a small amt. of DMSO of 80°C for 2 secs. It was dipped in methanol bath (SP = 14.5) for 10 min. further in isobutyl alcohol (SP = 10.5) for 10 min. and in toluene (SP = 8.9) for 10 min. The resulting hollow fibre membrane was 50 μm in thickness. 5.4.78 as 040662 (4pp96)

NIKN ★ D15 85244B/47 ★ J5 4133-475
Treating waste water in gypsum mfr. - by neutralising with acidic effluent from cooling and washing of sulphur dioxide, which has been aerated

NIPPON KOKAN KK 07.04.78-JA-040245

E33 L02 (E36) (17.10.79) C01f-11/46 C02c-05/02

In the mfr. of a desulphurisation process in which SO_2 gas present in waste gases is absorbed in a lime slurry as an absorbent and then gypsum is mfd. from the lime slurry, the excess waste water generated in the gypsum mfr. is neutralised by the acid waste water, generated from the cooling and washing of SO_2 gas, which is pre-treated by air aeration to remove SO_3 ions in the form of SO_2 gas or to oxidise partially to form SO_4 ions.

Amt. of SO_3 ions present in the acid waste water is greatly reduced as well as the amts. of S and COD components, development of white turbidity in the neutralised waste water is avoided without the use of sulphuric acid. 7.4.78 as 040245 (3pp117)

TB ★ D15 85245B/47 ★ J5 4133-476
 Continuously feeding waste liq. from reservoir to treating tank - using a device having an endless belt and sponges which pick up liq. which is squeezed into the reservoir
 HITACHI CHEMICAL KK 07.04.78-JA-041668
 (17.10.79) B01j-04 C02c-01
 Feeder for continuously conveying a waste liq. from a reservoir to a treating tank, e.g., an activated sludge tank, bacteria treating tank and a fixed or moving bed filter, comprises an endless belt carrying a number of spaced sponge blocks and having a bottom portion dipped into a reservoir, a guide roll disposed in the liq. bath, a pressure roll cooperable with the guide roll to compress the sponge block to cause more liq. to lodge in the pores and cells of the block as it passes between the pressure roll and the guide roll, a pair of pinch rolls for squeezing the sponge to move the liq. therefrom, a tray for receiving the squeezed liq. and delivering it into the treating tank.
 Large particles of solid impurities are left in the reservoir. 7.4.78 as 041668 (3pp47)

SUZU/ ★ D15 85261B/47 ★ J5 4133-500
 Mfg. ferrous sulphate tablets used for water treatment - by grinding ferrous sulphate and mixing with e.g. starch binder
 SUZUKI K 07.04.78-JA-040294
 E31 (D22) (17.10.79) C01g-49/14
 Mfr. of tablets of the ferrous sulphate discharged from iron oxide mfr., comprises drying ferrous sulphate clump at 45-65°C and grinding into an appropriate grain size, and mixing the ferrous sulphate powder with a water-soluble high molecular cpd., e.g., starch, etc., to form ferrous sulphate tablets whose surface is coated with the water-soluble high molecular cpd. The ferrous sulphate tablets are used as efficient deodoriser and insect control agent for use at a place upstream of the waste water path of public convenience, drive-in etc. either alone or in combination with a supplementary substance, e.g. NaHCO₃, phosphoric acid, etc.

Method effectively suppresses the corrosiveness, hygroscopicity and coagulability of the ferrous sulphate to facilitate handling it. 7.4.78 as 040294 (4pp117)

SHOW- ★ D15 85331B/47 ★ J5 4133-746
 Preparing drinking water from fluorine-contg. water - by adding water-soluble aluminium cpd. and opt. aluminium hydroxide gel and calcium cpd., subjecting to solid-liq. sepn., etc.
 SHOWA KOJI KK 08.04.78-JA-040811
 (17.10.79) C02b-01/23

Drinking water is prepd. from a F-contg. water, e.g. ground water, underground water, etc., by adding appropriate amts. of a water-soluble Al cpd. e.g. Al sulphate, Al chloride, polyaluminium chloride, K alum, etc., opt. together with Al hydroxide gel, to regulate the pH to 5.5-7.7 (5.7-6.5) opt. with addn. of Ca cpd. and to adsorb fluorine in the Al hydroxide formed. The water is subjected to a solid-liq. sepn. to separate the Al hydroxide opt. with the use of a coagulant. Finally the water is filtered to remove flocs present and then sterilised by the addn. of a fungicide. 8.4.78 as 040811 (8pp117)

MITA ★ D15 85332B/47 ★ J5 4133-755
 Purificn. of water contg. organic and nitrogenous cpds. - using activated carbon and biological digestive denitrification processes together with cation exchange resin treatment
 HITACHI KK 10.04.78-JA-041222
 (17.10.79) C02c-01/02 C02c-05/08

In a method of treating waste water contg. organic and nitrogenous cpds. uses an organics oxidn. process, a digestion process and a denitrification process. Part of waste water is treated with a cation exchange resin, the treated waste water is introduced into the denitrification process, the treated waste water from the denitrification process is treated with activated carbon which is in turn introduced into the organics exodn. process after being pptd. The activated carbon and sludge sepd. from the treated waste water in the organic oxidn. process are recycled to the activated carbon treatment process. The cation exchange resin sepd. by pptn. in the previous pptn. process following the cation exchange resin treatment process is introduced into the digestion process, and a mixt. of cation

exchange resin and digesting bacteria sepd. in the digestion process is recycled to the cation exchange resin treatment process. 10.4.78 as 041222 (7pp117)

MITU D15 35234V/19 = J7 9034-706
 Removal of mercury from solns. - using cation exchanger having chelate gp. and substd. partially by ammonium ion
 MITSUBISHI CHEM IND KK (MITS) 13.09.71-JA-071062
 (29.10.79) *J48036-091 + B01j-01/04 C02c-05/08 C22b-43
 Soln. contg. Hg was treated with a cation exchanger having chelate gp. and substd. partially by NH₄⁺. Capacity to treat Hg contg. soln. (200 ppm.) was in order of NH₄⁺ type >> Na-type > H-type and that per litre exchanger was 80 l. in both 3/4 and 2 equiv. substd. by NH₄⁺. 13.9.71 as 071062 B01j-1/04; C02c-5/08; C22b-43/00 (29.10.79)
 MITSUBISHI CHEM. IND. CO., (4pp) (J48036091)

KURS D15 64710U/43 = J7 9034-718
 Regeneration of active charcoal - used for waste water treatment
 KURARAY KK 05.11.71-JA-088439
 E36 J01 (29.10.79) *J48052-695 + B01d-15/06 C01b-31/08
 Charcoal is regenerated by decomposing organic material deposited in pores with molecular O-contg. gas. The regeneration is carried out in the presence of HClO, Cl₂ or its source material, H₂O₂, or chloramine. The organic matter is that which can be decomposed by K₂Cr₂O₇.
 Oxidants are K, Na, and Ca salts of HClO, Na, K, Ba, and Ca salts of HClO₂; and HClO₃ and its salts, and the charcoal is suspended in 1-5 times amt. of H₂O, and heated at 150-500°C. under 30-60 atmos. with passing air. 5.11.71 as 088439 C01b-31/08; B01d-15/06 (29.10.79)
 KURARAY CO. LTD. (3pp) (J48052695)

TSUH ★ D15 85407B/47 ★ J7 9035-022
 Chemical treatment of waste water - by introducing carbon dioxide gas, sepg. solids, contacting with more carbon dioxide gas and sepg. further solids
 TSUKISHIMA KIKAI KK 23.08.71-JA-064250
 (30.10.79) C02c-01/40 C02c-05/02

CO₂ gas is introduced into the waste water and the resulting solid material is sepd. The resulting liq. is further contacted with CO₂ gas to adjust the pH to 7.0 to 8.0 and the resulting solid is sepd. 23.8.71 as 064250 C02c-1/40 5/02 (30.10.79) TSUKISHIMA KIKAI KK (3pp22) (J48029269)

MAEJ/ D15 67428X/36 = J7 9035-023
 Metal removal from wastewater - by converting to hydroxides, then to sulphate and transforming into water insoluble oxide
 MAEJIMA T 01.09.73-JA-098634
 M11 (30.10.79) *J50048-748 + C02c-03 C02c-05/02

Metals contained in a waste water are isolated as metallic hydroxides which are then transformed into metallic sulphates or isolated as metallic sulphates by condensing and/or cooling the waste water; the metallic sulphates thus obtd. are transformed into water-insol. metallic oxides by reacting them, in the presence of crystd. water and/or a small amt. of water, with >1 of oxides, hydroxides, and carbonates of alkali earth metals. The method is suitable for treating waste waters from aluminate processing, electroplating, vulcanising, etc.

In an example, an electroplating waste water contg. CrO₃, H₂SO₄, NiSO₄, NiCl₂, and borates was treated with NaOH to obtain metallic sludge contg. water 60, Ni(OH)₂ 16.5, Cr(OH)₃ 15.01, and others 3.5%. The metallic sludge was mixed with CaO and the mixt. was heated at 120°C. All metallic components were transformed into water-insol. oxides which could be discarded without sec. pollution. 1.9.73 as 098634 C02c-3/00; 5/02 (30.10.79)
 MAEJIMA T. (3pp) (J50048748)

EBAI ★ D15 85428B/47 ★ J7 9035-194
 Osmotic filtration device - includes flattened tube of semipermeable membrane with a spacer in tube, liq. inlet and filtered liq. outlet
 EBARA INFILCO KK 07.07.73-JA-076895
 J01 (31.10.79) B01d-13

An osmotic filtration machine comprises a flattened tube of semi-permeable membrane with a flat-plate spacer located in the tube, the tube being corrugated with a number of spacers each being disposed between the adjacent turns of the corrugated tube, a means for introducing a liq.

into the tube, and a means for discharging a filtered liq. component from the hollow space between the tube turns. 7.7.73 as 076895 B01d-13/00 (31.10.79) EBARA INFILCO KK (4pp47) (J50029475)

ANON ★ D15 85443B/47 ★RD-187-012
Drinking water with improved taste - contains sweetener or flavouring agent, e.g. sodium saccharin, sucrose, L-menthol, etc.
ANONYMOUS 20.10.79-RD-187012
(10.11.79) C02b-00/*

Drinking water with improved taste contains one of the following: 0.025-1.7 ppm neohesperidin dihydrochalcone (I), 0.5-5 ppm, sodium saccharin, 500-25000 ppm sucrose 1000-6000 ppm sorbitol, 500-2500 ppm xylitol, 20-60 ppm sodium cyclamate, 1-10 ppm acetosulpham, 0.1-0.5 ppm L-menthol, 0.1-0.5 ppm isoamyl isovalerate, 0.02-0.075 ppm methyl salicylate. Mixts. of these cpds. at sub-recognition levels may also be used.

Pref. additives are 0.5-3 ppm sodium saccharin, 2000 ppm sucrose, 0.2 ppm L-menthol and 0.2 ppm isoamyl isovalerate. The water pref. is free from hypochlorite ions and contains < 25 ppm inorganic salts. (903)

SINT- ★ D15 B/47 ★RU--64-671
Purifying residual waters contg. sulphide - by contacting before neutralising with sulphur dioxide-contg. gas and with inorganic acid

SINTOFARM INTR MEDI 12.12.75-RU-084194
(15.09.78) C02c-01/40

ICEC- ★ D15 B/47 ★RU--65-136
Magnesium-contg. water coagulation - by mixing with recycled mud, basifying with calcium hydroxide and sepg. clear water from mud

ICECHIM INST CHIMIC 22.05.76-RU-086170
(14.09.78) C02c-01/40

ICEC- ★ D15 B/47 ★RU--65-138
Complex inorganic coagulant recovery - from mud obtd. in coagulation phase by acidification, decanting, washing and neutralisation with calcium hydroxide

ICECHIM INST CHIMIC 22.05.76-RU-086169
(12.09.78) C02c-01/18

INCH- ★ D15 B/47 ★RU--66-577
Recovery of aluminium ion-contg. inorganic coagulant - from water purification, by repeated acidification and washing with water

INST IND CHIMICA 31.01.74-RU-077468
(27.09.78) C02b-01/40

VOAG= ★ D15 85486B/47 ★SU-649-689
Maize and fodder beet fertiliser prodn. - using ion-exchanger regeneration waste soln. from metal plating plant waste water purificn.

VORON AGRIC INST (UYVO=) 16.06.77-SU-498163
C04 J01 M11 (28.02.79) C05d-09/02

Waste ion-exchanger resin regeneration aq. soln. formed during the treatment of aq. industrial waste from metal plating plants is used as agricultural fertiliser for increasing crop yield of maize and fodder beets.

The waste contains alkali metal, zinc chromium and other metal salts (nitrates, sulphates, phosphates and chlorides). The soln. is evapd. and salts are opt. crystallised prior to use as fertiliser. The fertiliser stimulates photosynthesis and respiratory activity of plants without accumulation of components in the plant tissue: which are toxic to man or to domestic animals.

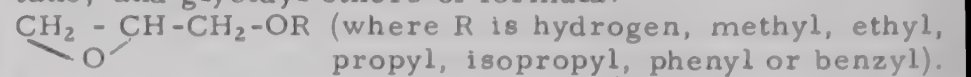
Kalinnikov, D.D., Meleshko, V.P., Izmailova, D.R. et al. Bul. 8/28.2.79. 16.6.77. as 498163 (2pp938)

STAD D15 28390V/15 =SU-650-494
Low molecular weight, oxygen-contg polymers - for use in lowering the salt concentration of water

STANDARD OIL CO (IND) 22.09.72-US-291233
A97 (28.04.79) *NL7312-961 C02c-01/40

Salt concentration of water is lowered by (a) mixing the water with an aqs. soln. of a polymeric solvent cpd., the latter being used in such an amount that the soln. is maintained permanently in a liquid state, at a given temp., in order to form a liquid body consisting of a layer of water enriched solvent cpd. soln. and a layer II of salt-enriched water; (b) withdrawing layer I, (c) increasing the temp. of

layer I relative to the given temp., to form an aqs. phase practically free of solvent cpd., and a solvent-enriched liquid phase, and (d) withdrawing the aqs. phase. The polymeric solvent cpd. has a mol. wt. of 800-20,000 esp. 1500-5000, and is a polymer of ethylene oxide, propylene oxide 1,2-epoxybutane, 2,3-epoxybutane, styrene oxide, epifluorohydrins, epichlorohydrin, epibromohydrin, N-(2,3-epoxypropyl)-pyrrolidone, dioxolane, trioxane, oxetane, and glycidyl ethers of formula:



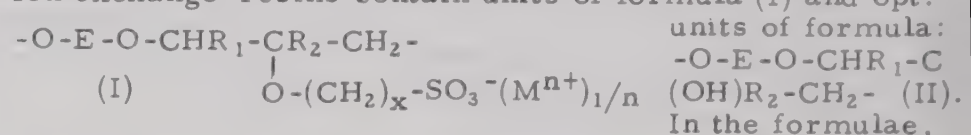
Lazare, L., Jakabasu, S.S. Bul. 8/28.2.79. 21.9.73. as 960906 (4pp)

RHON D15 27172Y/16 =SU-650-509
Alkyl sulphonated phenoxy resin membranes - having ion exchange properties and selective permeability prepd. e.g. by reacting phenoxy resins with a sultone

RHON-POULENC INDUSTRIES 15.10.75-FR-032226

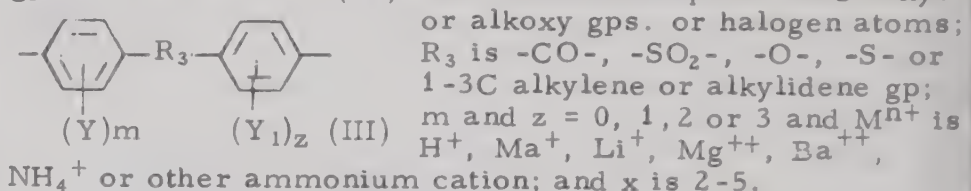
A91 (A25) (28.02.79) *BE-847-353 + C08g-08/28 C08g-75/24

Ion exchange resins contain units of formula (I) and opt.



In the formulae, R_1 and R_2 are each H or Me; E is a divalent gp. derived from a polynuclear diphenol in which the OH gps. are fixed to different rings; and x and n are integers. The resins are prepd. e.g. by reacting phenoxy resins with a sultone (e.g. propane- or butane sultone, etc.) or a haloalkyl sulphonic acid salt.

Pref. the polymer contains 0.5-3 milliequivalents/g. esp. 1-1.5 meq/g. of the units (I) (on dry polymer). Pref. E is of formula (III) in which Y and Y_1 are 1-4C alkyl



Resins are esp. useful for the prodn. of ion exchange membranes with selective permeability, useful e.g. in electrodialysis, reverse osmosis, and ultrafiltration, and is separator diaphragms in electrolysis cells, e.g. those used for the electrolysis of NaCl. The membranes have excellent resistance to alkaline media.

Canton, J.P., Bul. 8/28.2.79. 14.10.76. as 407708 (3pp)

NONF= ★ D15 85591B/47 ★SU-650-980
Removal of cyanide and thiocyanate from aq. waste - by reaction with active chlorine reagent in acid soln. and in presence of oxygen

NONFERR METAL RES 28.01.77-SU-449083

E37 (05.03.79) C02c-05/04

Cyanide and thiocyanate are removed from aq. waste with a low consumption of materials and a low level of residual chlorine in the treated water, if the waste is treated with a cpd. contg. active chlorine at a pH of 2-7, with simultaneous aeration while the reaction of cyanogen chloride formation is proceeding, to oxidise it 'in situ'. A typical reagent is sodium hypochlorate, and this gives better results than the previous reagent, sodium hypochlorite, used at pH 10-10.5; it is not required in such large amts. Other reagents are Cl/air, chlorine water or calcium chloride.

Vrtanesyan, S.G., Minasyan, K.V., Gevorkyan, E.A. et al. Bul. 9/5.3.79. 28.1.77. as 449083 (2pp815)

KUZM/ ★ D15 85711B/47 ★SU-652-125
Effluent purification automatic control - using two membranes, one for gas-contg. effluent and other for gas, and signal from electrolytic cell

KUZMIN A A 05.10.77-SU-532722

R26 (18.03.79) C02c-05/10 G05d-27

In automatic control and regulation of effluents purification in chemical ind. the analysable gas passes through a water-impermeable membrane and is dissolved in an electrolyte in electrochemical cells from which the output signal is measured. Accuracy is increased and the control process is made more reliable, by first passing the gas through a water-permeable membrane and measuring its concentration in the zone between the two membranes.

Kuzmin, A.A., Chernin, Ya. M. Bul. 10/15.3.79.
5.10.77. as 532722 (2pp29)

PLAS/ ★ D15 B/47 ★SW 7803-778
Partitioned septic tank or sedimentation basic etc. mfr. - from curable plastics and reinforcement fibres using sectional mould core with partitions between core sections

PLAST B 04.04.78-SW-003778
A32 (A92) (05.11.79) B29d-03/02

A mould core consists of several parts. Partitions are placed between the parts, with the ends of the partitions protruding beyond the mould surface that defines the inner wall of the tank.

The mould surface is treated with lubricant and then coated with reinforcement fibres and curable plastics. When the plastics is hard enough, the tank is separated from the mould, with the partitions anchored in the tank wall. 4.4.78 as 003778 (-pp1407)

NATR D15 82554A/46 = US 4174-281
Countercurrent decantation for liquid treatment of solids - using chambers connected by external liquid lines and valves responsive to weight of solids

NATIONAL RES DEV CORP 03.05.77-GB-018453
J01 + P43 (13.11.79) *DT2819-459 B01d-21/10

Countercurrent decantation appts. comprises two cells interconnected by a valve responsive to the amt. of solid on it, to pass the solid between the cells by gravity. The two cells are also interconnected by a liq. passage.

The valve comprises a stationary structure and a buoyant barrier which enables accumulation of solids on the top to provide movement in response to its buoyancy. The valve opens when a certain amt. of solid is on it, and closed when there is still enough on it to prevent bulk mixing of the liquids.

The appts. may be used for various liq. solid treatment, e.g. sepn. of pregnant liquor from barren solids, e.g. colliery washings. 1.5.78 as 901616 (13pp976).

UNTC ★ D15 85815B/47 ★US 4174-282
Water precoat filter with replaceable filter elements - locked on tubes by spring clips released when elements are rotated one quarter turn

ECODYNE CORP 18.09.78-US-943403
J01 K06 (13.11.79) B01d-29/16

Liq. precoat filter has replaceable filter elements whose ends are supported on tubes projecting upwardly from a tube sheet. Each filter element is releasably connected to the tubes by couplings which permit a spring clip to lock under shoulders when the filter element is pushed down. The spring clip is released when the filter element is rotated one-quarter of a turn. A sliding seal prevents leakage between the filter elements and their support tubes.

Used in prodn. of ultra pure water for steam generation of electricity. The filter elements can be installed and removed from a remote location. Thus the filter is esp. suitable for electricity generation from a nuclear reactor where the whole appts. becomes radioactive. 18.9.78 as 943403 (7pp67).

PROC D15 69744U/46 = US 4174-291
Lower of metal ion concn of aq solns - with mixt of insolubilizing agent and crystallization graft

PROCTER & GAMBLE CO 28.04.72-US-248545 (08.07.74-US-486297)

E33 (13.11.79) *NL7305-925 + C11d-07/12

A dry detergent compsn. is prepd. contg. 5-50% of a water-soluble organic detergent, 20-80% of a water-soluble salt of carbonate, bicarbonate or sesquicarbonate, and 0.1-60% of calcium carbonate particles of max. particle size $<20\mu$.

The organic detergent is an alkyl ether sulphate, $RO(C_2H_4O)_xSO_3M$, where R is 10-20C alkyl or alkenyl, x is 1-30, M is a salt forming cation; the condensation prod. of an 8-22C aliphatic alcohol with 5-30 moles of ethylene oxide; or an amine oxide $R^1R^2R^3N \rightarrow O$, where R^1 is a 10-28C alkyl contg. 0-2 hydroxy gps. and 0-5 ether linkages, R^2 and R^3 are each 1-3C alkyl and hydroxyalkyl gps.

The compsn. prepd. is capable of rapidly reducing the free metal ion concn. of water, esp. calcium, magnesium, iron and aluminium which interfere with detergent perform-

ance. 8.7.74 as 486297 (8pp931).

USAT ★ D15 85824B/47 ★US 4174-293
Disposal of radioactive waste aq. solns. - by using them to hydrate cement powder and impregnating the cement with polymer, esp. polystyrene, formed in situ

US DEPT OF ENERGY 12.10.77-US-841410

A81 K07 L02 (A13) (13.11.79) G21f-09/20

Aq. solns. contg. radioactive waste materials are disposed of by dispersing them, in an amt. of 15-30 wt. %, in densified dry Portland cement of particle size 120-400 mesh and bulk density 1.3-1.8g/cm³ in a leak-proof container, sealing the container while the soln. hydrates the cement, and then impregnating the hydrated cement with a monomer and a polymerisation catalyst. The monomer is polymerised in situ, and the impregnated cement is stored. The soln. is added to the cement powder without mechanical agitation, and the whole process is conducted at $<99^\circ\text{C}$.

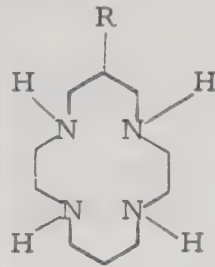
The method enables radioactive waste, e.g. from water-cooled reactors, to be stored, e.g. underground, in a virtually non-compressible and non-leachable form. It is efficient and economical. 12.10.77 as 891410 (7pp909).

TABU/ D15 74814A/42 = US 4174-319
Alkyl-substd. cyclic alkylene tetramine(s) - useful as heavy metal extractants, metal chelating agents and for recovery of heavy metals, e.g. uranium, from waste water

TABUSHII 19.05.77-JA-057125

E13 J01 K05 (13.11.79) *GB1529-150 C07d-257/02

New 12-alkyl-1,4,7,10-tetrazocyclotridecane has formula (I) where R is 8-20C n-alkyl.



Pref. R is a 12, 14, 16 or 18C n-alkyl gp., esp. n-C₁₂H₂₅. (I) may be prepd. e.g. from an alkyl bromide RBr, diethyl malonate, tosyl chloride and tosylated triethylenetetramine in a series of reactions with final removal of the tosyl protective gps.

(I) is useful as a metal ion capturing agent for use in processing waste water, recovery of specific heavy metals from sea water and sepn., purificn. and concn. of metals. It is esp. useful for sepn. and concn. of U from sea water. 23.1.78 as 871349 (8pp927).

WEBB/ ★ D15 85915B/47 ★WP 7900-895
Apparatus for adding gas to liquid - including vertical tube into bottom of which gas is bubbled

WEBB W G 06.04.78-US-894055

J02 (15.11.79) B01f-03/04 C02b-01/18

D/S: N(DK, JA) + E(DT, FR, GB, LU).

An apparatus for adding gases to a liquid includes a vertical, hollow tube at the bottom of which is formed a bell-shaped member. This terminates inside the tube in a throat of smaller cross section than the tube. An annular ring flares outwardly from the throat into abutment with the inside surface of the tube to form an annular chamber between the tube, bell shaped member and ring.

Spaced apertures are positioned around the throat and a gas is supplied to the chamber. A cone is positioned beneath the bell shaped member and gas discharged through the apertures causes a swirling stream of liquid to rise through the tube.

A gas e.g. oxygen can be added to water to remove harmful chemicals and/or to keep biological solids in suspension.

The apparatus produces a high degree of mixing between the gas and liquid.

4.4.79 as US0211 (20pp295)

(E) ISR: US3855367; US1791949; US3814395; US4051035; US3758083; US3365860; US2630749; US3829070; US3968086; US4051204; US4060574; GB1482191.

CARL/ D15 75737B/42 = WP 7900-920
Treatment of waste water or phosphoric acid - in moving bed ion exchange process, with resin always in packed condition

CARLSON LG 31.01.79-US-007980 (12.04.78-US-895817)

C04 J01 M25 (15.11.79) *EP---4-792 C01b-25/18 + B01d-15/06

D/S: N(BR, DK, JA, SU).

Waste water or phosphoric acid is treated by first being

passed as feed liquid through a resin bed in a loading column. Spent resin is transferred to a regeneration reservoir column then it is passed to a regeneration column by a laminar movement. Then the resin is passed to a loading reservoir column, in which it is rinsed, then it is passed in a laminar movement into the loading column.

Waste water (e.g. municipal or industrial waste water or waste water from ore mining or process tailing) or phosphoric acid is purified to remove contaminants or to recover valuable materials. In the process the resin is in a packed condition at all treatment times so that it has additional advantages over the usual moving bed systems. With this process when the resin is moved through and between the various vessels or columns, need to ensure retention of the liquid-to-resin relationship in phase is reduced. The resin is used efficiently and even high vols. of raw H_3PO_4 highly loaded with ions can be treated.

11.04.79 as 00225 (50pp1248)

(E)ISR: US3130151; US3152072; US3515277; US3531401; US3645682; US4098695; GB-760524.

AERA-★ D15 85934B/47 ★WP 7900-958
Aeration of liquid by pumping past gas nozzle - by propeller blades on rotating tube terminating in nozzle

AERATION INDS INC (INHO/) 21.04.78-US-898983

J02 (15.11.79) C02b-01/34 C02c-05/04

D/S: N(BR, DT, GB, JA, SU, SW, US)

In an aeration apparatus air is introduced into a body of

liquid via an inclined tube terminating at its lower end in a nozzle. The tube is rotated about its axis and carries propeller blades near its lower end to pump water past the nozzle to become aerated. Preferably a set of diffuser plates is mounted downstream of the nozzle and rotated by the tube to break up bubbles discharged by the nozzle.

The propeller blades have a rake which is negative at the upstream end and becomes progressively more positive towards the downstream end. The leading edge of the blades makes an angle of less than 90° to the tube surface.

The apparatus is used to aerate water in a domestic or municipal facility.

The propeller blades are non-fouling and are arranged so that bubbles discharged from the nozzle do not contact the blades so that their efficiency is not reduced.

10.4.79 as US0224 (34pp295)

(E)ISR: US3465706; US2767965; US3442220; US2928665; US3778233; US2590581; US1639828; US3782702; US4045522; US3367423; US4056977; US3614072; US3975469.

See Also

D22 BE 876261

D22 EP ---5286

D22 GB 1556323

D22 RD 187051

D16: FERMENTATION INDUSTRY

CORP ★ D16 84195B/47 ★BE -877-754
Neutral glucamylase derived from *Stachybotrys subsimplex* - useful for glucose syrup prodn. from starch hydrolysates

CPC INTERNATIONAL INC 09.07.79-JA-055717 (20.07.78-JA-087812)

(D17) (16.11.79) C07g C12d

New glucoamylase enzyme (I) has optimum activity at pH 6-6.5 and 60°C , and max. activity at 65°C (measured by reaction for 10 min in a 2% maltodextrin soln. at pH 6).

(I) is esp. that derived from *Stachybotrys subsimplex*, esp. the strain FERM 4377. It is able to convert a 30 wt. % soln of starch hydrolysate (destrose equivalent 10) to a prod. contg. $\geq 96\%$ glucose (dry basis) by reaction at pH 6-6.5 and 55°C .

(I) has sufficient heat stability for use in industrial systems and gives a more complete conversion than known enzymes which operate best under more acidic conditions. 18.7.79 as 877754 (27pp1251)

TAKE D16 35741F/00 #DS 1643-539
Production of d-pantoic acid or d-pantolactone

TAKEDA CHEMICAL IND KK 05.09.67-FR-120050 (30.08.67-DT-643539)

B05 E16 (15.11.79) *FR1542-706 + C07c-59/10

D-Pantoic acid is prepd. by microbiologically culturing a medium contg. DL-pantoic acid at $15-50^\circ\text{C}$ and pH 5.0-10.0, until the L-pantoic acid is practically consumed. Microorganism used as *Brevibacterium insectiphilium* ATCC-21110, *B.malis* ATCC 21111, *Corynebacterium equi* ATCC-21107, *C.humifarium* ATCC-21108, *Arthrobacter tumescens* ATCC-21109, *A.ureafaciens* ATCC-21124 or *Bacillus pulvifaciens* ATCC-21112.

Process provides a new, simple method for the high yield, industrial scale prodn. of D-pantoic acid, which is used as an intermediate in the prepn. of D-pantothenic acid. 30.8.67 as 643539. (8pp913)

MCDD D16 83228Y/47 =DS 2717-978
Culture medium for selective determ. of *Serratia* - contains nutrient source, gram-positive inhibitor, *Klebsiella* inhibitor, *Escherichia coli* inhibitor, indicator for *Serratia* and buffer

MCDONNELL DOUGLAS CORP 03.05.76-US-682655

B04 (15.11.79) *DT2717-978 C12k-01 06

nutrient broth for selective determ. of *Serratia* microorganisms, contains (per litre) (a) a nutrient source contg.

2.7-3.3(3.0)g./l. of an organic nitrogen source to promote growth of *Serratia* microorganisms, and having a low carbohydrate content; (b) 9-11(10)g. of a mixt. of bile salts; (c) 2.9-3.1(3.0)g. of p-coumaric acid; (d) 3.9-4.1(4.0)g. of dibasic K phosphate; (e) 4.85-5.15(5.0)ml. of a 1% soln. of 4, 2¹, 4¹-trichloro-2-hydroxydiphenylether, and (f) 0.95-1.05(1.0)g. of indoxyl- β -D-glucoside. The broth has a pH value of 8.0.

Component (f) is the indicator; upon contact with *Serratia* it is converted to indigo and forms a blue ppte. *Serratia* can be selectively determined even when *E.Coli* etc. is present, and its presence in the urine indicates an infection in the urinary tract. 21.4.77 as 717978. (3pp997)

MCDD D16 75870Y/43 =DS 2717-980
Detection of *Candida* and fungi in urine - with medium contg. carbon and nitrogen sources and e.g. chloramphenicol, potassium tellurite

MCDONNELL DOUGLAS CORP 03.05.76-US-682660

B04 R16 (15.11.79) *BE-853-720 C12k-01/06

Medium for detection of *Candida* yeasts and other fungi with peptone and dextrose, contains 0.97-1.03g. of chloramphenicol and 2.9-3.1 ml./l. of potassium tellurite in 1% stock soln., which suppresses growth of gram-positive and gram-negative organisms, and reduced aniline blue as pH-indicator. The medium changes its colour when it becomes acidic owing to the organism's metabolism. The initial pH of the medium is 6.9.

The presence of *Candida* yeasts in urine indicates infections in the urinary tract, the throat and the skin. The test is very sensitive. 21.4.77 as 717980. (3pp997)

DAMB-★ D16 84241B/47 ★DS 2854-955
Column of cells composting rubbish in descending stages - has aerating and venting fans working in variable sequence

DAMBACH-INDUSTRIEAL 20.12.78-DT-854955

(15.11.79) C05f-09/02

In a composting plant consisting of a number of cells arranged one above the other, at the pressurised air side below the bottoms of the cells, which open to dump the material into the cell beneath, all the cells have individual fans delivering compressed air. At the air venting side beneath all cell bottoms except the lowest, an air venting pipe is connected via an individual regulating valve to the common exhausting fan.

The air feeding fans and the individual regulating valv-

as are controlled in ventilating phases such that the cells forming adjacent pairs are not ventilated simultaneously.

The layout makes it possible to control much more easily, the aeration of the separate contents of the cells, so that the feeding of the air is more uniform and alterations of the feed can be effected more quickly to suit the characteristics of the matter being composted. 20.12.78 as 854955. (6pp1045)

CHL/ ★ D16 84245B/47 ★DT 2819-129
Topical compositions e.g. ointment contg. beta glucuronidase - for treatment of non-infectious skin disorders e.g. psoriasis
KOHLE V 29.04.78-DT-819129
B04 (15.11.79) A61k-37/48

Agents for treating non-infectious skin diseases contain beta-glucuronidase in a usual pharmaceutical or cosmetic carrier material. Used for treatment and prophylaxis of non-contagious skin disorders, esp. psoriasis, acne, seborrhoeic and hyperkeratitic eczema, senile pruritis, exanthema, efflorescence, and contact eczemas. The agents can be used medicinally for rehabilitating skin and mucous membranes and as cosmetics for improving skin moisture and elasticity.

They are esp. useful for restoring the physiological state of skin and mucous membranes and for percutaneous use in arthritis psoriatica. In addition beta-glucuronidase accelerates the absorption of other cosmetic and therapeutic agents. They are highly active preparation with no injurious or unpleasant side-effects. 29.4.78 as 819129 (10pp280)

PAPO= ★ D16 84456B/47 ★DT 2918-738
Portland cement clinker mix - contg. neutralised wastes from yeast and titanium manganese manufacture
ZAPOROZHE TITAN MAG (OLSH=) 10.05.78-SU-606851
L02 M25 (15.11.79) C04b-07/35

Portland cement clinker is prepd. from a raw mixt. of lime component 50-52 wt.%; clay component 7.5-10 wt.%, iron contg. component 1-1.5 wt.%, yeast hydrolysis waste water 30-38 wt.%, neutralised Cl contg. waste gases from Fe-Mn prodn. 1-9 wt.%,

The raw mixture gives a Portland cement clinker with improved physio-chemical and mechanical properties. The firing temp. is reduced by 80-140°C, the furnace throughput increased 2-3% and fuel consumption reduced by 3-4%. 15.5.79 as 918738 (12pp1351)

IRI ★ D16 84476B/47 ★DT 2919-132
Antitumoural and antiviral substances KS-2-B - prepd. by culturing *Chaetalea dickinsii* or *Lentinus edodes* strains under aerobic conditions

KIRIN BREWERY KK 12.05.78-JA-055460
B04 (15.11.79) A61k-35/66 A61k-45/04 C07g-11 C12d-09/22

Novel KS-2-B has a strong anti-tumor effect as well as prophylactic and chemotherapeutic effects on numerous infectious diseases caused by pathogenic microorganisms and viruses. KS-2-B is esp. useful in potentiating the immunological function, inducing interferon and stimulating macrophages and other cell functions. KS-2-B is harmless towards normal cells, and can be used to treat both animals and humans. 11.5.79 as 919132 (26pp1401)

COEF D16 82716B/46 =EP---5-148
Substrate for serum alpha-amylase determination - containing starch or amylose granules surface crosslinked to control swelling
BOEHRINGER MANNHEIM GMBH 02.05.78-DT-819298
A89 B04 R16 (14.11.79) *DT2819-298 C08b-31 C08b-33 + G01n-33/16
D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, SW).

Substrate for the determ. of alpha-amylase based on particulate starch derivatised with determinable gps., consists of surface-crosslinked starch or amylose granules of diam. 0.01-0.20 mm with a controlled redn. in swelling capacity.

The substrate is used in alpha-amylase determns., e.g. in determ. of serum alpha-amylase activity, which is an important clinical parameter for pancreatic function.

The substrate is uniform, both within a batch and from batch to batch, and gives improved linearity of absorption. This makes the repeated determ. of calibration curves

unnecessary.

20.2.79 as 100499 (15pp280).

(G) ISR: US2977356; DT2408008; US4066509; GB1381380; 3 Journal references.

WELL ★ D16 84531B/47 ★EP---5-271
Determn. of biological substances esp. antigens and haptens - by enzyme immunoassay for samples
WELLCOME FOUNDATION LTD 04.05.78-GB-017749
A96 B04 R16 (14.11.79) G01n-33/16
D/S: E(BE, CH, DT, FR, GB, NL, SW)

Biological substance (I) in a test sample is detected and/or determined by mixing the sample with a pre-determined amount of a soluble enzyme-labelled form of (I) and a pre-determined amount of a soluble biotin-tagged antibody raised against (I). The mixt. is allowed to reach equilibrium, then insolubilised avidin is added and the solid and liquid phases are sepd. The enzyme activity of either phase is determined.

(I) include antigens, haptens esp. digoxin and codeine, etc., and they are determined rapidly and accurately even at low concns.

3.5.79 as 101354 (28pp1248)

(E) ISR:—

CORP ★ D16 84535B/47 ★EP---5-277
Microbiological prodn. of glyceride oil - by aerobic cultivation of yeast on medium contg. fatty acid
CPC INTERNATIONAL INC 08.05.78-US-904099
(D13 D23) (14.11.79) C07c-67 C12b-03/12 C12d-13/08
D/S: E(BE, CH, DT, FR, GB, IT, NL)

Microbiological prodn. of oil comprises aerobic cultivation of suitable yeast cells in a medium having as C source a 10-20C fatty acid, then harvesting the cells and recovering the intracellular oil.

Pref. the C source is 0.5-5 wt. % as C and the medium also contains an N source at 0.005-0.02 wt. % N (by wt. of medium). Suitable yeasts are *Rhodospiridium*, *Lipomyces*, *Candida*, *Saccharomyces*, *Endomyces* and *Rhodotorula*, and cultivation is at pH 4-6 and 20-40°C.

This C source improves oil yield (cells contain > 50 wt. % oil on dry cell basis) and allows control over the chemical nature of the oil. The prod. is useful e.g. for making a cocoa butter substitute.

8.5.79 as 101406 (25pp1251)

(E) ISR: J47004995; DT-730231; FR2307472; FR2219223; FR2188963; 9 Journal References.

STRA- D16 54444Y/31 =GB 1556-038
Air-permeable closure for shaker flask - with antisplash head and wadding trap for use with bacterial cultures
STRAHLEN-U UMWELT G 29.10.75-DT-U34387
J04 Q33 (21.11.79) *FR2329-348 C12k-01/10

A venting attachment for a shaking retort is adapted to receive a stopper which is permeable by gas but not by bacteria and which, in use, is protected from liq. splashes from the retort. The attachment comprises a hollow, spherical ventilating portion (I) and a tubular splash baffle (II). (I) has a pipe connecting the retort with the interior of (I) without extending into the sphere. (II) extends into the sphere interior from the opposite direction to the pipe and also protrudes out of (I). This protrusion can receive cotton wool and/or gauze stopper, etc.

(II) is so shaped as to preclude linear communication between the stoppered part of the protrusion and the main tubular opening of (II) in the interior of the retort, to prevent or minimise the likelihood of the stopper being splashed by liq. during shaking of the retort.

A high shaking frequency for ventilation of the retort contents is possible. The retort may be filled to a greater capacity. 26.10.76 as 044378 (3pp976)

IZUM/ D16 11486Y/07 =GB 1556-178
Koji diastase production chamber - using inert gas circulation with steam for sterilisation, temperature and moisture control
IZUMI M 06.05.76-JA-050944 (21.07.75-JA-088408)
(D13) (21.11.79) *DT2632-139 + C07g-07/02

A Koji making method comprises circulating a ventilation gas through materials inoculated with a Koji producing

mould in a closed system contg. a ventilation line, a Koji making chamber and an exhaust line.

The ventilation gas initially contains no free O₂, and is oxygenated on circulating to produce a circulating fermentation-promoting gas. Steam is introduced into the circulating ventilation gas tending to destroy infectious microbes in the gas and to control the temp. and humidity of the gas.

The method can use waste gases such as combustion or flue gas, reducing the risk of contamination by infectious microbes. Koji is made in an all-round method which can carry out steps from steam cooking of raw material to Koji, using one appts. 22.6.76 as 025801 (+23.7.75, 27.2.76, 26.3.76-JA-089176, 020084, 032493)(10pp931)

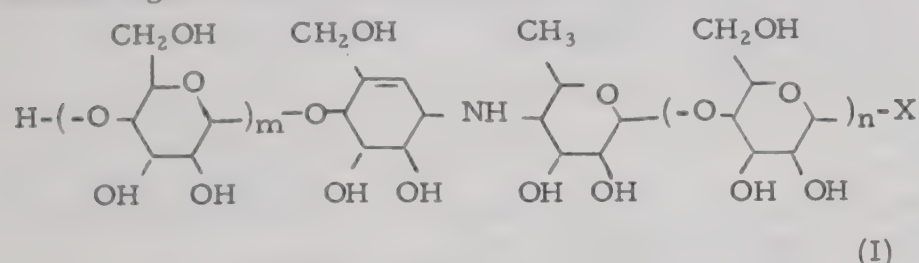
FARB D16 51041A/28 =GB 1556-345

Amino sugar derivs. - useful as glycoside hydrolase inhibitors

BAYER AG 10.06.77-DT-726207 (23.12.76-DT-658562)

B03 C02 (B04 C03 D13) (21.11.79) *NL7714-142 A61k-31/73 C07h-05/06

Amino-sugar derivs. of formula (I) are new.



In (I), m and n are each 0-8, and (m+n) is 0-8; X is OR, SH, SR, NH₂, NHR or NRR₁; R is alk(en)yl, cycloalkyl, aryl, aralkyl or heterocyclic radical, opt. substd.; and R₁ is (cyclo)alkyl, aryl or aralkyl, opt. substd., or R and R₁ complete a heterocyclic ring.

(I) are potent inhibitors of glucoside hydrolases, and are useful for treating adiposity, hyperlipoproteinaemia, atherosclerosis, diabetes, pre-diabetes, hypoglycaemia, gastritis, constipation and caries. 19.12.77 as 052673 (35pp997)

BOEF D16 63401A/36 =GB 1556-393

Measuring or eliminating formate(s) or their precursors - using hydrogen acceptor and specified formate dehydrogenase enzyme

BOEHRINGER MANNHEIM GMBH 18.03.77-DT-712004

E19 J04 R16 (21.11.79) *BE-864-256 G01n-31/14 +C07g-07/02

Formate or cpds. convertible into formate, are determined or removed by a reaction in the presence of formate dehydrogenase derived from *Candida boidinii* DSM 941 and a hydrogen acceptor.

Pref. the hydrogen acceptor used is nicotinamide, adenosine-denucleotide, the reduced dinucleotide formed being measured optically. The enzyme used is obtd. from the *C. boidinii* strain cultured on a methanol carbon source. The determ. of formate is carried out at a pH 6.5-9.5.

The enzyme obtd. from *C. boidinii* DSM 941 yields a stoichiometric reduction of the hydrogen acceptor, permitting the determination of formate or cpds. such as oxalate in analytical or preparative work in which the presence of formate has a disturbing action. 14.3.78 as 009996 (3pp931)

REDP- ★ D16 84664B/47 ★GB 1556-398

Immobilising enzymes with mercapto substituents - on carriers with mercapto-alkoxy gps., esp. for isomerase used in fructose prodn. from glucose

REDPATH SUGARS LTD 12.01.78-CA-294803

(D17) (21.11.79) C07g-07/02 C13k-11

Enzymes (I) having SH gps. are immobilised by reaction with an insol. support (II) having SH gps. so that a covalent disulphide bridge is formed. (II) has the formula HSR₂OG (G is the support carrier, esp. inorganic; R₂ is opt. branched and/or unsatd. divalent organic radical). Esp. G are porous glass beads of specific pore size 200-1000 Å and surface area 5-100 sq. m. /g, and are functionalised by reaction with HOR₂SH (R₂ is esp. 1-6C linear alkylene). Pref. (I) are prefunctionalised by reaction with R₃O.CO.O.CO.R.SH (R₃ is 1-6C alkyl) to replace an amino H atom with -CO.R.SH (R is 1-6C linear alkylene). Used esp. for isomerisation of glucose (in starch hydro-

lysolysate) to fructose using glucose or ocylose isomerases. Method is used with a wide range of enzymes using the same reagents and when the immobilised enzyme is spent it is easily regenerated (by redn) giving the SH-contg. support which can be reloaded with fresh enzyme in situ. 17.5.78 as 020311 (10pp1251)

TOXN ★ D16

84686B/47 ★GB 2020-64

Macrolide antibiotics with antibacterial and anti-mycoplasmal activity - obtd. by cultivation of *Micromonospora* sp. A11725, useful as fodder additives

TOYO JOZO KK 16.03.79-JA-031316 (10.05.78-JA-054373)

B04 (21.11.79) A61k-35/70 C12d-09/14

Antibiotics A 11725 I, Ia, II, IIa and III and their pharmaceutically acceptable salts are new, the antibiotics being characterised by physical and chemical props. Also claimed is the prepn. of the antibiotics (derivs.) by culture of a suitable microorganism, partic. the novel microorganism *Micromonospora* sp. A 11725 (FERM-P No. 448 NRRL 11452). The antibiotics are cultured in a medium contg. assimilable carbon source, nitrogen source and inorganic substances under aerobic conditions.

The antibiotics have antibacterial or antimycoplasmal activity against e.g. *S. aureus* strains, *Streptococcus pyogenes*, *Sarcina lutea*, *Corynebacterium diphtheriae*, *Mycoplasma gallisepticum*, *M. synoviae* etc. Adult human doses are e.g. 400-2000 mg/day (P.O. or I.V.) for treatment of e.g. infectious respiratory diseases caused by Gram Staphylococcus spp. LD₅₀ (mouse) is ≥2000 mg p.o.

The antibiotics are also useful as fodder additives. 8.5.79 as 015807 (+2.3.79-JA-024788)(27pp949)

ABBO ★ D16

84708B/47 ★GB 2020-804

Reverse passive haemagglutination test for *Neisseria gonorrhoeae* - by incubation of cell lysate with particles sensitised with antibodies to *Neisseria gonorrhoeae* strains

ABBOTT LABORATORIES 15.05.78-US-905575

B04 R16 (21.11.79) C12k-01/06 G01n-33/16

Microorganisms are identified as *N. gonorrhoeae* by incubating a lysate of the microorganism with a suspension of discrete particles sensitised with antibodies to *N. gonorrhoeae* strains ATCC 31397, 31398, 31399, 31400, 31401, 31402, 31403, 31404, 31405, 31406 and 31407.

Agglutination indicates positive identification. The reagent comprising the above sensitised particles is also claimed.

Test gives rapid and reproducible identification of any known *N. gonorrhoeae* strains and is not subject to false reactions by usual interfering organisms. 3.4.79 as 011584 (7pp949)

SAFI ★ D16

B/47 ★J5 4130-995

Improvement on immunological specimen

SAFR INVENTIONS 22.03.78-ZA-001662

(11.10.79)

20.3.79 as 033150.

TOYM ★ D16

84974B/47 ★J5 4131-995

Fixed enzyme membrane for enzyme electrode - has permeable membrane layer of high molecular material graft-copolymerised with radical polymerisable monomer contg. aldehyde

TOYOBO KK 04.04.78-JA-040070

A96 B04 J04 R16 (13.10.79) C07g-07/02 C12d-13/10 G01n-27/40

Fixed enzyme membrane has membrane face opposing the electrode, of high polymer substance e.g. acetylcellulose, capable of permeating selectively electrochemically detectable substance, and the membrane layer contacting a substance to be determined. The membrane layer has substrate permeability formed by bonding enzyme to high polymer substance graft-copolymerised with radical-polymerisable monomer having aldehyde gp. (e.g. acrolein).

The fixed enzyme membrane can prevent the permeation of substances hindering the measurement (e.g. Na⁺, K⁺, CO₃²⁻, CN⁻, Cl⁻, etc.) and objected substances (e.g. glucose, urea, uric acid, triglyceride, cholesterol, etc. in body liq., tissue, food, etc.) can be precisely determined by the enzyme electrode using the fixed enzyme membrane with high sensitivity.

High polymer membrane having selective permeability is made of e.g. polyethylene, polypropylene, acetylcellulose, etc. Enzyme used is e.g. glucose oxidase, alcohol

dehydrogenase, cholesterol oxidase, etc. 4.4.78 as 040070 (8pp50)

ISE- ★ D16 84988B/47 ★ J5 4132-226
Live vaccine for avian infections laryngotracheitis - contain the virus which forms pock on chorioallantoic membrane of eggs and no pock on membrane of allantoic cavity
BISEIBUTSU KAGAKU 04.04.78-JA-039851
B04 C03 (15.10.79) A61k-39/32 C12k-05

Live vaccine for avian infectious laryngotracheitis (ILT), contains avian infectious laryngotracheitis virus as effective ingredient when inoculated on the chorioallantoic membrane of eggs of 9-11 days of age, the virus forms a pock (localised lesion) of 2 mm dia. on the membrane, and when inoculated in the allantoic cavity, it does not form the pock on the chorioallantoic membrane.

The virus can be distinguished clearly from the wild type of ILT virus which forms a pock on the chorioallantoic membrane when inoculated on the allantoic cavity; thus, the effectiveness or ineffectiveness of the vaccine to the disease can be determined. The vaccine can be applied as aerosol to the eyes or nose because it is less toxic than that in the prior art. 4.4.78 as 039851 (3pp52)

URS ★ D16 85004B/47 ★ J5 4132-291
Bio-reactor for enzymic reactions - comprises box, semipermeable membrane placed in box and inner wall on which enzymes fixed
KURARAY KK 03.04.78-JA-040019
B04 J04 P34 (15.10.79) A61k-37/48 A61m-01/03 C12b-01 C12d-13/10 C12k-01

The bioreactor comprises (a) box, (b) semi-permeable membrane laid in the box and (c) the enzyme fixed on the parts of the inner wall of the box, which are contacted with the substrate soln. An wall having e.g. concavo-convex surface is pref. used.

The bioreactor can be used widely for industrial uses and medicinal uses, e.g. the saccharification of starch with amylase, prevention for clouding of beer, 'sake', etc. with protease, the determ. of glucose in urine with glucose oxidase, the determ. of uric acid in blood with uricase, the decomposition of asparagine in blood with L-asparaginase. 3.4.78 as 040019 (4pp5)

KE- ★ D16 85005B/47 ★ J5 4132-292
Identifying bacteria in a culture medium - by contacting with a porous sheet contg. reagent and pigment, and selectively growing bacterium on the sheet
EIKEN KIZAI KK 31.03.78-JA-038446
B04 (15.10.79) C12k-01/10

The method comprises (a) inoculating the bacteria to be tested, on conventional culture medium, (b) putting a sheet prepd. by impregnating a reagent and a pigment, with which the specific bacteria can be grown and coloured, on sterilisable absorptive porous sheet and dry-fixing them, on the surface of the culture medium, (c) culturing and (d) identifying the grown bacteria.

Being dry-fixed in the porous discriminating sheet the unstable reagents can be preserved for long time in the sheets. The reagent and the pigment are gradually dissolved out in the culture medium through the condensed water of the agar medium and are diffused in the agar medium to required concn. Thus reagent and pigment can be saved. Further provided that various sheets are prepd. only one kind of agar medium is enough for culturing various kinds of bacteria. When the sheet is taken out and is sterilised, it can be preserved for long time. 31.3.78 as 038446 (3pp5)

NIHG ★ D16 85006B/47 ★ J5 4132-293
Culturing chlorella in high yield - by adding grain syrup to culture liq. to increase multiplying efficiency
NIPPON GAKKI SEIZO KK 06.04.78-JA-039759
(D13) (15.10.79) C12k-01

Method comprises adding grain syrup to the culture liq. for chlorella. The optimum amt. of grain syrup depends on the kind of the culture liq. used but pref. 0.1-10% of grain syrup is added to the culture liq. Examples of applicable chlorella strains are C. ellipsoidea Gerneck IAM-C-27, C. ellipsoidea Gerneck IAM C-102, C. ellipsoidea Gerneck T.I., etc.

By combining grain syrup (distiller's solubles) in the

culture liq., the multiplying efficiency of chlorella is increased and the yield of chlorella body increased by 20-100 w/w% c.f. the control. 6.4.78 as 039759 (5pp5)

AMAN ★ D16 85007B/47 ★ J5 4132-294
Continuous or batchwise prodn. of enzymes - by fixing microbe to a carrier e.g. polyacrylamide gel, and contacting with nutrient liq.
AMANO PHARM KK 03.04.78-JA-038058
A96 (15.10.79) C12d-13/10

The method comprises fixing the living body of a microbe onto a carrier such as polyacrylamide gel, collagen film, calcium arginate gel, aga, etc. and contacting a soln. contg. C source, N source and other nutrients, with the fixed microbial body.

The enzymes can be prepd. efficiently for batch process, the fixed microbial body can be repeatedly use. Sepn. of the microbial body is not necessary and the enzyme can be easily refined.

The microbe is e.g. Bacillus subtilis No. 24 (FERM-P 2040) or α -amylase, Bacillus polymixa No. 55 (FERM-P 3952) with β -amylase, Aeromonas sp No. 212 (FERM-P 2306) with neutral cellulase, pseudomonas sirikiliensis No. 2662 (FERM-P 2319) with phospholipase C, Psuedomonas fluorescens IAM 1057 (FERM-P 1460) with lipoprotein lipase and Flavobacterium dormitata var. glucanolyticae (FERM-P 1289) with phosphomannase. 3.4.78 as 038058 (4pp5)

MITU ★ D16 85008B/47 ★ J5 4132-295
Phosphofructokinase prodn. from Thermus bacteria - by crushing microbial body of the bacteria and separating off prod. from suspension obtd.
MITSUBISHI CHEM IND KK 05.04.78-JA-039933
(15.10.79) C12d-13/10

The method is effected by sepg. phosphofructokinase from the suspension obtd. by crushing the microbial body of the bacteria belonging to Thermux.

Thermus thermophilus HB8 (ATCC 27634), Thermux flavus BS 1, AT 61, AT 62, etc. can be used. The bacteria is cultured at 75°C for 6 hrs. and the bacterial body is collected at the later logarithmic phase. Then the bacterial body is crushed by ultrasonic wave treatment and the ammonium sulphate fraction is obtd. as usual. The enzyme can be further refined by gel filtration, column chromatography, etc. 5.4.78 as 039933 (3pp5)

HAGI/ ★ D16 85009B/47 ★ J5 4132-297
Brewing miso, syoyu, etc. - in the presence of seaweed ash to increase brewing velocity
HAGIWARAY 03.04.78-JA-038068
(15.10.79) A23I-01/20

Miso syoyu, etc. are prepd. by brewing the material in the presence of the ash of sea weeds. Miso syoyu, etc. which are excellent in taste and flavour, contain useful minerals with good balance and have decreased NaCl content, can be prepd. in a short brewing time without the rancidification and putrefaction due to undesirable microbes.

The ash is obtd. by burning seaweed at 200-1000 (300-600)°C. The ash is extracted with water and the residue is further extracted with water and the residue is further extracted with aq. acidic soln. at pH below 5. The obtd. alkaline extract and acidic extract are adjusted to pH 5-9 respectively and they are mixed. Practically 5-95% of NaCl used in prepg. miso syoyu, etc. is replaced with the extract or its dried prod. 3.4.78 as 038068 (12pp5)

TAKE ★ D16 85063B/47 ★ J5 4132-501
Antibiotic C-15462A used as bactericide and disinfectant - obtd. by culturing Streptomyces microorganism
TAKEDA CHEMICAL IND KK 05.04.78-JA-040581
B04 (15.10.79) A61k-35/74 C07g-11 C12d-09/14

A new antibiotic C-15462A has an elementary analysis: C 70.53 $\pm$ 0.5%, H 4.78 $\pm$ 0.3%, O 25.4 $\pm$ 0.5%; molecular wt. of 324 (mass spectrum m/e); molecular formula: C₁₉H₁₆O₅; m.pt. of 188-193°C; specific optical rotation: $[\alpha]_D^{25}$ - 205 $\pm$ 20° (c 0.137 pyridine).

Antibiotic C-15402A has a specified UV and IR spectra and is insol. in petroleum ether, hexane, benzene and diethyl ether, hardly soluble in (m)ethanol, acetone, ethyl acetate and chloroform and easily soluble in pyridine and DMSO. It has positive colour reaction to 1%

FeCl_3 -1% $\text{K}_3\text{Fe}(\text{CN})_6$ (1:1), negative to magnesium acetate, positive to KMnO_4 ; is neutral; and in the form of yellow crystals.

The antibiotic is useful as bactericide or disinfectant, because it shows an activity against Gram-positive, Gram-negative and acid fast bacteria. Antibiotic C 15462A is prep'd. by cultivating an antibiotic C-15462A-producing strain of *Streptomyces* in a culture medium and recovering the antibiotic from the cultured broth. Example of the strain for producing the antibiotic is *Streptomyces longisporoflavus* No. C-15462 (IFO 13779, NRRL-11287). 5.4.78 as 040581 (10pp53)

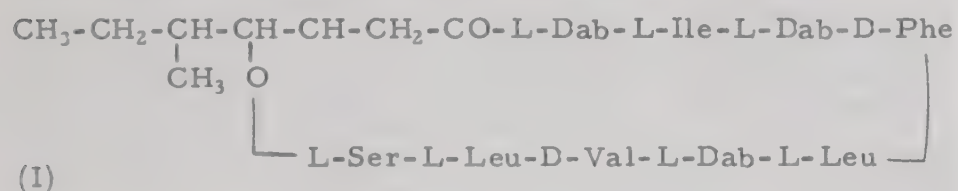
SANY ★ D16 85074B/47 ★ J5 4132-527
Stable aq. iron complex salt soln. prepn. - by adding chelating agent, pref. sodium citrate, tartrate or pyrophosphate or EDTA
SANKYO KK 05.04.78-JA-039972

E12 J04 (E14) (15.10.79) C07c-59/12 C07c-101/26 C07f-15/02
Stable aq. iron complex salt soln. (I) is prep'd. by adding chelating agent. The soln. is useful for colour identification test in assaying enzymatic activity of aromatic prim. amine.

Chelating agent includes citrates, tartrates, polyphosphates, metaphosphates, pyrophosphates, EDTA, etc. with Na citrate. Na tartrate, Na pyrophosphate and EDTA being pref. Amt. of chelating agent is 2-25% for iron complex salt. 5.4.78 as 039972 (2pp104)

AJIN ★ D16 85087B/47 ★ J5 4132-548
Polypeptide antibiotic pelmycin A - prep'd. by fermentation of *Bacillus circulans* AJ3902 under aerobic conditions

AJINOMOTO KK 07.04.78-JA-040999
B04 (15.10.79) A61k-37/02 C07c-103/52 C12d-09/20
Antibiotic pelmycin A is of formula (I). The antibiotic shows marked inhibitory activity against Gram-positive

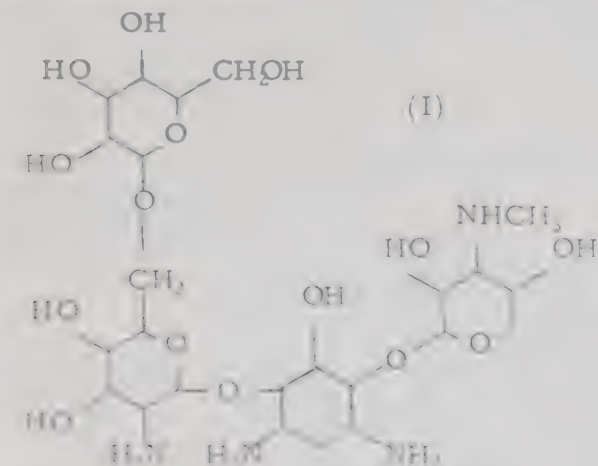


and Gram-negative bacteria as well as fungi.

The peptide antibiotic is prep'd. by a fermentation of *Bacillus circulans* AJ 3902 (FERM-P 3097) under aerobic conditions. The fermentation is carried out at 25-45°C in a nutrient medium contg. glucose, sucrose, peptone, meat extract, yeast extract, ammonium sulphate, ammonium nitrate, urea, NaCl, phosphates, K, Na, SO_4 , Mg, Fe, etc. 7.4.78 as 040999 (5pp16)

KYOW ★ D16 85088B/47 ★ J5 4132-550
Antibiotic 477-2h - active against Gram-positive and -negative bacteria; produced e.g. by fermentation of *Micromonospora sagamiensis*

KYOWA HAKKO KOGYO KK 06.04.78-JA-039682
B03 (15.10.79) A61k-31/71 C07h-15/22 C12d-09/14
Antibiotic 477/2h of formula (I) is new. The antibiotic shows mild inhibitory action against Gram-positive and



Gram-negative bacteria. It is useful also as an intermediate for the synthesis of sagamycin.

Typically, the antibiotic is prep'd. by fermentation of *Micromonospora sagamiensis* (FERM-P 4459). Fermentation is at 25.40°C for 1 to 12 days in con-

ventional media comprising carbon sources, nitrogen sources and minerals. 6.4.78 as 039682 (5pp16)

MEIJ ★ D16 85097B/47 ★ J5 4132-577
Antibiotic BN-227 - obtd. by culturing *Pseudomonas* genus microorganism

MEIJI SEIKA KAISHA 06.04.78-JA-039758
B04 (15.10.79) A61k-35/74 C07d-213/89 C12d-09/20

Novel antibiotics BN-227 substance contains C, 53.79%; H, 5.84%; N, 8.73%; O, 31.64% and has a molecular wt. (by mass spectra analysis) of 155, a molecular formula $\text{C}_7\text{H}_9\text{NO}_3$, m.pt. 115°C is specified UV and IR absorptive spectra, positive result on ferris chloride, colour reaction and negative result on Ninhydrin and Sakaguchi's colour reactions.

BN-227 is produced by culturing BN-227 producing fungi of *Pseudomonas* genus in culture medium and isolating and removing BN-227 from obtd. culture prod. Specific fungi strain of *Pseudomonas* genus is *Pseudomonas* SP BN-227 strain. 6.4.78 as 039758 (8pp69)

NITT ★ D16 85115B/47 ★ J5 4132-624
Prod'n. of cement having improved strength, workability etc. - by addn. of sulphonic acid sodium salt and resin soap or alkali treated waste alcohol fermentation liquor of treacle

NITTO CHEM IND KK 06.04.78-JA-039733
A93 E12 L02 (A25) (15.10.79) C04b-07/35 C04b-13/28

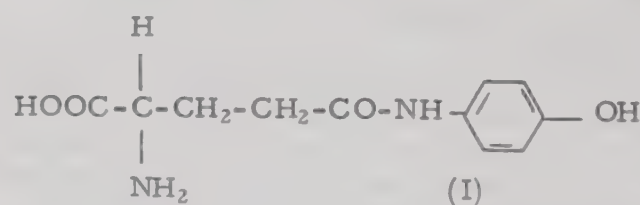
The quality of cement is improved by the addn. of 0.0005-0.01 wt. % of (A) a cpd. of formula $\text{R-C}_6\text{H}_4\text{-O-(C}_2\text{H}_4\text{O)}_n\text{-SO}_3\text{Na}$ (where R: alkyl of 7-9C, n = 2-5) and 0.001-0.5 wt. % of (B) resin soap or (C) alkali-treatment material of waste alcohol fermentation liquor of treacle.

Quality of cement (e.g., plasticity, workability, strength) is improved by the use of a small amt. of the additives. Pref. (B) is an alkali salt of resin acid contg. diterpene as a main component. Pref. (C) is a liq. matter having pH 11-13, and is prep'd. by solubilisation of waste liquor of alcohol fermentation of treacle with the addition of NaOH. 6.4.78 as 039733 (4pp170)

DOJI ★ D16 85195B/47 ★ J5 4133-191
Quantitative agent gamma-L-glutamyl-4-hydroxyanilido - is used for determining gamma-glutamine transpeptidase by absorptiometry

DOJIN YAKAGAKU RES 06.04.78-JA-041489
B04 R16 (16.10.79) G01n-21/02

Title cpd. is of formula (I), is used as a substitute for determining γ -glutamine transpeptidase, instead of γ -L-



glutamyl-4-nitroanilido. (I) is easily soluble in dil. HCl and the HCl soln. is stable for > 24 hrs.; the conventional

The method is not effected by a yellow colouration since 4-aminophenol, which is produced by reacting (I) with γ -glutamine transpeptidase, develops a blue colouration with sodium pentacyanoaquoferrate. The method does not require serum as blind and is esp. effective when many specimens are treated at once, since the developed 4-aminophenol is stable for 3 hrs. at pH 5. 6.4.78 as 041489 (2pp90)

NIOF ★ D16 85252B/47 ★ J5 4133-484
Additive for fermentative prodn. of L-glutamic acid - contains a polyoxyalkylene glycol or its deriv.

NIPPON OILS & FATS KK 10.04.78-JA-041304
A97 B05 E16 (17.10.79) C09k-03 C12d-13/06

An additive, having both deforming and prodn.-increasing capabilities, for the fermentation of glutamic acid is new which contains as the main component polyoxyalkyleneglycol derivs. prep'd. by the esterification of > 80% of a cpd. obtd. from the addn. of 10-80 mole /OH gp. of propylene oxide or propylene oxide or propylene oxide and ethylene oxide to a 4-12C polyhydric alcohol with 3 to 8 OH gps. or its deriv. with residual hydroxyl gps. by using a 14-18C satd. fatty acid, or polyoxyalkyleneglycol derivs. whose ethylene oxide chain content is < 20 wt. % on the basis of the whole mol. wt. in the case where ethylene oxide is added to the 4-12C polyhydric alcohol with 3 to 8 OH gps. or its deriv. with residual OH gps. in a proportion

L-lysine (I) is produced by a mutant of *Brevibacterium* which is resistant against S-2-aminoethyl-L-cystein and requires alanine and leucine. In an example, *B. lactofermentum* AJ-3429 was cultured with shaking at 31° for 72 hrs. in a medium (pH 7.0) contg. glucose 10, (NH₄)₂SO₄ 4.5, KH₂PO₄ 0.1, MgSO₄·7H₂O 0.04 soybean protein hydrolysate (total N = 7%) 1, and CaCO₃ 5% plus 2 ppm. of Fe⁺⁺ and Mn⁺⁺, 50 ug. biotin/l., and 200 ug. thiamine HCl/l.

Prodn. of (I) was 5.1 g./dl., while it was 4.4 g./dl. in the parent strain *B. lactofermentum* AJ-3424.

(I) in the culture supernatant was adsorbed onto Amberlite IR-120 (H^+) and eluted with 3% NH_4OH . The eluate was concd. under reduced pressure, adding with HCl , and cooled to crystallise 38.1 g. (I)- $HCl \cdot 3H_2O$. 30.1.73 as 012179 C12d-13/06 (29.10.79) AJINOMOTO CO. LTD. (5pp) (J49100289)

TAKE D16 46814U/33 = J7 9034-837
Plasminostreptin a protease inhibitor - by cultivation of streptomyces antifibrinolyticus

TAKEDA CHEMICAL IND KK 08.02.72-JA-014132

B04 (29.10.79) *BE-794-975 A61k-37/02 C07g-07 C12d-13

The title cpd. is prepd. by cultivation of a plasminostreptin formed strain of Streptomyces, e.g. *S. antifibrinolyticus*, under aerobic conditions on a culture medium contg. assimilable sources of C and N. The plasminostreptin has a mol. wt. of 26000 + 200 in 0.1 M $NaCl$ soln. 8.2.72 as 014132 C12d-13/00; A61k-37/02; C07g-7/00 (29.10.79) TAKEDA CHEMICAL INDS. LTD. (8pp) (J48082089)

AMCY D16 33005V/18 = J7 9034-838
Antibiotic BM 123 - prepd. by cultivating a microorganism of *Nocardia* SP NRRL 5646 or its mutants

AMERICAN CYANAMID CO 12.10.72-US-297173

B04 C03 (29.10.79) *DT2351-344 A61k-35/74 C12d-09/14

New antibiotics BM 123 alpha, BM 123 beta and BM 123 gamma are produced by cultivating a microorganism with the characteristics of *Nocardia* sp. NRRL 5646 or mutants thereon under submerged aerobic conditions in an aq. nutrient medium contg. assimilable sources of carbohydrate, nitrogen and inorg. salts until a substantial antibacterial activity is imparted to the medium, then isolating the antibiotics from the medium.

The new antibiotics display in vivo antibacterial activity against various organisms and can be used for the treatment of bacterial infections in mammals. They are pref. administered parenterally. 12.10.73 as 114024 (clg. 12.10.72-US-297173) C12d-9/14; A61k-35/74 (29.10.79) AMERICAN CYANAMID CO. (20pp) (J49075796)

ABMI = * D16 85531B/47 ★SU-649-745
Protein hydrolysate prodn. from yeasts - involves fermentative hydrolysis by *Actinomyces* strain followed by additional hydrolysis with specified proteolytic enzyme

AS BELO MICROBIOLOG 09.03.77-SU-461697

B05 E16 (06.04.79) A23j-01/18 C12d-13/06

Protein hydrolysates are produced by subjecting yeasts to hydrolysis by enzymes produced by *Actinomyces cinerascens* 3a; the hydrolysate is then sepd. and dried. This method is improved by subjecting the hydrolysate, before sepn. to additional fermentative hydrolysis by proteolytic enzymes contained in the preparation 'Protosubtilin G-3 Kh' (R TM). By this method, the yeast proteins are effectively split and high mol. wt. polypeptides are obtained. The process is accelerated. The products can be used for various purposes, e.g. as a component of nutrient media for the prodn. of lysine. A hydrolysate produced by the above method, added in an amt. of 1% to a 2% maize extract, ensures complete utilisation of the material.

Shklyar, B.Kh., Shpokene, A.P., Ragavichus, A.B. et al. Bul. 8/28.2.79. 9.3.77. as 461697 (4pp70)

MICR = * D16 85532B/47 ★SU-649-746
L-asparaginase prodn. for use in medicine - produced by *Erwinia carotovora* in nutrient medium contg. pentose-contg. hydrolysates from vegetable wastes

MICROBIOLOGY INST 23.08.76-SU-399068

B04 (06.04.79) C12d-13/10

L-Asparaginase is produced by *Erwinia carotovora* grown by the deep-cultivation method under aerobic conditions, in a nutrient contg. a carbon source, a yeast extract, $MgSO_4$, K_2HPO_4 , KH_2PO_4 , an ammonium salt and water. This process is intensified, the yield of L-asparaginase is increased and the base of the starting materials is extended by using as a carbon source a pentose-contg. hydrolysate of vegetable wastes. The xylose: glucose ratio is between 0.6:1 and 7:1. Before the introduction into the nutrient medium, the hydrolysate is purified with activated carbon and a resin; and then CaO is added to the

purified soln., pref. in such an amt. that the pH rises 6.8.

The compsn. pref. contains (in wt. %) pentose-contg. hydrolysate 0.5-1.5, an ammonium salt 0.3-0.5, KH_2PO_4 0.3-0.6, K_2HPO_4 0.7-1.4, $MgSO_4$ 0.02-0.05, yeast extract 1.0-4.0; the balance is water.

L-Asparaginase has antilymphatic and immunosuppressive activity, and hence it is used in medicine. Ozolin, R.K., Grivin, P.P., Gertsberg, Z.V. et al. Bul. 8/28.2.79. 23.8.76. as 399068 (3pp70)

AAGE = * D16 85533B/47 ★SU-649-746
Clarifying wine and other drinks - by filtering through perlite powder contg. minor amt. of acid-soluble ferric oxide AS ARMN GEN INORGAN 27.01.75-SU-103224 (06.04.79) C12h-01/02

Wines are clarified by filtration through a layer of a filtering material on a support. Additional filtering material is introduced in the form of a suspension in already clarified wine. This method is improved by using as a filtering material a perlite powder contg. 0.02-0.05% of ferric oxide soluble in acids. By this method; the process is accelerated (2 times), the wine is stabilised and its quality is improved.

Manvelyan, M.G., Manykan, R.V., Mekhuzla, N.A. et al. Bul. 8/28.2.79. 27.1.75. as 103224 (2pp70)

KDPO = * D16 85534B/47 ★SU-649-747
Clarifying wines using e.g. palygorskite suspension - is intensified by subjecting the suspension to activating cavitation in circulation circuit by varying pressure KRASD POLY (ENZY=) 17.01.77-SU-445769 (06.04.79) C12h-01/02

Aq. suspension of a clarifying material (e.g. palygorskite) used for wines, is prepd. by forcibly circulating the suspension in a closed circuit. The activity and uniformity of the suspension is improved by changing, at least twice, the pressure in the closed circuit, namely the initial pressure is reduced to the pressure of satd. vapour pressure at the max. speed points, and then again raised to the initial value.

By this method, cavitation is created in the suspension and water contained in the pores of palygorskite evaporates instantaneously, whereby the palygorskite particles burst, yielding highly active fragments. Thus, the clarification is rendered more effective. The consumption of the palygorskite is reduced from 1.0-1.5 g/l. to 0.2-0.5 g/l. in case of wines, and from 2.0-3.0 g/l. to 0.5-0.7 g/l. for stronger drinks. Agabalyants, E.G., Merzhanyan, A.A. and Muratidi, G. Bul. 8/28.2.79. 17.1.77. as 445769 (2pp70)

MOSU * D16 85535B/47 ★SU-649-748
Identifying microorganisms by their DNA content - involving separating from cells by lysis and comparing with DNA of reference strain

MOSCOW LOMONOSOV UNIV 14.06.77-SU-498970

(06.04.79) C12k-01/04

Microorganisms can be identified by separating cells from a culture; subjecting them to lysis; sepg. DNA (desoxyribonucleic acid) from the lysate; purifying and hybridising the test DNA with the DNA obtd. from a reference microorganism strain; and determining the homology percentage in the resulting nucleotide system. This process is simplified and accelerated by carrying out the cell lysis at 37-50°C for 30-60 min., sepg. the DNA from the lysate using a 1.5-2.5 fold quantity of ethyl alcohol; purifying by treatment with 0.54-0.6 vol. % of isopropyl alcohol and effecting hybridisation within 8-10h. The total duration of the process is 11-13h. High accuracy is attained.

DNA is labelled with C^{14} -thymine. Pulse-counting in a homogeneous system is taken as 100% homology. For example, a homology of 89% was found in the system of *E. coli* 761 vs. DNA of *E. coli* VZT (reference strain). Antonov, A.S., Belousova, A.A., Lysenko, A.M. et al. Bul. 8/28.2.79. 14.6.77. as 498970 (2pp70)

AMI= ★ D16 85536B/47 ★SU-649-754
Bacterial rodenticides for cereals - are prepd. by soaking air-sterilised grains with bacterial culture under reduced pressure, and then drying

AS ARMN MICROBIOLOG 02.08.76-SU-393719
C03 (06.04.79) A01n-15 C12k-03

Bacterial rodenticides are prepd. by soaking sterilised grains with bacterial culture, effecting growth of the bacteria on the grains, and drying the prepn. The process is simplified and the cost is reduced by carrying out the sterilisation of the grains with dry air at 100-120°C, and performing the soaking with a bacterial culture under reduced press. (0.8 atm.) at 25-30°C, for 0.5-1 h; and then returning to the atmospheric press. within 5-15 min.

The pressure reduction promotes deep penetration of the bacteria into the grains. The bacterial culture (e.g. rodent typhus bacteria) is grown at 37°C for 14-16 h. The grain soaking lasts 1h. Then the soaked grains are air-dried at 40°C for 1h.

Afrikyan, E.G. Kharatyan, I.G., Khachatyan, L.S. et al. Bul. 8/28.2.79. 2.8.76. as 393719 (3pp70)

ARCA= ★ D16 85538B/47 ★SU-649-756
Purifying vegetable material hydrolysates - by introducing lignin dissolved in alkali soln. to effect absorption of organic impurities by resultant lignin flocs

ARCANGEL FORESTECH 10.10.77-SU-534449
F09 (28.02.79) C13k-01/04

Hydrolysates of vegetable materials are purified, according to the Parent Patent No. 423841, by contact with insoluble lignin, which absorbs organic impurities. This method is improved by first dissolving lignin, or its derivative, in an alkali soln. The lignin-contg. soln. is poured into an acid hydrolysate whereby lignin is precipitated in the form of flocs, which absorb the organic impurities, and can then be sepd. by known methods. Due to the very large specific surface area of the lignin flocs the consumption of lignin can be reduced to about 2g/l. (i.e. 15-25 times less than in the Parent Patent), and yet the purification effect is enhanced 3-5 times. This method can be used in the microbiological and cellulose industries.

Gelfand, E.D., Bogdanovich, N.I. and Kamennyi, V.I. Bul. 8/28.2.79. 10.10.77. as 534449 Add to 423841 (2pp70)

BASH= ★ D16 85565B/47 ★SU-650-558
Plant protection from autumn or spring frost - by spraying with aq. suspension of chlorella

BASHKIRSKOE AGRIC 01.12.77-SU-548967
C03 P13 (08.03.79) A01g-13/06

Kefir contg. 1% of fat is prepd. by pasteurising milk which is standardised with respect to fat; cooling to the souring temp; introducing a souring preparation; souring the milk and cooling. This method is improved by keeping the pasteurised milk at 85-90°C for 60 min., whereby the proteins swell and a denser curd is obtained. As the souring preparation, liquid decanted from Kefir fungi is used in a quantity of 1 vol. % w.r.t. the milk. Before the souring, ascorbic acid is pref. added (110 g. per lt. of milk).

Bykova, O.I., Zozina, G.V. and Torgov, V.D. Bul. 9/5.3.79. 4.1.77. as 442180 (2pp70)

AMVI= ★ D16 85575B/47 ★SU-650-625
Influenza virus nucleoproteide prodn. - includes treatment of virus with bromelain detergent, ether extn. and differential centrifugation

A MEDICAL VIROLOGY 11.05.77-SU-484384
B04 (08.03.79) A61k-35/76 A61k-37/10

Influenza virus nucleoproteide, useful in medicine is prepd. in improved purity by treating virus culture contg. material with detergent followed by extn. with ether and graduated centrifugation of the resulting prod.

The purity and specificity of the material are improved by the pretreatment of virus with bromelain and the sepn. of sub-viral size particles by differential centrifugation and treatment of particles with detergent.

Zakstelskaya, L.Ya., Ivanova, V.T., Lunykin, A.A. et al. Bul. 9/5.3.79. 11.5.77. as 484384 (2pp938)

VOLG= ★ D16 85605B/47 ★SU-650-995
Microbial fatty acid mono- or di-ethanolamide prepn. - includes esterification of corresp. acid with methanol and treating prod. with corresp. amine, used as surfactants

VOLGODONSK SURFACE 02.02.77-SU-448290
E16 (05.03.79) C07c-102/04 C07c-103/38

Fatty acid mono- or di-ethanolamides employed as non-ionic surfactants or emulsifiers, are made by esterifying fatty acids with methanol using p-toluene-sulphonic acid as catalyst, subsequently heating the esters with mono- or di-ethanolamine at 90-110°C in presence of an alkaline catalyst.

Purer prods. based on a wider raw material basis are produced, by using fatty acids from microorganism fat obtd. by microbiological transformation of paraffins. Volkova, L.D., Soin, A.L., Bordyug, M.P. et al. Bul. 9/5.3.79. 2.2.77. as 448290 (2pp835)

FOOD= ★ D16 85717B/47 ★SU-652-211
Alcohol from starch-base material prodn. - with mass level in steam separator controlled by flow adjustment from collector to fermenter
FOOD IND AUTOM RES 28.12.76-SU-435712
(15.03.79) C12c-07/06

Stable output of alcohol prodn. from starch bearing raw material is ensured by automatic control of the level of mass in the steam separator.

This is achieved by adjusting the flow rate from the intermediate collector into the yeast fermenter, and from the collector to the evaporator in the second stage of vacuum cooling.

Klepikov, V.M., Zhekov, M.A., Petrunya, V.I. Bul. 10/15.3.79. 28.12.76. as 435712 (3pp89)

KIFO= ★ D16 85718B/47 ★SU-652-212
Hops bitter substances extractor - has perforated partitions with diametrically opposed and articulated flaps

KIEV FOOD IND TECHN 07.06.76-SU-369411
(15.03.79) B01d-11/02 C12c-09/02

The extraction of bitters from hops is intensified by perforated partitions carrying diametrically opposed and hinged flaps. The latter are in the form of segments and are spring biased against a lug. The partitions are mounted with the flaps staggered in relation to each other, and the ends of the rod feature a perforated separator shell facing the perforated part of the housing, and bounded by a casing featuring tubes.

Popov, A.E., Loboda, P.P., Orlov, L.A. et al. Bul. 10/15.3.79. 7.6.76. as 367411 (3pp89)

AGRI= ★ D16 85719B/47 ★SU-652-217
Tissue cell suspension prodn. for virus cultivation - centrifuge above trypsin ground tissue treatment vessel with connections to nutrient and salt soln. vessels

AGRIC EQUIP WKS 06.06.74-SU-038664
(15.03.79) C12k-09

Improved efficiency of viruses culture and process mechanisation are due to the separator of cells suspension and of trypsin and concentration with a centrifuge. The latter is fitted in the housing and is connected to the trypsinator vessel as well as to the vessels of nutrient and for ready suspension. The disintegrator is mounted above the trypsinator and features a conical shell set coaxially with the shaft to prevent co-rotation of the ground mass with the blades.

Belyaev, L.V., Runik, E.A., Maslov, Yu.N. et al. Bul. 10/15.3.79. 6.6.74. as 038664 (5pp89)

BELL/ ★ D16 85867B/47 ★US 4174-371
Solar heated organic waste composter - with forced heated air flow to evaporate water and accelerate composting process

BELL WM 29.11.77-US-855779
Q74 (13.11.79) C05f-03/04 F24j-03/02

An organic waste treatment system includes a composting chamber adjacent which is housed a thermal mass. Air is conveyed from the vicinity of the thermal mass to the composting chamber. The thermal mass is heated by solar energy. An air intake port is positioned adjacent the thermal mass and the composting chamber is vented. There is pref. a damper system which controls the air flow within the composting chamber and this is controlled by a thermostat responsive to the temp. within the system.

The appts. is used to convert human excrement, organic kitchen waste, and/or garden compost into a nutrient-rich fertiliser and soil conditioner. The system uses solar heat to minimise circulation of cold air through the biomass and to provide for evapn. of excess moisture. 29.11.77 as 855779 (11pp295).

COPE/ ★ D16 85877B/47 ★ US 4174-389
Selective lysis of collagen fibrils, esp. scar tissue in the eyes - by intravitreal injection of collagenase followed by inactivation and removal of the enzyme

COPE LA 13.05.77-US-796807

B04 (13.11.79) A61k-37/48

Selective lysis of collagen fibrils located in the vitreous ocular region of a mammal, by intravitreal injection of a pharmacologically suitable soln. of a collagenase and then after a short period injecting a collagenase inactivator and removing the collagenase soln. The collagenase soln. may contain an activator such as calcium ions.

Used in removal of scar tissue, esp. after cataract surgery, retinal detachment and pars plana vitrectomy, without damage to adjacent tissue. 13.5.77 as 796807. (8pp916).

ELIL ★ D16 85878B/47 ★ US 4174-390
Improved feeds for increased feed utilisation efficiency in ruminants - contg. antibiotic A7413 complex or its components or derivs.

ELI LILLY & CO 11.08.78-US-932833 (04.02.76-US-655670)

B04 C03 (13.11.79) A61k-35

Feed utilisation efficiency in ruminants is increased by oral admin. of Antibiotic A-7413 complex obtd. by cultivation of Actinoplanes sp. NRRL 8122. Alternatively A-7413 factors A, B or C; or the Me ester deriv. or acetyl or triacetyl derivs. or bis(mercaptoacetic acid) deriv. of factor A; or their salts, may be used in place of the complex.

The Antibiotic complex and the separate factors and their derivs. and salts belong to the thiostrepton family; they are antimicrobials esp. effective against Gram-

positive bacteria and partic. against strains resistant to other antibiotics. They also inhibit Propionibacterium acnes, which is associated with acne, and various oral bacteria associated with periodontal disease and plaque formation. They improve feed utilisation efficiency in animals and are growth promoters for poultry. Included in ruminant feeds to provide 0.05-10mg/kg. daily. 11.8.77 as 932833 (+ 1.11.76, 7.2.77 - US - 737456, 766306) (20pp1248).

FARB D16 84216A/47 = US 4174-43
Amino-sugar saccharase inhibitor isolation - from actinoplanaceae cultures by ion exchange adsorption

BAYER AG 04.05.77-DT-719912

A91 B03 (13.11.79) *DT2719-912 C07h-15/20

O- $\{4,6\}$ -dideoxy-4-[1S-(1,4,6/5)-4,5,6-trihydroxy-3-hydroxymethyl-2-cyclohexen-1-yl]-amino]- α -D-glucopyranosyl-(1 $\rightarrow$ 4)-O- α -D-glucopyranosyl-(1 $\rightarrow$ 4)-D-glucopyranose (I) is isolated from a culture broth obtd. by fermenting an Actinoplanaceae microorganism.

Process comprises (a) adding a strongly acid cation exchange resin and an anion exchange resin in acid or basic form to the culture broth; (b) sepg. from the culture filtrate and any mycelium; (c) eluting (I) from the sepd. resin in mixt.; (d) passing the eluate over a combination of a highly crosslinked strongly acid cation exchanger which weakly bonds (I) in the H⁺ form, and an anion exchanger in the basic form; (e) passing the eluate over a strongly acid cation exchanger which bonds (I) strongly in the H⁺ form; (f) treating the cation exchanger with (I) bonded to it with 0.01-0.05N mineral acid to fractionally elute (I) and (g) recovering the fractions contg. (I).

(I) is a powerful saccharase inhibitor. 20.4.78 as 898263 (8pp974).

See Also

D13 DT 2821139

D13 GB 1556297

D13 SU 649755

D17 GB 1556401

D22 J5 4132238

D25 WP 790096

D17: SUGAR; STARCH

KAET/ ★ D17 84257B/47 ★ DT 2819-719
Low pressure preliminary dewatering of bagasse - with multiple rearrangement of fibre layers and uninterrupted pressure cylinder working

KAETHER W 05.05.78-DT-819719 (00.00.76-DT-657232)

(15.11.79) C13c-03

In a process for reducing the moisture content of bagasse, the cane is treated by passage through a diffuser followed by dewatering mills working at high pressure. The sugar content is washed out in the extrn. zone of the diffuser by spraying with extrn. fluid in countercurrent. At the outlet of the diffuser, the cane is subjected to a preliminary dewatering operation by large dia. cylinders exerting low pressure.

During the uninterruptedly progressing pressing operation, the bagasse layers are subjected to multiple displacement and rearrangement, and it is fed through differently constituted, successive, interrupted pressing zones. As distinct from the preceding flat pressing and screening surface, the following screening surface is a curved one, and the originally flat package of bagasse in the flat pressing zone, has imparted to it, a curved form, under the influence of the curvature of the low pressure cylinder. The interrupted transition zone between the flat and the curved pressing zones, is positioned where the highest degree of longitudinal thrust of the package of bagasse deformed by the low pressure preliminary dewatering cylinder occurs.

Improvement relates to special measure and their use in combination so as to ensure an uninterrupted, and smooth transition of the mass of bagasse, from the flat to the curved pressing zone, and to make possible an additional dewatering in the transition zone. The special measures are applied in the zone at the ends of the chains where there

is no screen. They consist on the special corm of the sta of the curved pressing zone; the positioning of the transition zone relatively to the low pressure cylinder and its height relatively to the flat pressing zone. 5.5.78 as 8197 Add to 2657232, 2716666 (11pp1045)

SELW- ★ D17 84361B/47 ★ DT 2821-12
Massecuite crystalliser column - with alternately inverted conical deck plates and cooled paddle mixer

SELWIG & LANGE MASC 13.05.78-DT-821129

(15.11.79) C13f-01/02

A crystalliser column for massecuite in the sugar industry has several decks of conical plates, with every other cone inverted. Each apex of an inverted cone forms with vertical paddle mixer shaft, and the outward edge of each normal cone forms with the column wall the annular slots for the massecuite passage. The paddles are hollow and receive, together with their shaft, a coolant in counter flow to the massecuite.

This creates a clearly defined passageway for the massecuite so that the heat transmission is improved and a high throughput is achieved without excessive input for the paddle mixer. 13.5.78 as 821129(13pp39)

NATT D17 ✓ 74669B/41 = GB 1556-4
Cold water swelling starch prodn. - by two-stage crosslinking starch with sodium trimetaphosphate, useful as thickener foodstuffs

NAT STARCH & CHEM CORP 20.03.78-US-888382

A11 (A97 D13) (21.11.79) *NL7900-914 + C08b-31 06

Cold water swelling starches are prepd. by reacting a granular starch base in a prim. crosslinking step with sodium trimetaphosphate in an aq. slurry at pH 10-12, at a temperature low enough to maintain the starch in a unswollen granular

ate.

The resultant slurry is neutralised to a pH of 5-6.5 and a prim. crosslinked granular starch recovered. The starch obtd. is reslurried and the pH adjusted to ≥ 7.5 , and additional sodium trimetaphosphate added. The resultant slurry is drum dried to effect a sec. crosslinking reaction in situ, from which a sec. crosslinked starch prod. is recovered.

Starches formed are esp. used in foodstuffs, such as fruit pie fillings or tomato sauce. 25.5.78 as 022302 (5pp931)

REA- D17 63250A/35 =GB 1556-401
Glucose prepn. by enzymatic hydrolysis of cellulosic material - involves treating with ethylene to increase glucose yield on enzymatic hydrolysis with cellulase
GREAT WESTERN SUGAR 22.06.77-US-808812
E13 (D16) (21.11.79) *US4097-333 C13k-01/02

Glucose is produced by the enzymatic hydrolysis of cellulosic material by contacting the material with ethylene and hydrolysing (part of) the material to glucose.

The material is contacted with ethylene prior to or during hydrolysis. The material is dispersed in water and ethylene gas bubbled through the dispersion at a rate > 1 cc/min/1000 ml of dispersion to contact the material.

Glucose yields are enhanced in the process, esp. when lignin associated with the material is degraded before hydrolysis. 25.5.78 as 022752 (5pp931)

See Also

D16 BE 877754

D16 GB 1556398

D16 J7 9034819

D18: SKINS; HIDES; LEATHER; TOBACCO

HFP D18 89205X/48 =DS 2521-126
Treating natural hides and furs - in a multistage process using a water-sol. solvent and an aq. dye compsn.
CHEM FAB PFERSEE GMBH 13.05.75-DT-521126 (23.01.75-DT-502563)

(15.11.79) *FR2298-638 C14c-05 D06p-03/30
Natural hides and skins are defatted and then dyed and ref. refatted. In the first stage the tanned skins are treated in a bath of a water-insol. solvent contg. an emulsifier at 30-50°C. The wt. to vol. ratio of skins to solvent is 1:3 to 1:30. In the second stage the skins are treated in a bath of a water-insol. solvent contg. an emulsifier and a dye which is soluble or dispersible in water at 30-80°C and a pH of 3-6. The wt. ratio of skins to solvent is 1:0.2-1.0 and the wt. to vol. ratio of skins to solvent is 1:3 to 1:30.

In the third stage the dyed skins are treated at 20-80°C in a bath of water-insol. solvent and water and opt. a retting agent. The major part of the water is removed by azeotropic evaporation and the solvent by centrifugation. The emulsifier in stages 1 and 2 or only 2 is an anionic emulsifier in acid or partly neutralised form, e.g. a mineral oil sulphonate, alkylbenzene sulphonate and/or dialkyl phosphosuccinate partly neutralised with acid mono- and diesters of phosphoric acid. 13.5.75 as 521126, Add. to 502563. (5pp068)

RTA ★ D18 84665B/47 ★GB 2020-538
Aroma-improving tobacco additive from Nicotinia plant gum - removed by solvent then purified to remove lipid(s)

BRIT AMER TOBACCO LTD 09.05.79-GB-016008 (12.05.78-GB-019228)
P15 (21.11.79) A24b-15/08

Prodn. of smoking material additive (smoke aroma precursor) comprises removing surface gum from fresh Nicotinia plants, then partitioning or purifying the gum to give (a) the desired diterpene fraction (A) and (b) an unwanted lipid fraction which is discarded.

The gum is pref. removed by washing with CHCl_3 , and then partitioned between a two-phase hexane/aq. methanol (70-90% methanol) system. Pref. the gum is removed from freshly harvested leaves or from flowers which have been air dried.

Treatment of tobacco with (A), e.g. at 0.002-0.01 wt. %, improves aroma, e.g. imparts a cedar-like note esp. in the side stream. 9.5.79 as 016008 (4pp1251)

LEAT= ★ D18 85539B/47 ★SU -649-757
Tanning of hide for leather sole mfr. - is intensified by carrying out treatment with ammonium sulphate and with titanium and zirconium tanning agents in one bath
LEATHER SHOE IND RE 04.10.77-SU-532184
(28.02.79) C14c-13

Intermediate product for the mfr. of leather soles is prepd. by planarly splitting a hide, washing the lower surface, deliming it, treating with $(\text{NH}_4)_2\text{SO}_4$, tanning with a

titanium and zirconium tanning compsns. neutralising with Na_2SO_3 and urotropin, and additionally tanning with syntans. This process is intensified by carrying out the $(\text{NH}_4)_2\text{SO}_4$ treatment and the tanning in one bath with a liquid coefft. of 0.7-0.9 for 14-18h.

The bath contains (in g/l) $(\text{NH}_4)_2\text{SO}_4$ 50-70, titanium tanning agent 15-30 and zirconium tanning agent 40-70. The neutralisation is carried out with 20-30 g/l. Na_2SO_3 and 20-30 g/l. of urotropin. The additional tanning lasts 18-22 h. The total process takes 40-57 h. (2-2.5 times less than the conventional process).

Pustyl'nik, Ya.I., Metelkin, A.I., Chirkin, Yu.G. et al. Bul. 8/28.2.79. 4.10.77. as 532184 (3pp70)

RIZZ- D18 20325Y/12 =US 4173-904
Hide drying machine belt centralisation - by selvedge contact sensors actuating power cylinders for askew position of tensioning roll

RIZZIL & C SPA 02.12.75-IT-029920 (03.09.75-IT-026875)
Q36 + Q64 (13.11.79) *DT2635-435 B65h-25/26 + F16h-07/18

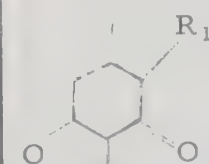
An appts. for centering an endless band trained over a driven guide roll and a stretching roll having a nut-and-spindle at each end, comprises a double-acting cylinder-piston unit for displacing either end of the stretching roll in the roll axes plane and another roll to displace these ends in the perpendicular direction to this plane. A sensor at each side of the band detects movement and controls a hydraulic fluid circuit including a 3-way solenoid valve to deliver hydraulic pressure to the units.

The system is used e.g. for drying hides, and gives dependable, accurate and rapid centering of the band, regardless of the material and/or nature of the hides squeezed dry between the bands. 13.10.77 as 841752 (+ 16.8.76 - US - 714754) (7pp976).

INFL ★ D18 85762B/47 ★US 4173-982
Enhancing taste or aroma of tobacco - using substd. di:methyl di:hydroxy benzene or cyclohexadiene cpd.

INT FLAVORS & FRAGR INC 08.06.78-US-913717 (26.05.77-US-800889)

E14 P15 (E15) (13.11.79) A24b-03/12 A24d-01
The aroma or taste of a smoking tobacco is enhanced by mixing the tobacco with an effective amt. of a cpd. of formula (I) (as an equilibrium mixt. with its mono- and di-enol tautomers):



(I)

(where R_1 is $\text{CH}_3\text{CO}-$ or CN ; the dotted line is a single or double bond, but when single R_1 must be CN).

The tobacco is imparted a sweet, smokey, wood and "Oak Moss"-like aroma prior to smoking, and in the mainstream and in the sidestream on smoking.

8.6.78 as 913717 Div. ex 4115431 (c.f. 70662A/39) (17pp914).

See Also

D21 GB 1556376

D23 US 4174286

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

LYON/ D21 48220U/34 #DS 2324-820
Dental alloy - useful as gold alloy subst and used for crowns, inlays, onlays, etc

LYON RL (LYO /) 26.05.71-US-147161 (16.05.73-DT-324820)
M26 + P32 (15.11.79) *US3749-570 C22c-19/05

A Ni alloy, comprising 0.03-0.3% C, 0.3-3.5% Be, 0.5-5% Al, 0.4-4% Mo, 8-20% Cr and the remainder nickel is used for false teeth. Porcelain may be sintered onto the alloy to give a strong lasting structure.

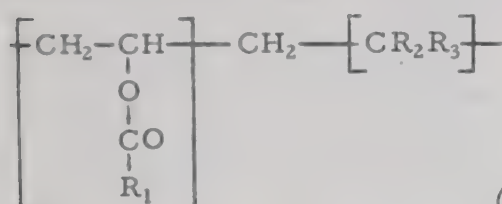
Specific alloy contains 0.1% C, 1.5% Be, 3.0% Al, 2.0% Mo, 12.0% Cr and Ni. 16.5.73 as 324820. (2pp068)

OREA D21 88666V/52 = DS 2427-671
Fatty compn. for lipstick and eye shadow - contg. a fat mixed with a compatible copolymer

L'OREAL SA 08.06.73-LU-067772

A96 (A14) (15.11.79) *BE-815-977 A61k-07

Fat compsn. for cosmetics, e.g. lipstick, comprises a cosmetic fat and ≥ 1 non-toxic copolymer of formula (I):



(where R_1 is 1-19C satd. hydrocarbon gp.; R_2 is -O-CO- R_4 , -CH₂- R_5 , -O- R_6 or -CH₂-O-CO- R_7 ; R_4 is 1-19C satd. hydrocarbon gp. and differs from R_1 ; R_5 is 5-25C

satd. hydrocarbon gp.; R_6 is 2-18C satd. hydrocarbon; R_7 is 1-19C satd. hydrocarbon and R_3 is H or also methyl when R_2 is an ester gp.). The copolymer has a mol. wt. of 2,000-500,000 and contains ≥ 1 monomer with a hydrocarbon chain of ≥ 7 C atoms.

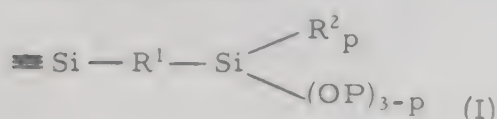
The copolymer, e.g. vinyl acetate-allyl stearate copolymer adds brilliance and adhesion to lipstick, eye shadow, etc. 7.6.74 as 427671. (11pp068)

GOLD D21 46070X/25 = DS 2555-053
Polysiloxane-polyoxyalkylene block copolymers - useful as foam stabilisers for polyurethanes, textile auxiliaries, anti-foam cpds in cosmetics etc

GOLDSCHMIDT TH AG 06.02.75-GB-005160

A26 F06 (A87 A96) (15.11.79) *BE-837-635 C08g-77/46

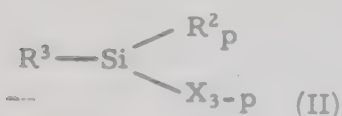
An organopolysiloxane-polyoxyalkylene-block copolymer is prep'd. by laterally binding ≥ 2 polyoxyalkylene blocks to the organopolysiloxane block, the copolymer contg. ≥ 2 units of formula (I):



(where R^1 is 2-8C alkyl-ene; R^2 is 1-4C alkyl and/or a trialkylsilyloxy gp.; OP is a polyoxyalkylene block derived from

an alcohol POH; $p = 1$ or 2).

An organopolysiloxane with lateral SiH gps. is first reacted with an organosilane of formula (II):



(where R^3 is 2-8C alkenyl and X is chlorine or an alkoxy gp.) and the intermediate prod. is reacted with polyoxyalkylene mono-ols and opt. polyoxyalkylene diols

or lower monovalent alcohols.

The block copolymers are useful in the formation of polyurethane foams as stabilisers. 6.12.75 as 555053. (9pp068)

YOUD/ D21 52114X/28 = DS 2606-488
Amalgamable dental powder - contg. non-alloyed indium granules, as well as silver-tin alloy, to improve plasticity

YOUDELIS W V 13.06.75-US-586822 (20.02.75-US-551572)

M26 (15.11.79) *BE-838-429 A61k-05/02

A powdered dental mixt. which forms an amalgam with mercury comprises (a) 70-99.5wt.% of a powdered alloy of 70-80wt.% of Sn and up to 8wt.% of this alloy

may be replaced by up to 6wt.% Cu and up to 2wt.% Zn and (b) 0.5-30wt.% of powdered In.

The amalgam has good mechanical properties and lower content of Hg. 18.2.76 as 606488. (6pp068)

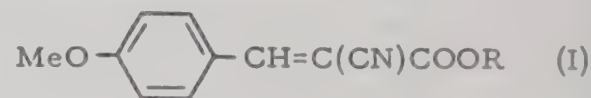
HENK ★ D21 84339B/47 ★DT 2820
Sealant for container for aq. compsn. e.g. cosmetic gel pencil polyethylene glycol with hydrophobic gp. to prevent drying
HENKEL KG AUF AKTIEN 12.05.78-DT-820806
A97 B07 G04 (A25) (15.11.79) C09k-03/10

Sealant for containers contg. aq. compsn., to prevent drying out, consists of a polyethylene glycol (I) contg. hydrophobic gp. or a highly conc. system of (I) and water. The sealant is useful for packages contg. pencils based on aq. gels e.g. for the application of cosmetics or pharmaceuticals or for adhesives.

The highly conc. system is applied on a state of low viscosity contg. under 25 (under 15)wt.% water. The container to be sealed is kept in the air until the required water balance with the atmos. is obtd. (I) becomes viscous to gelatinous at equilibrium with the ambient atmos. 12.5.78 as 820806 (9pp16)

FARB D21 80936B/45 = EP ---5
Cosmetic light-protective compsn. - contains 4-methoxybenzylidene-cyanoacetate as UV A filter and opt. a UV B filter
BAYER AG 18.04.78-DT-816819
E14 (14.11.79) *DT2816-819 A61k-07/44
D/S: E(BE, CH, DT, FR, GB, IT, NL, SW)

Light-protective compsn. contains a 4-methoxybenzylidene cyanoacetate having formula (I)



(where R is n-hexyl, n-octyl, n-decyl or prim. 9-10C isoalkyl).

(I) are used as UV-A filters in cosmetic compsns. for protecting the skin against UV-A radiation (i.e. having wavelength 320-400 nm), e.g. protective compsns. against sunlight, artificial light sources and for treating pathological sensitivity.

(I) have absorption max. 340 nm, high specific extinction, are oil-soluble, non-toxic, odourless, colourless, stable to UV, oxidn., heat and pH, and can be synthesised. 6.4.79 as 101050 (24pp200)

(G) ISR: FR1368808; GB1020614; DT1087902.

YARD- D21 09316Y/06 = GB 1556
Splint for immobilising damaged limb - having plastic body insulating and protective layers on opposing faces

YARDNEY CO 29.07.75-US-600082

A96 P32 + P34 P73 (21.11.79) *BE-844-687 B32b-27/08 + E 05/18

A structure is produced as a formable orthopaedic device comprising a plastics sheet having a thermally insulating plastics foam layer on one side and a protective layer on the other.

The plastics sheet is ≥ 40 mm thick having a tensile strength at yield of 2,000-10,000 p.s.i., a flexural strength of 3,000-14,000 p.s.i., a flexural modulus of 0.5-10⁵ p.s.i., a notched Izod of 0.3-30 foot lb. per in., a Rockwell hardness of 15 on the R scale to 55 on the D scale, and a Vicat softening pt. of 60-80°C. The thermally insulating plastics foam layer is ≥ 10 mm thick and has a coefficient of heat transfer of $\leq 2 \times 10^{-4}$ cal/sec cm²/cm/°C.

The orthopaedic devices produced can be used to support, position, protect, immobilise and/or restrain portions of the body. 29.7.76 as 031734 Add to 1517373 (8pp93)

MANC- ★ D21 84662B/47 ★GB 1556-376
 Film forming compsn. contg. oxo-aluminium carboxylate - and alkyl
 alkanoate, hydrolysing rapidly on hair or skin
 MANCHEM LTD 28.11.75-GB-049010
 E12 G02 (D18 E17) (21.11.79) C09d-03/48
 compsn. (A) comprises (i) Al cpd. $(O = Al-X)_n$ (I) ($X =$
 $3-22C$ carboxylic acid gp.; $n =$ integer) and (ii) ≥ 1 ester
 Y (II) ($R =$ alkyl; $Y = 3-25C$ carboxylic acid gp. different
 from X). Pref. (I) is 40-95 (40-60) wt. % and (II) 5-60 (40-
 10) wt. %. Opt. the compsn. also contains (iii) $(R'O)AlX_2$
 (III) and (iv) $R'x$ (IV) ($R' = 3-5C$ alkyl).

Also new are compsns. (B) contg. (I); ≥ 1 ester RZ
 (V) and a cpd. $B-M-O-AlB-O-AlB-O-M-B$ (VI) ($Z = 3-25$
 C carboxylic acid gp., which may be the same as X; $M =$
 Ca, Mg, Zn or Sr ; each B is $3-22C$ carboxylic acid gp.).
 The compsns. are hydrolysed by moisture in the air
 in the substrates to which they are applied, to flexible,
 strongly adherent films. Substrates include skin, hide
 and hair of humans and animals. (B) give greater stren-
 gth, flexibility and adhesion than compsns. contg. only
 (I) and (II). 25.11.76 (3pp1251)

PERE/ ★ D21 84669B/47 ★GB 2020-556
 Artificial tooth with ceramic core - embedded in metal under
 porcelain covering to reduce weight and thermal conductivity
 PEREZ RD 04.05.78-US-902885
 L02 M22 P32 (21.11.79) A61c-13/08

The tooth has a metal mass around and embedding a core
 and a covering layer over at least part of the metal. The
 core is pref. of solid ceramic and the covering layer is of
 porcelain fused to the metal.

The tooth is pref. made by making a pattern composite
 of wax and a core, investing and removing the wax to
 leave core and investment material, casting to embed the
 core in a metal mass, then removing from the mould and
 applying the outer layer. The ceramic core reduces poros-
 ity and heat conductivity compared to a conventional pontic
 with porcelain fused to metal and also reduces the weight.
 5.79 as 015454 (5pp1358)

DAIS- ★ D21 84998B/47 ★J5 4132-241
 Cosmetic cotton wool - obtd. by impregnating cotton wool with face
 lotion contg. ethanol, glycerine, borax and perfume
 DAISAN GOMEI KK 31.03.78-JA-038705
 (15.10.79) A61k-07

Cotton wool for make-up use, is prepd. by impregnating
 the face lotion contg. water, ethanol and glycerin as the
 major ingredients and opt. a little amt. of borax and per-
 fume, in cotton wool.

The face lotion is prepd. of water 55-65 w/w%, ethanol
 30-35 w/w% and glycerin 5-10 w/w% and 4-5 times in wt.
 of the face lotion is usually impregnated in cotton wool.
 The face lotion of the prescription gives the good face-
 washing effect by ethanol and the emollient effect by gly-
 cerin synergically. Borax is used to improve the face-
 washing effect of the face lotion. The obtd. cotton wool
 of make-up use is formed to proper size and form, folded
 and packaged in proper bags.

The cotton wool impregnated with the face lotion, gives
 excellent smooth touch on skin and never injures skin.
 31.3.78 as 038705 (2pp5)

KANE ★ D21 84999B/47 ★J5 4132-242
 Cosmetic compsn. for hair, skin etc. - contains e.g. gamma-(N-2-
 hydroxyethyl amino:propylene:glycol-alpha-decanoate, (N)-2-
 hydroxy-3 dodecanoxy:propyl:galactosamine, etc.
 KANEBO KK 31.03.78-JA-038573
 E16 (E13) (15.10.79) A61k-07

The cosmetic contains ≥ 1 cpd. of formula R_1COOCH_2-
 $CH(OH)-CH_2NHR_2$ (I) where R_1 is 9-21C alkyl or alkenyl;
 and R_2 is $-CH_2-$
 CH_2OH-CH_2-
 $CH(OH)-CH_2-$
 CH_2CH_2-
 $CH_2CH_2OH,$
 $-CH_2-CH(OH)-$
 $CH_3, -CH_2CH_2-$
 $CH_2OH, -CH_2-$
 $CH(OH)CH_2-$
 $CH_2OH, 4-glucosyl, 4-galactosyl$ or (II) or (III)).

(I) are free of defects of prior art nonionic surfactants.
 They can be combined with various cosmetics such as
 creams, milk lotions, oily skin cosmetics, hair dressing
 agents, hair conditioners, shampoos, rinses, etc. to give
 excellent gloss and texture. They are non-stimulating to
 the skin, are biologically safe and have affinity to the skin,
 emulsion stability and storage stability.

(I) is used in an amt. of 0.1-30 w/w% of the cosmetic,
 and is a paste or liq. substance easily prepd. by reaction
 between higher fatty acid ester of glycidol and alkanolam-
 ine. 31.3.78 as 038573 (11pp5)

SUNZ ★ D21 85000B/47 ★J5 4132-243
 Skin-colouring compsn. contg. ferrous salt - with dihydroxy cpd.
 e.g. 3,4-dihydroxyphenyl pyruvic, mandelic or acetic acid,
 imparting healthy tan in absence of IR light

SUN STAR HAMIGAKI K 04.04.78-JA-039853

E14 (15.10.79) A61k-07/42

The compsn. contains (a) 3,4-dihydroxyphenylpyruvic acid,
 3,4-dihydroxyphenylacetic acid, 3,4-dihydroxyphenyleth-
 anol, 3,4-dihydroxymandelic acid and/or 3,4-dihydroxy-
 phenylethyleneglycol and (b) ferrous salt. The compsn.
 may be used as the two liq. type compsn. composed of the
 first liq. contg. ferrous salt (b) and the second liq. contg.
 the cpd. (a).

The skin can be easily coloured to healthy brown in a
 short time with the metabolic prods. of the components of
 living body such as dopa, dopamine, noradrenalin and/or
 adrenalin and ferrous salt without irradiation of IR-ray.
 4.4.78 as 039853 (3pp5)

KOBA- ★ D21 85001B/47 ★J5 4132-244
 Manicure remover - contains 2-oxo-4-methyl-1,3-dioxolan and
 aliphatic alcohol

KOBAYASHI KOSEI KK 03.04.78-JA-038933

E13 (E17) (15.10.79) A61k-07/04

The manicure remover contains 2-oxo-4-methyl-1,3-di-
 oxolan (I) and aliphatic alcohol. Flash point of (I) is $\sim$
 $132^\circ C$ and it can be handled much more safely compared
 with acetone and MEK which have been used mainly as
 manicure remover.

The manicure remover is free of stimulative odour and
 nasty odour, and showing rather weak solubility for fat,
 hardly whitens nail and chaps skin. Pref. ratio of (I) to
 alcohol is 1-19:1 (1.5-3:1). 3.4.78 as 038933 (3pp5)

JAPS ★ D21 85015B/47 ★J5 4132-387
 Dental mould compsn. for e.g. mfg. false teeth - consists of an
 irreversible colloid of a water soluble high polymer, hardener,
 retardant and inorganic filler

JAPAN SYNTHETIC RUBBER (NICR-) 06.04.78-JA-040533

A96 P32 (15.10.79) A61c-09 A61c-13/08

Compsn. consists of an irreversible aq. colloid of a mixt.
 of a water-soluble high molecular material (pref. of algin-
 ate or CMC salt), a hardening agent (pref. C cpd. or
 weak base non-soluble salt such as PbO Pb carbide or Pb
 silicate), a hardening retarding agent (Na (pyro)phosphate),
 and an inorganic filler (pref. Al hydroxide, C hydroxide,
 Al sulphate, Si oxide, Mg silicate or Ca silicate). Pref.
 50-100 pts. wt. of the hardening agent and 10-35 pts. wt.
 of the hardening retarding agent are added per 100 pts.
 wt. of the water-soluble high molecular material.

The dental compsn. is pref. used for making resin
 type artificial teeth with high precision by thermal poly-
 merisation. 6.4.78 as 040533 (5pp30)

ISHF ★ D21 85025B/47 ★J5 4132-426
 Palladium-silver dental alloy with good bondability to ceramics -
 also contains iron, and at least one of manganese, indium, tin,
 cobalt, chromium, nickel, titanium silicon and aluminium

ISHIFUKU KINZOKU KO 06.04.78-JA-039761

M26 P32 (15.10.79) A61c-05 C22c-05/06

The alloy comprises base alloy of Pd 30-60%, Ag 20-5%
 and Fe 5-20% and mixed with ≥ 1 of Mn 0.05-5%, In 0.1-
 10%, Sn 0.1-10%, Co 0.1-5%, Cr 0.1-5%, Ni 0.1-5%, Mn
 0.1-5%, Ti 0.05-3%, Si 0.05-2%, Al 0.05-2% and In 0.01-
 0.5%.

The alloy has high elasticity adsorbs mechanical im-
 pact through the ceramics, has thermal expansion coeffic-
 ient identical with ceramics and melting temp. higher than
 firing temp. of the ceramics to obtain initial bonding stren.

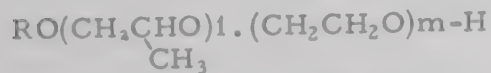
gth. 6.4.78 as 039761 (5pp53)

NIHS ★ D21 85057B/47 ★ J5 4132-491
Solubilisation agent for toilet water or lotion - contains higher alcohol-alkylene oxide addn. prod.

NIPPON SURFACTANT KK 06.04.78-JA-039685

A25 E17 (15.10.79) B01f-01 B01f-17/42

Solubilisation agent comprises > 1 higher alcohol alkylene oxide addn. prod. of formula (I) (where R is branched > 20C alk(en)yl and 1 and m are respectively an integer and is 1 > 1, m > 5).



(I)

Agent has an improved solubilisation

capability c.f. conventional oxyethylene derivs. and polyoxyethylenepolyoxymethylen derivs. Agent is not subject to hydrolysis in acidic atmosphere. 6.4.78 as 039685 (4pp)

TOKA- ★ D21 85334B/47 ★ J5 4133-794
Rubber stopper used to measure length on root canal in dentistry - prepd. by vulcanising mixt. of silicone rubber, vulcanised rubber and bismuth trioxide

TOYO KAGAKU KENKYUS 10.04.78-JA-041899

A96 P32 (A26 A60) (17.10.79) A61c-05/02 A61c-19/04

A rubber stopper used in dental treatment consists of rubber obtd. by mixing silicone rubber and vulcanised rubber with bismuth trioxide (Bi_2O_3), and vulcanising the mixt. For example, the compsn. of the rubber consists of 100 pts. wt. of silicone rubber and 10 pts. wt. of Bi_2O_3 .

The rubber stopper is used for treating the root canal and is mounted on a reamer for this purpose. The rubber stopper is non-toxic and visible on an X-ray film. Thus the length of the root canal can be easily measured by using the reamer with the stopper. The rubber stopper is easily sterilised and it can be easily cut into a desired shape. 10.4.78 as 041899 (2pp2)

SNKM ★ D21 85350B/47 ★ J7 9034-278
Composition for evaluating decayed teeth - consists of an aqueous soln. of saccharose, sodium chloride, sodium tri:nitride and bromo:cresol green and purple

SANKIN KOGYO KK 12.05.73-JA-052937

R16 (25.10.79) A61k-05 G01n-33/16

Estimating decayed teeth consists of using an aq. soln. contg. saccarose, sodium chloride and sodium trinitride, and bromocresol Green and bromocresol Purple.

The decayed state of the teeth is rapidly and clearly evaluated with the composition. 12.5.73 as 052937 G01n-33/16; A61k-5/00 (25.10.79) SANKIN KOGYO (3pp76) (J50001589)

MIRA- ★ D21 B/47 ★ RU --64-734
Aq. make-up removal emulsion - contains phospho-lipid alkanol-amide, lanolin, di:ethylene glycol mono:stearate, cetaceum, collagen, lanolin deriv., paraffin and avocado oi

MIRAJ INTR COSMETIC 27.06.75-RU-088215

E19 (21.09.78) A61k-07/02

MIRA- ★ D21 B/47 ★ RU --65-294
Aq. tonic skin lotion - contains ethoxylated lanolin, propylene glycol, perfume, methyl para-hydroxy-benzoate and therapeutic mud extract

MIRAJ INTR COSMETIC 27.06.75-RU-088288

E19 (31.08.78) A61k-07/02

TURI- ★ D21 B/47 ★ RU --66-661
Medicinal tooth-paste compsn. - contains sapropelic mud extract contg. chlorine, sulphate, magnesium and calcium

MINISTERUL TURISMUL 23.04.74-RU-078523

B05 (30.01.79) A61k-07 16

AMLE- ★ D21 85825B/47 ★ US 4174-296
Improving water solubility of lecithin for use in e.g. shampoo - by use of tert. amine oxide or specific surfactant as solubiliser

AMERICAN LECITHIN 04.12.78-US-965998

E19 (13.11.79) A23i-07 B01i-13 C11d-09 30

The solubility of lecithin is improved by adding to an aq. dispersion of the lecithin a solubilising agent selected from tert. amine oxides, alkyl alcohol sulphate salts, alkylamidopropyl betaines, sodium alkene sulphonates, alkyl sulphoacetates and disodium salt of monoalkyl amide

of sulphosuccinate.

Clear, stable aq. solns. of lecithin can be prepd. at room temp., such solns. being infinitely dilutable. The lecithin can be incorporated into skin and hair care prod in the water phase of an emulsion instead of in the oil phase. In such cosmetic or toiletry compsns. the lecithin acts to influence the elasticity of skin and hair; it softens hair, imparts sheen, improves body and reduces its electrostatic charge. 4.12.78 as 965998 (8pp914).

ICIL D21 36916A/21 = US 4174-3
Dental or orthopaedic powdery cement - consisting of ternary ox. contg. alumino-borate glass powder and water-soluble poly. contg. carboxyl gps.

IMPERIAL CHEM INDS LTD 12.11.76-GB-047211

A96 L01 (13.11.79) *DT2750-326 + C081-33

Cement compsn. comprises (a) an alumina borate glass powdered form contg. fused oxides of Al, B and a third oxide, of an alkali(ne earth)metal, and (b) a water-soluble organic polymer comprising a polymer chain contg. recurring carboxylic acid or carboxylate ion gps. (pref. poly(meth)acrylic acid). A fourth component, an inorganic oxide or salt is pref. also present; and is Pb oxide, SiO₂ or a P oxide.

Used esp. to produce dental cements, or dental filling or cavity lining materials. 7.11.77 as 849360 (5pp997).

FARB D21 27121A/15 = US 4174-3
Crosslinking paste for organo-polysiloxane - contg. catalyst a thickened with active hydrophilic silicic acid (NL 3.4.78)

BAYER AG 30.09.76-DT-644193

A26 + Q34 (A60 A96) (13.11.79) *DT2644-193 C081-83/04

A pasty compsn. for the room temp. crosslinking and curing of a vulcanisable organopolysiloxane comprises (a) a crosslinking agent for an organopolysiloxane, (b) a curing catalyst, and (c) 3-40(20) wt. % of active hydrophilic silicic acid as a thickener. Pref. the compsn. also contains <40 wt. % of >1 inactive filler.

Advantageously the organopolysiloxane is in one tube and the pasty compsn. is in another, and lengths of material are squeezed out in easily ascertained proportions and mixed in the presence of water, e.g. water vapour in the atmosphere, the mixt. setting to a silicone rubber. Dental impressions is the preferred field of use. 26.9.77 as 836340 (4pp990).

SPIT/ ★ D21 85874B/47 ★ US 4174-3
Aerosol antiperspirant compsn. - contg. solid satd. long chain aliphatic carboxylic acid to improve adherence of astringent to skin

SPITZER JG 18.12.78-US-970013 (03.03.75-US-554388)

E17 (E32 E33) (13.11.79) A61k-07/32

A highly concentrated aerosol antiperspirant compsn. comprises (a) 0.1-30 wt. % of a nonvolatile miscible organic liq., (b) 8-30 wt. % of an antiperspirant salt, (c) 0.1-1 wt. % of a bulking agent, (d) a liquified propellant having vapour pressure of >2.4 atmos. absolute at 21 °C and (e) 0.1-5 wt. % of a solid satd. aliphatic carboxylic acid having 14-22C in a straight chain.

Pref. the amt. of liquefied propellant is >0.15 mole per atmos. absolute pressure at 21 °C per 100g. of compsn. to generate an expelled gas: liq. ratio of 10-40

The solid satd. aliphatic carboxylic acid improves the adherence of the antiperspirant salt to the skin, for which purpose it is more effective than prior art non-volatile oils. 18.12.78 as 970013 C.i.p. 3970219, 4019657 (+ 9.4.75, 7.10.75, 3.11.75, 26.3.76, 19.7.76, 17.9.76, US - 566562, 620448, 628283, 670913, 706857, 724425) (12pp914).

COLG ★ D21 85875B/47 ★ US 4174-3
Dentifrice of reduced abrasiveness - contg. aluminosilicate and calcined alumina hard abrasives and fluoride cpd.

COLGATE PALMOLIVE CO 31.01.77-US-764131 (28.01.75-544618)

B06 (13.11.79) A61k-07/18

A dentifrice has pH >7, and contains an alkaline buffer, and as abrasives, 10-70% of amorphous alkali(ne earth) metal aluminosilicate and 7.5-20% calcined α-alumina flakes of particle dia. 1-15 μ., in sufficient amts. to give the compsn. a radioactive enamel abrasion value above about 450, and 0.005-1.0 wt. % of a water soluble fluor

It to reduce the enamel abrasion.

The compsn. has superior cleaning and polishing pow-
er, but does not damage dental enamel. The alumino-
silicate is pref. a sodium alumino-silicate contg. 5-10%
SiO₂, at least 70% SiO₂, up to 10% Al₂O₃, and up to 20%
moisture, and has particle size 2-40μ, esp. below 20μ.
The fluoride salt is pref. NaF, Na monofluorophosphate
or SnF₂. The toothpaste or dental cream use is convent-
ional. 31.1.77 as 764131 (6pp955).

See Also

D13 GB 1556149

D22 US 4174443

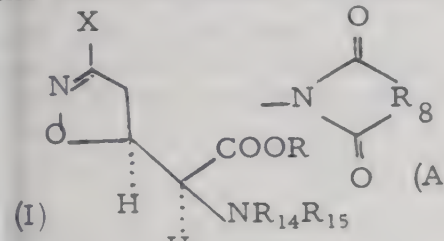
D22: BANDAGES; DRESSINGS

UO ★ D22 84158B/47 ★ BE-876-261
α-amino-3-chloro-α-isoxazoline-5-acetic acid and
analogues - are useful as intermediates for antibacterial and
antitumour agents

UPJOHN CO 15.05.78-US-905963

B03 E13 F09 (D15) (16.11.79) C07d

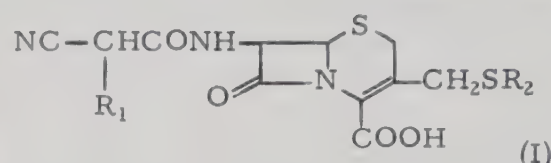
(I) (αS, 5S)-α-amino-α-(3-chloro-5-isoxazoline) acetic
acid derivs. of formula (I) as the racemic mixt. or opt.
isomers and their salts with acids and bases are new.
The intermediates are also new:

 (I) (A)
(where R=H, 1-8C alkyl,
halogenated-1-5C alkyl
(having 1-3 halo gps.) or
7-20C aralkyl; X = halo,
-OR₁, -SR₁, or -NR'R'';
R₁ = 1-2C alkyl, 6-20C ar-
yl or 7-20C aralkyl; R',
R'' independently = H or
1-8C alkyl; R₁₄, R₁₅ = H, -COO-R₆ or CO-R₇ or together
with the N atom form a gp. (A); R₆ = 1-8C alkyl, 1-5C
halogenated alkyl (having 1-3 halo gps.) or opt substd. 7-
20C aralkyl; R₇ = 1-12C alkyl, 6-20C aryl or opt. substd.
7-20C aralkyl; R₈ = -CR₉R₁₀-CR₁₁R₁₂-, 1,2-cyclohexyle-
ne or opt. substd. 1,2-phenylene; R₉, R₁₀, R₁₁, R₁₂ = H
or 1-5C alkyl. With the conditions that when R₁R₁₄ and
R₁₅ = H then X = Cl and that when X=Cl and R = -H or 1-8C
alkyl then neither R₁₄ nor R₁₅ = alkoxy carbonyl or Gp. A).
(B) Process for preparation of (I) (X = Cl; R₁ R₁₄, R₁₅ = H)
is claimed. Cpd. of formula (I) (where X=Cl, R₁ R₁₄, R₁₅ = H)
is a known antitumour and antimicrobial agent (see US
356807 and US 3878047) designated as Cpd. AT-125. The
new cpds. have similar activity e.g. they are active against
E. coli and bacillus subsp. and may be used to avoid
mould formation in paper mills, disinfect surfaces, reduce
fish odour etc. For pharmaceutical use they may be
administered orally, parenterally or rectally using classi-
cal formulations. AT-125 as previously made by micro-
biological methods - the present invention gives a chemical
synthesis. 15.5.79 as 876261(103pp395)

UPL ★ D22 84161B/47 ★ BE-876-273
particulate water-insoluble CMC prepn. - by treating water-soluble
sodium CMC with hydrogen chloride and thermally crosslinking
INT PLAYTEX CORP 17.05.78-US-906724
A11 P32 (A96) (16.11.79) A61f C08b
particulate, water-insol. carboxymethylcellulose (CMC)
prepd. by treating with HCl as a particulate, water-
insol. NaCMC of degree of substitution (DS) < 0.4 and heating
the CMC to temps. > 1000°C to transform it into a partly
acid and cross-linked form.

The prods are used in tampons and other absorbent dev-
ices. Compared with previous methods of insolubilisation
of CMC by acidification with HCl in a water-miscible org-
anic solvent, e.g. isopropanol, the present method presen-
ts no environmental problems and no need for solvent-
recovery systems. 16.5.79 as 876273(16pp1329)

UBA D22 39819S/23 = DS 2056-983
Cyanacetylaminoccephalosporanic acid derivs.
CIBA GEIGY AG 02.06.70-CH-008199 (28.11.69-CH-017731)
B02 C02 (15.11.79) *BE-759-570 + C07d-501/36
new cephalosporin derivs. (I) and their salts, are antibac-
terials active against Gram-positive and -negative strains,
esp. penicillin resis-



H, methyl, phenyl, p-chlorophenyl or thienyl-(2)-; and
R₂ is an opt. 1-4C alkyl or lower alkylthio-substd. triazol-
yl, tetrazolyl, thiadiazolyl or oxadiazolyl.

Specific (I) are 7-cyanacetyl-amino-3-desacetoxy-3-(X)-
cephalosporanic acids (where X is 3-methyl-1,2,4-thiadi-
azol-5-ylthio, 2-methyl-1,3,4-thiadiazol-5-ylthio, 1-
methyl-tetrazol-5-ylthio, 2-methylthio-1,3,4-thiadiazol-
5-ylthio, 2-methyl-1,3,4-oxadiazol-5-ylthio, or 1,3,4-
thiadiazol-5-ylthio), and their salts. 20.11.70 as 056983
(+24.12.69; 17.2.70; 20.4.70-CH-019243; 002281; 005877)
(16pp913)

HENK

D22

11148T/07 = DS 2117-427

Quaternary ammonium base solns - for disinfecting purposes

HENKEL KG AUF AKTIEN 08.04.71-DT-117427 (24.10.70-DT-
052321)

E16 + P34 (15.11.79) *BE-770-927 + A611-13 C07c-91/26 C07c-
93/04

A soln. of a quat. ammonium hydroxide with an aliphatic
gp. of > 3C atoms is prepd. An amine of formula R₁R₂-
NH (where R₁ is a 4-24C aliphatic gp. and R₂ is H or 1-24C
aliphatic gp.) is reacted with ethylene oxide in molar ratio
of > 1:(1+n) where n is the number of active H atoms in the
amine. Reaction is effected at 40-100°C under pressure
in the absence of an alkoxylation catalyst and in the pres-
ence of > 5 mols. water per mol. amine. When a sec.
amine is used a water-soluble solvent, esp. isopropanol,
is also present.

The quat. ammonium hydroxide is useful as antimicro-
bial disinfectant. 8.4.71 as 117427, Add. to 2052321.
(3pp068)

BADI

D22

56356B/31 = EP ---5-168

Polyvinyl pyrrolidone-iodine prodn. by direct reaction - in presence
of acid, salt or amide gives prod. used as germicide, bactericide,
fungicide and disinfectant

BASF AG 28.04.78-DT-818767

A97 + P34 (A14) (14.11.79) *DS2818-767 C08f-08/22 + A61k-
33/18 A611-13

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, SW)

A novel process for the prepn. of polyvinyl pyrrolidone-
iodine reaction prod. (PVP-I₂) comprises reacting
powdery polyvinyl pyrrolidone with I₂ at 70-100°C, in the
presence of HCOOH, oxalic acid or an ammonium salt or
amide of carbonic-, formic- or oxalic acid.

PVP-I₂ is used as a germicidal, bactericidal, fungicidal
and disinfectant compsn.

Stable PVP-I₂, having characteristic distribution
coefft. = 200, I₂: iodide ratio = 2:1 and available I₂ content
= 5-20 wt. %, can be obtd. by heating at 70-100°C for only
0.5-9 hrs., compared with more than 22 hrs. without
additive. Shorter heating times prevent PVP degradation.
30.3.79 as 100966 (16pp200)
(G) ISR: DT2439197; FR2290914; GB-836868; DT2016086.

PROC ★ D22 84539B/47 ★EP---5-286
Solid disinfectant esp. for toilet bowl tanks - contains lithium hypochlorite and calcium hypochlorite (BE 23.10.79)
PROCTER & GAMBLE CO 18.04.78-US-897478
E34 P34 (D15 E33) (14.11.79) A611-09/* A611-13
D/S: E(BE, CH, DT, FR, GB, IT, NL).

Compact solid disinfectant contains 10-107 wt.% available Cl_2 supplied by a mixt. of LiOCl and $\text{Ca}(\text{OCl})_2$ in wt. ratio 0.47-0.17:1, pref. 0.37-0.29:1.

Pref. the compsn. also contains 20-80 wt.% inorganic diluent, esp. this diluent is a mixt. of 99.5-5 (70-80) wt.% NaCl and 0.5-95 (20-30) wt.% Na_2SO_4 .

For use in swimming pools, wash basins and esp. toilet bowl tanks. Compsns. provide uniform Cl_2 release over a long time at widely varying water temp. (40-80°F). They dissolve more readily with less residue than $\text{Ca}(\text{OCl})_2$ compsns. alone, and relatively little expensive LiOCl is needed.

9.4.79. as 200171 (21pp1251).

(E) ISR: GB1175749; FR1582688, GB1126108.

CUPR- ★ D22 84573B/47 ★EP---5-361
Antifungal compsn. esp. for preserving wood - contg. zinc or copper salts of different satd. acyclic carboxylic acid(s)

CUPRINOL LTD 05.05.78-GB-018026

C01 E12 F06 P63 (F09) (14.11.79) A01n-09/24 B27k-03/36 C07c-53/24

D/S: E(BE, DT, FR, GB, IT, LU, NL, OE, SW).

Antifungal compsn. comprises a mixt. of Zn or Cu salts of (a) primary and/or secondary satd. acyclic carboxylic acid (I) and (b) a tertiary satd. acyclic carboxylic acid (II).

The compsns. are preservatives for degradable organic materials esp. for woods, in which the compsn. has good resistance to evapn. and to being washed out. Other uses for the compsns. include treatment of fabrics, rope, cordage, nets, paper, boards and leather.

2.5.79 as 300748 (35pp1248).

(E) ISR: FR1356995; GB1037761; US3558782; US2951789
2 Journal References.

BEHW D22 05978Y/04 =GB 1556-199
Polyanionic solns. for erythrocyte preservation and kidney perfusion - contg. increased potassium and magnesium and decreased sodium and chloride

BEHRINGWERKE AG 18.07.75-DT-532183

B04 + P34 (21.11.79) *DT2532-183 A01n-01/02 A61k-35/18

A polyionic isotonic salt soln. comprises as cations ≥ 80 mval. of K per litre and ≥ 1.7 m val of Mg per litre, and as anions, chloride ions and other physiologically tolerable anion(s). The total concn. of anions is 90-160 m val. per litre, and the concn. of chloride ions is > 100 m val. per litre.

Pref. the other anion(s) is/are SO_4 and PO_4 anions and anions derived from aliphatic fatty acids or hydroxilic acids. The soln. may also contain a colloid (albumin, gelatine deriv. or PVP), carbohydrates and further substances suitable for addn. to perfusion solns., esp. heparin, antibiotics, insulin and vasoactive substances.

Used for maintaining or preserving in active state erythrocytes, microorganisms or an organ for transplantation, whereby erythrocytes or microorganisms are suspended in the soln. or the organ is perfused with the soln. 8.7.76 as 028458 (6pp997)

CALY D22 23851Y/14 #GB 1556-206
Transferring liquid between sterilised containers - by fusing under pressure sealed connecting tubes contg. linings which join together
CALIFORNIA INST OF TECHN 25.09.75-US-616765 (07.09.76-GB-037050)

A92 Q39 + P33 P34 Q31 (21.11.79) *DT2639-584 A01n-01

Fluid can be osceptically moved from one sterile container to another by providing each container with meltable tubular connector which has a liner not meltable at the temp. used to melt the connector; bringing together lengths of the ends of two connectors, the liners not extending to the ends; applying temp. and pressure to cause the end lengths to flow away to form a communicating opening while maintaining sterile conditions; and cooling the ends so as to form a sterile passage.

Pref. the connectors are of PVC polymers, fluorinated

ethylene propylene copolymers, chlorotrifluoro-ethylene polymers or polyvinylidene chloride polymers; and the er is a polyimide. 7.9.76 as 037050 (12pp1376)

SCHU D22 21575A/12 =GB 155
Solid antimicrobial agents contg. stable percarboxylic acids - substd. per:benzoic acids used in aq. systems
SCHULKE & MAYR GMBH 26.11.76-DT-653738
E14 P34 (D15) (21.11.79) *BE-860-743 A611-13 + A01n-09/17

Water-sterilising elements are prepd. for immersion in aq. media exerting a long-lasting antimicrobial activity. The element comprises a normally-solid carrier supplying ≥ 1 organic peracid accessibly to the water and within the carrier.

The peracid(s) is stable in the media and sparingly soluble in water to ≤ 1 wt. %/vol. Pref. the carrier is biologically-inert, water-insoluble and is or includes calcium fluoride, barium sulphate, activated charcoal and/or gel.

The organic peracids used in water sterilisation can be added in excess without waste or danger, and can stand in contact with the media for prolonged periods, establishing and maintaining its antimicrobial effect. 22.11.77 as 048550 (9pp931)

AIRW- ★ D22 84719B/47 ★J5 4110
Gel compsn. for sterilising and deodorising air - contains stearate salt as gelling agent, volatile active material and freezing inhibitor e.g. polyethylene glycol

AIRWICK INDS INC 31.01.78-US-873827

A97 E12 P34 (E17) (30.08.79) A611-09/* C09k-03

The gelling compsn. comprises a homogeneous aq. mixt. which consists of 1.5-15 wt. % of a stearate salt, as a gelling agent discharging alkali metal ion, 0.5-6.0 wt. % of a volatile active material, 1-20 wt. % of a refrigerating inhibitor and the balance carragheenine component(s) and other where the wt. ratio of the carragheenine component(s) to the stearate salt is 0.3/1-5/1.

The stearate salt is Na stearate. The refrigerating inhibitor is ethyleneglycol, diethyleneglycol, triethyleneglycol, tetraethyleneglycol, polyethyleneglycol or polypropyleneglycol.

The compsn. is used for sterilising and deodorising in a warehouse kept at somewhat higher temp. 31.1.79 as 009287 (6pp15)

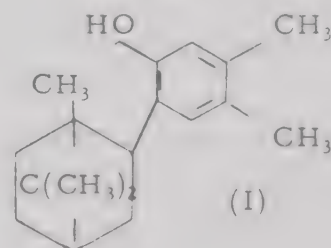
FARM- ★ D22 84723B/47 ★J5 4115
Antibacterial 6-iso-bornyl-3,4-xyleneol prepn. - by condensing camphene with 6-iso-bornyl-3,4 xyleneol-benzyl ether using Friedel Crafts catalyst, hydrogenating and de:benzylating

FARMATIS SRL 28.02.78-IT-020684

E14 (07.09.79) C07c-39/17

Prod. of 6-isobornyl-3,4-xyleneol of formula (I) comprises reacting camphene with 6-isobornyl-3,4-xyleneol-benzyl ether at about 0°C in an organic solvent (e.g. ethyl ether, benzene or nitrobenzene) in the presence of Friedel Crafts (e.g. AlCl_3) by condensn.; and hydrogenating the prod. and a debenzylating in the presence of a hydrogenating catalyst.

(I) is a strong antibacterial agent.



10.7.78 as 083900 (8pp15)

NIIO- ★ D22 84791B/47 ★J5 413
Impregnated germicidal cloth or paper mfr. - by impregnating resin soln. contg. copper and/or silver powder, used for mfg. clothes

NIPPON ION KK 31.03.78-JA-038552

A87 B06 F06 (A97 F09) (11.10.79) A01n-11 D06m-11 D21h-

A cloth or paper is impregnated with a resin soln. containing copper powder, silver powder or its cpd. or a mixt.

thereof. As the resulting impregnated cloth or paper has germicidal action, the cloth or paper is pref. used as clothes for babies, e.g. swaddling cloths, underclothes and bandage.

In an example, to 100 pts. wt. of a 30% DMF soln. of polyurethane is added 10 pts. wt. of copper powder (2-8 μ particle size) and 90 pts. wt. of DMF and themixt. is uniformly stirred. Woven cloth is immersed in the soln. and squeezed to 100% pick up and then immersed in flowing water and allowed to stand for 30 mins. and then dried. 3.78 as 038552 (4pp84)

IIIO- ★ D22 84980B/47 ★ J5 4132-201
Fungicidal resistant synthetic leather prodn. - from synthetic resin contg. copper and/or silver cpd.) powders
NIPPON ION KK 31.03.78-JA-038550
A82 F08 (15.10.79) D06n-03.

Cu powder, Cu cpd. powder, Ag powder and/or Ag cpd. powder is added to a synthetic molten resin and the resulting synthetic resin is moulded as into sheet form.

As a raw material of the synthetic resin, polyacrylic resin, PVC, EVA copolymer, polyurethane, urethane resin, polyamino acid resin, polyamide resin or synthetic rubber may be used. This may contain a crosslinking agent such as polyisocyanate. 100 pts. wt. of synthetic resin are mixed with 5-100 pts. wt. of powdery metal component(s) and an appropriate amt. of pigment for producing the synthetic imitated leather.

Above synthetic leather is used for sheet cover of furniture. 31.3.78 as 038550 (4pp15)

IIIO- ★ D22 84981B/47 ★ J5 4132-202
Fungicidal resistant synthetic leather prodn. for footwear - by adding copper cpd.) and/or silver (cpd.) to synthetic resin contg. foaming agent, coating support and foaming

NIPPON ION KK 31.03.78-JA-038551
A82 F08 P73 (15.10.79) B32b-05/18 D06n-03
Prod. of synthetic leather having fungicidal effect is described in which Cu powder, Cu cpd. powder, Ag powder, Ag cpd. powder or their mixt. is added to a synthetic resin contg. foaming agent. A support sheet is coated with a foamed layer of the resulting synthetic resin and continuous foams are generated in the resin layer.

Specifically, a liq. compsn. which consists of 100 wt. pts. of polyurethane soln., 28 wt. pts. of finely pulverised CaCO_3 , 2 wt. pts. of Ag powders having 200 mesh of granular size and 75 wt. pts. of DMF is prep'd. A fluffy textile sheet is coated with the compsn. and immersed in a flow of migrating water for 60 mins. then dried at room temp.

The synthetic leather is used for mfg. footwear such as shoes or sandals. 31.3.78 as 038551 (4pp15)

MITK ★ D22 84982B/47 ★ J5 4132-203
Fungicidally treated decorative ligneous board prodn. - by immersing flitch in boiling water, slicing into small thicknesses and treating with fungicide and wood preservative

MITSUI TOATSU CHEM INC 06.04.78-JA-039736
C02 E13 F09 P63 (15.10.79) B27k-03/02

A flitch is immersed in a boiling water and is sliced into boards having small thickness. The boards in wet state are treated with a fungicidal agent and a wood preservative agent.

The fungicidal agent is benzimidazole, benzisothiazole, benzthiazole, 2-(4-thiazolyl)benzimidazole, tetra-chloromethyl-sulphonyl-pyridine, tetramethyl-thiuram-disulphide, N-(fluorodichloromethylthio)-phthalimide or zinc lithiocarbamate salt. The wood preservative is chosen from hexamethylenetetramine, salicylic acid, formaldehyde, chloroacetoamide, N-methylol-chloroacetoamide, benzoic acid, sodium benzoate, 2,4,5,6-tetrachloro-isophthalonitrile, Na salt of acetoacetic acid, ethyleneglycol ester of monobromo-acetic acid or 4-(2-nirobutyl)-morpholine.

The resulting thin board has beautiful grain figures and ≥ 0.3 mm thickness. It is laminated on low quality wood block such as white Lauan. Dentacme contorta Merr et Rolfe by using an adhesive of urea-formaldehyde by heating and pressing step. 6.4.78 as 039736 (4pp15)

SANY ★ D22 84990B/47 ★ J5 4132-228
Insecticidal compsn. esp. for combating ants - contain an iodoacetylene alcohol, also has fungicidal activity in wood material, leather, synthetic resin etc.

SANKYO KK 05.04.78-JA-039971
A60 C03 E16 (15.10.79) A01n-09/30

Ant controlling agent contains as active component iodoacetylenealcohol of formula $\text{IC} \equiv \text{CHR}_1\text{-OH}$ (I) (where R_1 is H or lower alkyl).

(I) shows excellent insecticidal effect to harmful insects for wood such as white ant. (I) also shows fungicidal effect to fungi which generate on and damage wood material, wet pulp, paper, fibre, leather, adhesive, paint, synthetic resin etc. It has a low toxicity to human beings.

In an example, 10 pts. (I) was dissolved in 40 pts. of DMF and 40 pts. of xylene and 10 pts. of polyoxyethylene-nonylphenylether were added to prepare the emulsion. The emulsion was diluted at the time of use, and the diluted liq. was coated on or sprayed on wood. 5.4.78 as 039971 (4pp108)

SATO/ ★ D22 84996B/47 ★ J5 4132-238
Deodorant for use in shoes - contains montmorillonite, pyroligneous acid and papain enzyme, and is used in a small permeable bag

SATO M 05.04.78-JA-040491
P34 (D16) (15.10.79) A611-09/*

Deodorant for shoes is obtd. by mixing about 80% of montmorillonite, about 20% of pyroligneous acid and minor amt. of papain enzyme, kneading the mixt. and formulating the kneaded product as pellet, followed by drying. Deodorant bag for shoes is obtd. by charging the pellets produced above in a small and permeable bag.

Montmorillonite has an absorption activity 5 times as high as activated carbon. Pyroligneous acid is by-produced together with wood tar in the dry distillation of wood, and contains as major component acetic acid. It has a sterilising effect. The bag is made of paper, cloth, unwoven fabrics, etc.

When the deodorant is placed in shoes, the nasty smell in the shoes is absorbed by montmorillonite, decomposed by papain enzyme and reduced by pyroligneous acid. Therefore, shoes can always be kept clean. The deodorant also cleans the skin surface, and is useful for the treatment of athlete's foot. 5.4.78 as 040491 (2pp108)

UNIC- ★ D22 85016B/47 ★ J5 4132-389
Highly absorptive sanitary towel - comprises 4 layer comprising water absorptive material, paper, high molecular polymer powder, etc.

UNI-CHARM KK 04.04.78-JA-039345
A96 P21 P32 (15.10.79) A41b-13/02 A61f-13

The method comprises a first absorptive sandwich structure including water absorbing sheets (10- to 30 g/m²) (e.g. pulp), and water insoluble, water-swellable high molecular powder (10 to 30 g/m²) e.g. acrylonitrile denaturated CMC or denaturated PVA arranged between the sheets; a second absorptive layer (75-150 g/m²) of crushed pulp opt. with absorptive paper; a third absorptive sandwich structure including water absorbing paper (10 to 30 g/m²) and water-insoluble, water-swellable high molecular powder arranged between the sheets (10 to 30 g/m²); and a fourth absorptive layer of water-absorptive paper. 4.4.78 as 039345 (4pp30)

TAKE ★ D22 85042B/47 ★ J5 4132-471
Deodorising gas contg. ammonia, amine and/or thioether - by contacting with active carbon in presence of nitrogen oxide(s), oxygen and water

TAKEDA CHEMICAL IND KK 06.04.78-JA-040967
E36 J01 (15.10.79) B01d-53/34

Gas contg. ammonia, amine and/or thioether as main malodorous component is treated by contacting with an active C in the presence of NO_x (pref. combustion waste gas), O_2 and water.

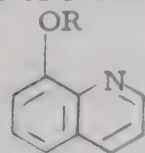
Used to treat gas obtd. from treatment plants for human waste, sewage water, garbage or paper pulp or from food or pharmaceutical mfr. NH_3 , amines and thioethers are efficiently adsorbed and removed by the active C as a result of the addn. of NO_x . 6.4.78 as 040967 (4pp55)

TKAG ★ D22 85382B/47 ★ J7 9034-738
Organic copper complex useful as pesticide etc. - prepared by reacting a copper cpd. e.g. copper sulphate, with 8-alkoxyquinoline

TAOKA CHEMICAL KK 06.10.71-JA-078530

C02 E12 (29.10.79) C07d-215/30

Method comprises reacting Cu cpd. (I) with 8-alkoxyquinoline of formula (II):



(R is methyl or ethyl).

Useful as a pesticide and sterilising agent etc.

The reaction is carried out in an organic solvent e.g. ethyleneglycol, pyridine, etc., in the presence of an organic base at 160 to 180°C. (I) is e.g. CuCl₂, CuSO₄, Cu(NO₃)₂, etc. 6.10.71 as 078530 C07d-215/30 (29.10.79) TAOKA CHEMICAL KK (2pp83) (J48040919)

SAOK ★ D22 85391B/47 ★ J7 9034-802
Prevention of bacterial decay by covering timber - with copper-contg. fabric or netting

SANYO KOKUSAKU PULP 21.10.75-JA-125853

C03 F09 P63 (29.10.79) B27k-03/14

In storing logs or wood chips outdoors, an improvement comprises spreading metallic copper-contg. fabric or wire-netting beneath the wood or over it. Bacterial decay of wood is effectively prevented. 21.10.75 as 125853 B27k-3/14 (29.10.79) SANYO KOKUSAKU PULP (2pp) (J52051003)

ANON ★ D22 85444B/47 ★ RD-187-013
Lubricant compsn. for tampons - comprises a copolymer of ethylene oxide and propylene oxide opt. with polyethylene glycol or other lubricants

ANONYMOUS 20.10.79-RD-187013

A96 P32 (A25) (10.11.79) A61f-00/*

Lubricant compsns. for tampons comprise a copolymer of formula (I) HO $\left[\text{C}_2\text{H}_4\text{O} \right]_a - \left[\text{CH}(\text{CH}_3)\text{CH}_2\text{O} \right]_b - \left[\text{C}_2\text{H}_4\text{O} \right]_c - \text{H}$ (where a, b and c are integers). The compsns. pref. have m. pt. 30-40(31-37)°C and Brookfield viscosity 180-550 (250-350)cps. at 60°C. The mol. wt. wt. of (I) is 2900-6500 (4000-6000) and the ethylene oxide content 20-70 wt %.

The compsn. may also contain polyethylene glycols of mol. wt. 400-3000, pref. > 1000, (I) may also be mixed with a smaller amt. of petroleum, jelly or other non-hydrophilic lubricant. Typical amts. of lubricant used are 2.5-20 wt %. A pref. (I) is 'P-94' (RTM) (903)

DEEG/ ★ D22 85468B/47 ★ RD-187-051
Microbiological growth control in photo processing washing water - using 1-bromo-3-chloro-5,5-dimethylhydantoin, pref. incorporated in filter housing

DEEGAN RO 20.10.79-RD-187051

E13 G06 (D15) (10.11.79) C02b-00/*

Microbiological growth is controlled using 1-bromo-3-chloro-5,5-dimethylhydantoin. This agent prevents microbiological growth from occurring or greatly reduces the extent of growth. It functions by slowly releasing chlorine and bromine into the photo-processing wash water and is effective in very small amts. e.g. 50 grams is sufficient to control microbiological growth in the wash water of a typical processing appts. It is useful in both black-and-white and colour processing.

Pref. the agent is incorporated in a filter housing which is placed in the wash water line just prior to the point where it enters the wash tank. A series of valves can then be arranged to direct all, some or none of the wash water through the filter housing to thereby have an appropriate amt. of the 1-bromo-3-chloro-5,5-dimethylhydantoin enter the wash tank as needed. (992)

PIME/ ★ D22 85652B/47 ★ SU-651-774
Disinfecting hen eggs - using high frequency electromagnetic field generated across electrodes, between which eggs are kept for a period of time

PIMENOV BI 28.06.77-SU-652773

B07 C03 (19.03.79) A23b-05

Method for disinfecting eggs (e.g. hen's eggs) from microorganisms, principally by heat-treatment. The duration of the process is reduced and the effectiveness is

increased by carrying out the heat treatment in a high-frequency electromagnetic field, which is amplitude modulated and has a carrier frequency of (1.0-1.2).10⁹ Hz. and an electrical field strength of 200-250 V/cm, and with a modulated frequency of (1.0-1.5).10⁷ Hz at a field strength of 150-200 V/cm. Treatment by the modulated field is done periodically with a duty factor of 10-10² and an interval of 0.1-1 sec, while the total treatment takes 1-4 hours.

Pimenov, B.I., Emelyanov, N.I., Voronin, M.I. Bul. 10/15.3.79. 28.6.77. as 502873 (3pp29)

JOHN/ D22 80562A/45 #US 3955-5
Reusable lightweight orthopaedic device - consists of two complementary half-shells radially telescoping adjustable and contg. pneumatically inflated cells

JOHNSON G W 15.12.75-GB-051308 (05.12.73-US-421747)

P32 (11.05.76) *GB1531-268 A61f-05/04

A cast splint brace, etc. comprises a pair of complementary half-shells of tough thin material, such that they are flexible about the longitudinal axis and rigid about the transverse axis. They engage each other and may be adjusted to fit the shape of an arm, leg, etc. Inside the shell is an inflatable bag which can be expanded to conform to the shape of the links, etc. The shells can be secured together.

The orthopaedic device may be mfd. in a single standard size, gives improved ventilation of the interior and prevents movement at a joint. 5.12.73 as 421747 (15pp97)

BROW/ ★ D22 85760B/47 ★ US 4173-97
Disposable antiseptic applicator swab - foam pad over end of blister pack holding crushable ampoule and with channel through flange

BROWN J B 07.07.77-US-813496

A96 P34 (13.11.79) A61m-31

A swab is made on a blister forming and sealing machine and includes a cylindrical crushable glass ampoule holding antiseptic liquid, and a blister package of identical complementary parts forming a chamber and flange. The ampoule makes a relatively tight fit in the chamber.

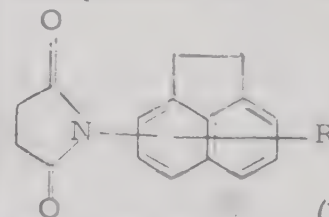
The flange is formed to provide a channel from the chamber to the exterior at one end and an applicator pad is folded over this end to prevent the flange contacting the patient and to allow the liquid to be dispensed when the ampoule is crushed. The pad is pref. of two pound density polyester foam and may be heat-sealed or adhered onto the blister, or impaled on a spike formed on the blister. 7.7.77 as 813496 (4pp1358).

ABBO ★ D22 85848B/47 ★ US 4174-34
Fungicidal N-(acenaphthenyl) maleimide(s) - useful for protecting plastics, cellulosic fabrics paints etc.

ABBOTT LABORATORIES 27.03.78-US-890736

A60 C02 E13 (13.11.79) A61k-31/40 C07d-207/40 C08I-33

A plastic, cellulosic or other film-forming compsn. resistant to fungal attack comprises 0.005-5% of a novel acenaphthene deriv. of formula (I) (where R is H or NO₂).



(I) are industrial fungicides and inhibit the growth of bacteria or fungi in contact with the surface of the object made from a polymeric or cellulosic material e.g. knitted woven, moulded or extruded forms

(I) of fabrics, e.g. cotton, outdoor wear, tents, paints, etc. 27.3.78 as 890736 (3pp937).

BALF- D22 08410A/05 = US 4174-41
Impregnating wood with preserving fluid - by surrounding with flexible sealed jacket and pumping in fluid

BALFOUR BEATTY LTD 29.09.76-GB-040380

F09 P63 + P42 Q46 (13.11.79) *BE-859-194 + B05d-03 B05 07/06

The wooden part of a structure that is exposed to the atmosphere is impregnated with wood preservative by surrounding the exposed wood by a closely fitting, fluid-impermeable covering and sealing the edges; evacuating air and other fluid from cracks and voids in the wood; and allowing the preservative to flow into the enclosure.

The process is used for e.g. telegraph poles. The enclosure is formed by e.g. a polyurethane shroud. The process is cheap and simple. 28.9.77 as 873438 (4pp976)

B ★ D22 85891B/47 ★ US 4174-417
 highly absorbent web prodn. from chemically modified cellulose
 es - used in sanitary napkins, surgical sponges and disposable
 ers
IMBERLY CLARK CORP 19.12.77-US-861721 (14.10.75-US-
221840)
11 F04 P73 (A96) (13.11.79) B32b-23/02
 d. of a highly absorbent web comprises (a) forming a
 by mixing chemically modified cellulose fibres (I) with
 solvent, (b) removing external solvent from the gel
 t. such that the total amt. remaining is in the range
 g. per g. of fibre of the fibre saturation pt., (c) spray-
 the gel mixt. to separate the fibres, (d) collecting the
 es as sprayed into a web having a high degree of z
 ection fibre orientation and (e) drying the fibres.
 (I) are selected from opt. crosslinked, chemically
 std. etherified or esterified cellulose or cellulose that
 been polymeric grafted without dissolving the fibres
 the extent that they are not identifiable.
 The absorbent web is used in the mfr. of wipers, sur-
 al sponges, sanitary napkins, tampons and disposable
 pers. The webs can have controllable wicking or dis-
 ution properties, controllable wet strength and dry
 length varying from a fluff-like mat to a soft tissue
 et to a tough flexible foam-like sheet. No solvent dry-
 is needed to retain the wicking and absorbent propert-
 19.12.77 as 861721 (24pp966).

4A ★ D22 85892B/47 ★ US 4174-418
 dering cellulose bacteriostatic in one or two bath processes -
 g zirconyl acetate complexes with peroxide cpds. formed in situ
 textile
US SEC OF AGRICULTURE 31.05.78-US-911029 (12.04.77-US-
887177)
35 E12 F06 P42 P73 (13.11.79) B05d-03 B32b-23
 me (I) or two (II) bath process is claimed for rendering
 ulosic textiles bacteriostatic. In (I), (a) the textile is
 mersed in an aq. soln. contg. 1-35% Zr acetate, 0.3-
 acetic acid and 1-25% of an inorganic peroxide, (b) ex-
 ss soln. is removed, (c) the textile is heated at 150-160
 for 0.5-30 mins. to effect drying and deposit peroxide
 mplexes of Zr on the textile, (d) the textile is washed to
 ove excess reagents and (e) drying is carried out at 50-
 °C for 0.5-30 mins.

In (II), (i) the textile is immersed in an aq. soln. contg.
 1-40% Zr acetate, (ii) excess soln. is removed, (iii) the
 textile is dried at 50-160°C for 0.5-30 mins. to convert
 the soluble Zr acetate to an insoluble Zr oxyacetate com-
 plex deposited on the textile, (iv) the textile is immersed
 in an aq. soln. contg. 1-30% of an inorganic peroxide to
 thoroughly wet it, (v) excess soln. is removed, (vi) heat-
 ing is carried out at 50-160°C for 0.5-30 mins. to dry the
 textile and deposit an insoluble peroxide complex of Zr
 oxyacetate and then steps (d) and (e) as in (I) are carried
 out.

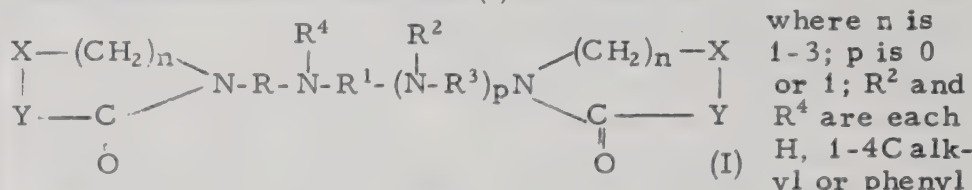
The obtd. textile finishes inhibit the growth and spread
 of odour and infection producing gram negative and gram
 positive bacteria. The antibacterial activity is durable to
 repeated launderings. 31.5.78 as 911029 Div. ex 4115422
 (8pp966).

GENA ★ D22 85900B/47 ★ US 4174-443
 Biocidal aza-bis-lactam(s) - also having a variety of other uses e.g.
 softening agents, intermediates for surfactants etc.

GAF CORP 30.12.77-US-865857

C02 E13 K04 (D21) (13.11.79) C07d-207/26 C07d-241/08 C07d-
 265/32

Aza-bis-lactams of formula (I) are new:



X is CH₂, O or N(R²); Y is CH₂ or, when X is CH₂, it can
 also be N(R²); and R, R¹ and R³ are each 2-6C alkylene.

(I) are useful as softening agents, as intermediates for
 surfactants, as ion exchange resins, as components of
 high energy fuels, as anti-dusting agents, as solvent and
 as saponification agents for acids; and also have use as
 detergents, chemosterilants, fungicides, insecticides and
 herbicides. They are substantially non-corrosive, and
 they are also non-irritating to the eyes and skin tissue so
 that they may find cosmetic application as skin condition-
 ers and antiseptic lotions. 30.12.77 as 865857 (6pp476).

See Also

D13 GB 1556149

D15 J5 4133500

D23: OILS; FATS; WAXES

NP ★ D23 84203B/47 ★ BE -877-779
 ntinuous bleaching of oils and fats esp. edible material - using a
 sture contg. bleaching adsorbent
CANADA PACKERS LTD 19.07.78-US-926071
(D13) (16.11.79) C11b
 e process comprises introducing continuously the heate
 oil or fat into a mixing vessel having an exit in the
 ver part in such a way to stir the oil/fat through the
 sel towards the bottom. A moisture contg. bleaching
 sorbent is added and the water is vaporised to form a
 pective atmos. against oxidn. above the surface. The
 /fat adsorbent is withdrawn by the bottom exit.
 A partic. embodiment comprises introducing the hot
 /fat tangentially into the upper zone of the vessel hav-
 a lower conical section and using a moisture contg.
 eaching clay.
 The process is continuous and the adsorbent can be ad-
 ed without the need to apply vacuum to protect the oil
 om air contact. 19.7.79 as 877779(27pp597)

N- ★ D23 B/47 ★ BR 7801-609
 ick-action fluorescent lamp reactor
TECNAL-PROJETOS ASS 16.03.78-BR-001609
U04 (13.11.79) B01d-45 14 C11b-01 10

CORP D23 08613V/05 = DS 2234-263
 Vegetable oil recovery - by treating finely divided raw material as
 aq slurry with cellulose

MAIZENA GMBH 12.07.72-DT-234263 (00.00.71-DT-104259)
 (15.11.79) *NL7210-264 C11b-01/04

Oil is recovered from grain germ by enzymatic decompn.
 The grain germ, without being dried is milled finely with
 mechanical or mechanical-acoustic milling appts., and
 diluted with water to a water content of ≥ 50%. The mixt.
 is treated with a cellulytic enzyme, from a cellulase-
 forming microorganism, which is as free from lipase
 and lipoxydase as possible.

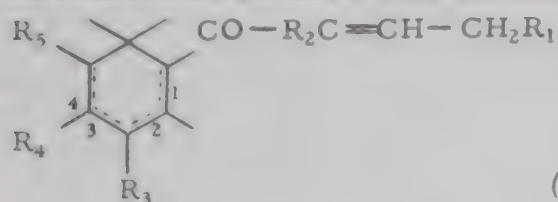
Treatment is effected at a pH 3.0-6.0 and 25-60°C for
 2-24 hrs. The oil phase, pref. after reducing the water
 content to 15-35%, is recovered. Maize germ is treated
 in the examples. 12.7.72 as 234263, Add. to 2104259.
 (4pp068)

FIRM D23 62779U/42 = DS 2315-640
 Alicyclic ketones - useful aromatising agents

FIRMENICH SA 30.03.72-CH-004770

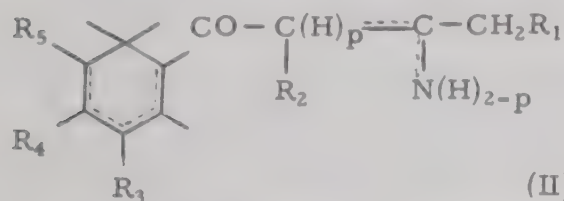
E15 + P15 P33 (D13) (15.11.79) *NL7304-365 A23I-01/22 C07c-
 49/61 C07c-175 C11b-09

Unsatd. cycloaliphatic ketones of formula (I) (where R₁₋₅
 are H or one is -CH₃)



and the rest are H and the aliphatic ring has 1 double bond in the 1, 2, 3 or 4 position or 2 conjugated double bonds in the 1, 3-position) are

prepd. by hydrolysing a cpd. of formula (II) (where p is 0 or 1) at 15-100°C



(II)

with a strong mineral or organic acid to the corresp. diketone or hydroxyketone which is reduced in neutral or slightly alkaline medium and then

treating with a basic or acid agent to split off water.

The reduction is effected using Raney-nickel, palladium or platinum oxide as catalyst or with LiAlH_4 or NaBH_4 .

(II) are new cpds. and (I) are useful as perfumes.

29.3.73 as 315640. (7pp068)

METG

D23

09111W/06 = DS 2336-639

Semi-continuous deodorising of oils and fats - using series of closed stages with direct heat exchange to feed

METALLGESELLSCHAFT AG 18.07.73-DT-336639

(15.11.79) *BE-817-803 C11b-03/14

Fats and oils are deodorised in a semicontinuous process. The fat or oil is charged into a multistage appts. In the first stage the fat or oil to be treated is heated by contact under vacuum with hot deodorised fat or oil with direct addn. of water vapour.

The cooled, treated fat or oil is then passed directly to the final stage. The heated fat or oil to be treated passed through several stages for a predetermined time. The oils are pref. moved against a partition by a propellant gas in the first stage to effect heat exchange.

18.7.73 as 336639. (7pp068)

RAUW-

D23

33571B/18 = DS 2747-765

Fat rich in 1,3-di:palmitoyl-2-oleoyl-glycerol - used as cocoa butter substitute, prepd. by palm oil crystallisation comprising solvent treatment

RAU W LEBENSMITTELW 25.10.77-DT-747765

B07 (B05 D13) (15.11.79) *DT2747-765 A23d-05 C11b-07

A fat contg. 45-80% 1, 3-di-palmitoyl-2-oleoyl glycerin (I) is prepd. by fractionation treatment of palm oil with an organic solvent. Process comprises (a) crystallising a fat fraction (m.pt. $> 45^\circ\text{C}$) at $17-35^\circ\text{C}$ and sepg. the 1st crystal fraction from the oil fraction, (b) crystallising a 2nd crystal fraction from the oil fraction at $10-25^\circ\text{C}$, and (c) washing the 2nd fraction with 8 times the amt. of organic solvent at -5 to $+15^\circ\text{C}$ to obtain a 3rd crystal fraction of high (I) content, or (d) dissolving 2nd fraction in an organic solvent, cooling it to -5 to $+15^\circ\text{C}$, crystallising and sepg. a 3rd crystal fraction.

Pref. the solvent is acetone or isopropanol. Fats rich in (I) are used as cocoa butter substitutes in the chocolate and pharmaceutical industries. Palm oil with an initial (I)-content of ca. 30% can be easily enriched. As the organic solvent is used only in the final stage, costs are reduced for providing a large plant protected against explosion risks. 25.10.77 as 747765. (3pp913)

FARB ★

D23

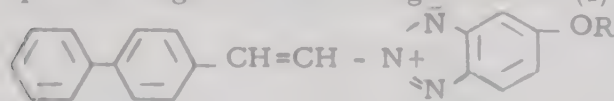
84261B/47 ★DT 2819-931

Textile detergent compsn. for low temp. use - contains etherified benzotriazole-substd. di:phenyl stilbene deriv. as whitener

BAYER AG 06.05.78-DT-819931

E13 (15.11.79) C11d-03/42

Optical brighteners having formula (I) (where R is 114C



alkyl, pref. $n\text{-C}_4\text{H}_9$, benzyl or 1-4C-alkoxy-ethyl) are used

as whiteners in detergent compsns., partic. for washing textiles at $30-60^\circ\text{C}$.

The detergent compsns. are partic. useful for washing polyester or polyamide fibre textiles. E.g. on washing a polyester fabric at 60°C in several 15 min. wash cycles, the addn. of 0.1% (I: where $R = n\text{-Bu}$) to detergent compsn.

significantly increased degree of whiteness. 6.5.78 as 819931(9pp200)

FIRM ★

D23

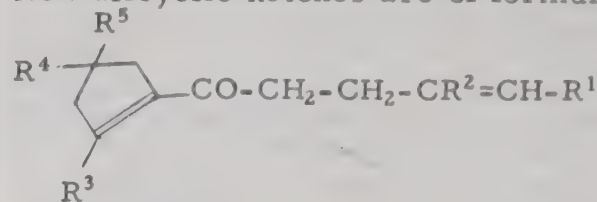
84404B/47 ★DT 291

Unsatd. cyclopentenyl ketone perfume components - are prepd. by hydrolysing unsatd. cyclopentenyl ketone and alkenyl reaction prod. (NL 13.11.79)

FIRMENICH SA 11.05.78-CH-005137

E15 (15.11.79) A61k-07/46 C07c-49/61 C11d-03/50

New alicyclic ketones are of formula (I) (where R^1 , R^2 and R^4 are H, Me and R^5 is a 1-3C alkyl).



(I) are acyclic odoriferous components in

perfumes, perfume bases and perfumed prods. (I) can be used for perfuming lotions, creams, cosmetics, shampoo and bath-foams, and for preparing fruity, wooden, jasmine or rose-like perfume compsns. (I) have an intense sweet, fruity note, and can be used in 0.1-2% or higher concns. 30.4.79 as 917450(14pp200)

BADI

D23

82749B/46 = EP ---

Octyl-cyclohexane perfume cpds. contg. 2,2,3,4 tetra:methyl- gp. - are prepd. by octyl-phenol hydrogenation and esterification methylation, oxidn., dehydrogenation or conversion to aldehyde

BASF AG 05.05.78-DT-819594

E15 G02 (G03) (14.11.79) *DT2819-594 A61k-07/46 C07c-3

C07c-47/32 C07c-49/30 C07c-69/24 C11d-03/20

D/S: E(CH, DT, FR, GB, NL).

New octyl-cyclohexane derivs. are of formula (I)



(where R^1 is H and R^2 is -CHO, -OAc, -O-CO-Et, -O-CO-C₃H₇ or -OMe; R^1 and R^2 together are = O; and the C_8H_{17} gp. is present as -CH₂-CMe₂-CMe₃).

(I) are used as perfumes for cosmetics, cleansers and detergents and as odour-improvers for glue and paints

(I) have a woody fragrance note which is less intensive but more clinging and long-lasting than that of p-tol Bu cyclohexyl acetate, -cyclohexanone or -cyclohexanone (I where $R^1 + R^2$ is = O) has a pleasant, wooden note. 12.4.79. as 101121 (14pp200).

(G)ISR: GB1025438; US2026668; US2121472; + 4 Journal Refs.

KAOS ★

D23

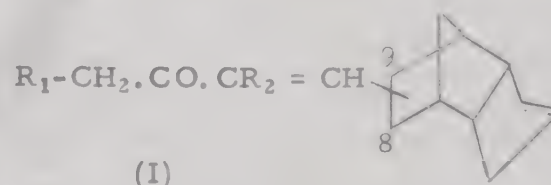
84687B/47 ★GB 2020

Tri:cyclo-alpha,beta-unsatd. ketone derivs. - useful as perfume cosmetics, soaps, detergents etc.

KAO SOAP KK 10.05.78-JA-055267

E15 (21.11.79) C07c-49/61

Ketones of formula (I) are new: ($R_1\text{CH}_2\text{CO}\text{CR}_2 = \text{CH}$ attached to the exo side of a norbornane ring at position 8 or 9. R_1 and R_2 are H or 1-5C (en)yl, ≥ 1 of them being H. The dotted line is a single or double bond).



(I)

They are prepared by aldol condensation of CH_3COR ($R = \text{R}, \text{CH}_2$ or R_2CH_2) with the appropriate 8- or 9-formyl cpd., pref. in aq. lower alkanol at solvent b.pt. using strong base catalyst and dehydration.

(I) have a long-lasting, woody odour. 3.5.79 as 0 (8pp1251)

KANF ★

D23

84783B/47 ★J5 413

Determn. of content of volatiles in non-aq. liq. - includes content liq. with porous diaphragm having continuous micro sweeping other side with inert gas, analysing carrier gas

KANEGAFUCHI CHEM KK 31.03.78-JA-038458

E17 J04 R16 (11.10.79) G01n-33 26

Volatiles present in non-aq. liq. are continuously

intermittently) determined by a method comprising (1) keeping the non-aq. liq. contg. volatile impurities (e.g. vegetable oil contg. traces of n-hexane) in contact with one side of a liq.-repellent porous diaphragm having continuous micropores, (2) sweeping the other side of the diaphragm with an inert carrier gas (typically nitrogen or helium), and (3) leading the carrier gas to a detector where the volatile impurities diffuse through the diaphragm into the carrier gas and are continuously (or intermittently) analysed. The method permits rapid and accurate determination of volatile impurities in non-aq. liq.

The carrier gas (nitrogen or helium) is passed through porous diaphragm, pref. at a pressure $\Delta P = 2\gamma \cdot C \cos \theta / R$, wherein ΔP is the pressure difference between the liq. and the carrier gas, γ is interface tension between the diaphragm and the liq., θ is contact angle between the diaphragm and liq., and R is micropore dia. The carrier gas is then led to the detector (e.g. gas chromatograph). 11.3.78 as 038458 (6pp173)

HPO ★ D23 85528B/47 ★SU -649-740
Hydration of fats and oils - by treating with an aq. extract of alder cones and standing mixt. in a magnetic field
KHARKOV POLY 25.10.76-SU-414773
(28.02.79) C11b-03

Fats and oils are hydrated by treatment with a hydrating agent comprising an aq. extract of black or grey alder cones, added in an amt. 1-3 wt. % on fat or oil wt. The mixt. is then left to stand in a magnetic field of 850-1250 G, and the sediment which forms is removed. Fats and oils which have excellent oxidn.-stability are obtained. Lozheshnik, V.K., Lozheshnik, G.N., Bantser, G.V. et al. Bul. 8/28.2.79. 25.10.76. as 414773 (3pp314)

NWCO = ★ D23 85553B/47 ★SU -649-995
Quantitative analysis of solid phase in fat - from nuclear magnetic resonance measurements by echo signal amplitudes in pulse sequence

NW CORRESP POLY 19.10.76-SU-413056
B05 J04 R16 (25.04.79) G01n-27/78
The known quantitative analysis of the solid phase in fat from nuclear magnetic resonance measurements involves recording the nuclear magnetisation intensity signal of thermally stabilised specimens of the same weight. For greater accuracy, echo-signal amplitudes are measured in a two-pulse sequence with consecutively different lags τ_1, τ_2 between them to apply a formula for the percentage content. Use of echo signals eliminates error whether in the laboratory or e.g. foodstuffs industry. The formula is

$$\frac{A_{1p}(\tau_2)A_{st}(\tau_1) - A_{1p}(\tau_1)A_{st}(\tau_2)}{A_{sp}(\tau_1)A_{1p}(\tau_2) - A_{sp}(\tau_2)A_{1p}(\tau_1)}$$

where A_{1p} is echo signal amplitude of entirely molten

specimen; A_{st} is echo signal amplitude at set temperature; A_{sp} is echo signal amplitude at fat solidification; τ_1 and τ_2 are time lags between 90-180° pulses. Other fields of application are in pharmaceutical industry, chemistry, biology and medicine.

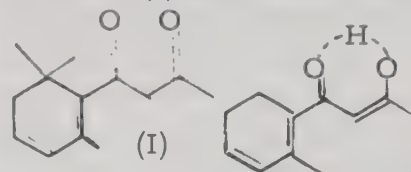
Babkin, A.F., Chernyshev, V.M., Avvakumov, A.K. et al. Bul. 8/28.2.79. 19.10.76. as 413056 (3pp840)

INFL ★ D23 85819B/47 ★US 4174-286
Perfumed solid or liq. detergent compsn. prepn. - using mixt. of 1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-1,3-butane:di:one and its enolate form as perfuming agent

INT FLAVORS & FRAGR INC 17.11.78-US-961687 (17.03.78-US-887630)

E15 (D18) (13.11.79) C11d-03/50

Prepn. of a detergent comprises intimately admixing with a solid or liq. detergent base 0.005-3 (pref. 0.005-0.2, esp. 0.01-0.2)% of an equilibrium mixt. contg. 1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-1,3-butanedione of formula (I) and its enolate form of formula (II).



Cpds. (I) and (II) provide a sweet, fruity, floral aroma. They are suitable for use in perfumes, flavouring compsns., tobacco, etc. The

(II) Parent Patent claimed cpds.

(I) and (II). 17.11.78 as 961687 Div. ex 4157351 (19pp927).

FIRM D23 13216Y/08 =US 4174-327
Pentamethyl (1)-oxa-spiro decadiene perfume and flavouring agent - prepd. by reacting (1)-hydroxy tetramethyl hydroxy butynyl cyclohexane with acid (NL010277)

FIRMENICH SA 30.07.75-CH-009920 (04.02.74-CH-001488)

E13 + P15 (D13) (13.11.79) *DT2634-077 C07d-307/94

The cpds. 6,7-epoxy-2,6,10,10-tetramethyl-1-oxa-spiro [4,5]decane (I), 2,6,9,10,10-pentamethyl 1-oxa-spiro [4,5]deca-3,6-diene, 2,6,9,10,10-pentamethyl-6,7-epoxy-1-oxa-spiro [4,5]dec-3-ene, and 2,6,9,10,10-pentamethyl-6,7-epoxy-1-oxo-spiro [4,5]decane are new.

Cpd. (I) can be prepd. from 1-(2,6,6-trimethyl-cyclohex-1-enyl)-butan-1,3-diol, which is cyclised and epoxidised. Redn. and esterification can be performed to give the corresp. dec-6-yl-acetate.

The cpds. are used in perfumes and perfumed prods. such as odour-modifiers, and in foodstuffs, animal feeds, beverages, pharmaceutical prepn. and tobacco prods. as flavour modifiers. 5.7.78 as 922189 Div. ex 4120830 C.i.p. 4014905 (+ 7.6.74 - CH - 007776) (+ 17.1.75; 23.10.75; 1.10.76 - US - 542072; 625452; 728644) (12pp931).

See Also

D16 EP ---5277 D25 US 4174288

D24: SOAP; SOAP DETERGENTS

NO- ★ D24 B/47 ★SW 7901-608
Purification of crude soap from sulphate cellulose prodn. - by mixing with mother liquor from pine oil extraction at process temp., and feeding to separator contg. cooled self-cleaning stirrer
LINOTEK OY 05.04.78-SF-001051
E12 F09 (05.11.79) D21c-11/04

Crude soap, that separates out in the prodn. of sulphate cellulose is mixed at the process temp. 60-80°C, with a washing soln. consisting of sodium-sulphate-contg. mother

liquor from pine oil extraction. The liquor is also at its process temp. The mixture enters a separator with a self-cleaning stirrer. Cold water for cooling circulates through the stirrer. The washing soln. sinks to the bottom and is led away. The cleaned soap is led away from the top.

Besides the additional alkali needed for neutralisation, the washing soln. contains 2-20g NaOH per litre of neutralised mother liquor. 22.2.79 as 001608 (-pp1407)

D25: OTHER DETERGENTS

PEAR/ ★ D25 84229B/47 ★CA 1065-730
Phosphate-free detergent compsn. - comprising water-soluble saccharide, alkali metal cpd. and alkaline earth metal cpd.
PEARSON EO 19.03.74-US-452628
E13 (E33 E34) (06.11.79) C11d-03/22

A cleaning agent compsn. for forming an aq. cleaning soln., comprises (a) 6-60 wt. % water-soluble saccharide, (b) 4-83% alkali metal cpd. and (c) 3-64% alkaline earth cpds.

The cleaning agent is useful as a laundry detergent.

The compsns. does not require the use of phosphorus cpds. is biodegradable and non-polluting; is easily and inexpensively fabricated from readily available commercial materials; and has effective detergency action. 12.3.75 as 221893 (34pp914)

KALI D25 10835U/08 =DS 2143-945
Insoluble dry enzyme addition products - useful in washing and cleaning compsns

KALI-CHEMIE AG 02.09.71-DT-143945
(15.11.79) *BE-787-686 C11d-03/38

A water-insol., dried enzyme adduct of a microbial protease and polyphenols of vegetable origin is used in washing and cleaning compsns. The adduct is pref. of α -amylase and tannin. Since the adduct is water-insol. and pref. granular in form it is compatible with human skin.

The polyphenol may also be lignin sulphonate to aid water solubility. 2.9.71 as 143945. (9pp068)

TEXC D25 46059W/28 =DS 2461-075
Prim. sec.-alkylamines prep'd. from paraffins continuously - partial nitration redn. amine separation, hydrogenating residue before recycling

TEXACO INC 26.12.73-US-428641

A25 B05 E16 (15.11.79) *BE-823-733 C07c-85/11

Sec. alkyl prim. amines (I) are prep'd. continuously from 6-30C n-paraffins by effecting partial nitration, hydrogenation of the nitroparaffin formed and sepn. of the amine produced from the mixt. of unreacted paraffin and nitroparaffin, and by-prods. The mixt. is then catalytically hydrogenated at 7.8-105 bar in a series of reaction zones, initially at 120-260°C and finally 315-400°C; the hydrogenated mixt. is opt. further hydrogenated at 232-343°C, and then recycled to the nitration stage.

Pref. the initial hydrogenation is at 177-246°C and the final at 343-377°C; an hourly space velocity of 0.2-10 vol./vol./hr. is used, with an alumina-supported catalyst contg. Gp. VIII metal (esp. Ni-Mo or Co-Mo).

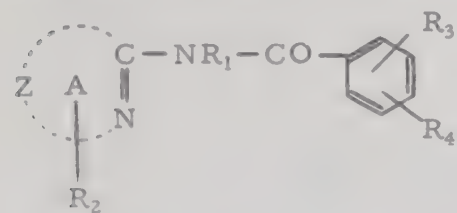
(I) are formed with high purity and selectivity. They are used as freeze-thaw stabilisers in emulsions, pigment dispersants, polyurethane catalysts, corrosion protection agents, bacteriostatics, detergents, freezing protection agents in petrols, etc. 23.12.74 as 461075. (6pp913)

KAOS D25 96565X/52 =DS 2622-761
Stabilising bleaching compsn. contg. inorganic peroxide cpd. - together with surfactants and builders by adding heterocyclic cpd.

KAOSOAP KK 04.06.75-JA-067268

E13 (E34) (15.11.79) *DT2622-761 C11d-03/39

A bleaching, stable detergent comprises (a) 1-30wt.% of a water-soluble anionic, nonionic and/or amphoteric surfactant; (b) 1-50wt.% of an inorganic peroxy cpd.; and (c) a water-soluble builder, both percentages being based on the combined wt. In addn. there is present 0.001-5wt.% of ≥ 1 cpd. of formula (I).



In (I), R_1 is H or 1-3C alkyl; ring A is a 5- or 6-membered heterocyclic ring which may be condensed with a benzene or another heterocyclic ring; R_2 is H, 1-10C (substd.)-alkyl, (substd.)phenyl,

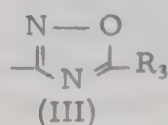
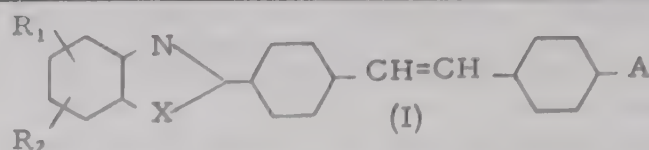
pyridyl or 2-oxopyrrolidinyl gp.; R_3 is H, (substd.)alkyl, (substd.)phenyl, alkoxy-, phenoxy-, amino-, acyloxy, carbamoyl-, acyl or halogen or forms a benzene ring with R_4 ; and R_4 is H, or an alkylene alkylidene or phenylene gp. which can be removed. Typical cpd. is 3-salicyloyl-amido-1,2,4-triazole. 21.5.76 as 622761. (8pp068)

FARH ★ D25 84282B/47 ★DT 2820-322
Optical brightening stilbene derivs. - for natural and synthetic fibres and detergents

HOECHST AG 10.05.78-DT-820322 (00.00.77-DT-709924)

A60 E13 F06 (15.11.79) C07d-413/14 C07d-417/14

New stilbene cpds. are of formula (I):



In (I) X=O or S; R_1 and R_2 are each H, F, Cl, phenyl, lower alkyl or alkoxy, lower dialkylamino, lower tialkylammonium, acylamino or opt. functionally modified carboxy or sulpho gps.; two adjacent

R_1 and R_2 gps. may together form a phenylene, lower alkylene or 1,3dioxapropylene gp; and A is a gp. (II) or (III) in which R_3 = -, β - or γ -pyridyl, pyridyl methylene, thienyl, phenyl, furanyl, benzofuranyl, pyrazinyl, pyrimidinyl or pyridazinyl gp.

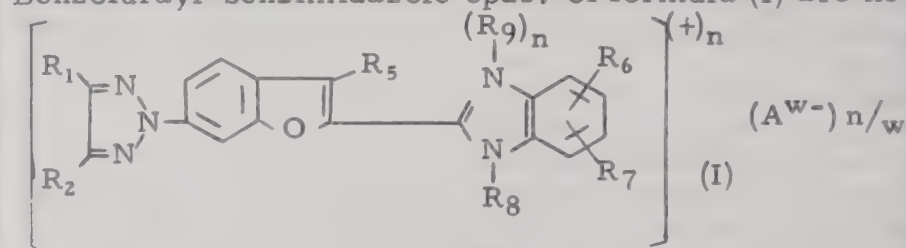
The almost colourless fluoroescient (I) are used as optical brighteners for lacquers, natural and synthetic fibres e.g. natural and synthetic polyamides, natural and regenerated cellulose, PVC etc. (I) may be also added to detergents. Effective amts. are 0.01-2%. (I) which are substituted by 1 pref. two carboxy or carbalkoxy gps. can be linked via ester or amide bonds to linear, polyester molecules and synthetic polyamides and may thus advantageously be incorporated in the starting materials used for the mfr. of these materials; such material have partic. high fastness to sublimation and solvents. 10.5.78 as 820322 Add to 2709924(15pp4)

FARB ★ D25 84359B/47 ★DT 2821-116
Benzofuranyl-benzimidazole(s) - used as optical brighteners and intermediate benzofuran derivs.

BAYER AG 13.05.78-DT-821116

A60 E23 F06 (15.11.79) C07d-407/14 D06l-03/12

Benzofuranyl-benzimidazole cpds. of formula (I) are new



In (I) R_1 is opt. substd. aryl, alkyl, aralkyl, styryl, or alkoxy; R_2 is H, CN, COOH, COOR, opt. substd. carbamoyl, acylamino, or as R_1 ; R is the gp. of an alcohol; R_1 and R_2 may together form an opt. substd. aromatic or hydro-aromatic ring; R_3 and R_4 are H, opt. substd. alkyl or alkoxy, or halogen R_5 is H or opt. substd. alkyl or aralkyl; R_6 is as R_3 or R_5 , opt. substd. alkyl sulphonyl or phenyl sulphonyl, SO_3H , COOH or derivs. including CN or CF_3 ; R_7 is as R_3 ; R_8 is cyclo-alkyl, alkenyl, alkyl, aryl, or aralkyl, or if n is O, it may also be H; R_9 is opt. substd. cycloalkyl, alkenyl, alkyl or aralkyl, or is H; A^- is a colourless anion of valency W; n is 0 or 1.

Used as optical brighteners of organic materials, and as scintillators and laser dyes. High fastness, esp. to light and washing are obtd. 13.5.78 as 821116(51pp195)

ASAH ★ D25 84395B/47 ★DT 2917-1
Molecular aggregate having an ordered structure - comprising surfactant having a hydrophobic and a hydrophilic part and also rigid par

ASAH CHEMICAL IND KK 08.12.78-JA-151159 (28.04.78-JA-049736)

E19 (15.11.79) B01f-17/18 C07c-43/26 C07c-93/06 C07c-119/06 C11d-03

Molecular aggregate comprises a surfactant which contains a hydrophilic part and a hydrophobic part and a rigid part, having length ≥ 1 nm, either in hydrophobic part or between the hydrophobic part and the hydrophilic part. surfactant pref. has formula $C_n-Ta-\phi-Yb-C_m-X$ (I) (wh C_n and C_m are hydrophobic parts; X is a hydrophilic part; Ya and Yb are divalent coupling gps., and ϕ is a rigid component).

The surfactant forms a stable molecular aggregate having an ordered structure, and can be used actively in selective permeation, retention and for accelerating or retarding a chemical reaction. The conc. of (I) can be bel.

critical conc. of standard surfactants. 27.4.79 as 131(67pp200)

C D25 12732Y/08 =GB 1556-437
 ening and antistatic compsns. for textiles - contg. ammonium
 l-carbamates and a suspending aid
 PROCTER & GAMBLE CO 07.06.76-US-693806 (18.08.75-US-
 05479)

E16 F06 (21.11.79) *BE-845-282 C11d-03/32 D06m-13/40
 ics are contacted with an alkyl ammonium carbonate
 formula

$R_1R_2NH_2^+ O(O)CNR_3R_4^-$ (I) to impart to them
 ness and anti-static benefits. R_1 is H or (cyclo)alkyl.
 $R_2 \geq 6C$ alkyl. R_3 and R_4 are as R_1 , but the total cpd.
 $\geq 11C$.

Pref. compsns. comprise (I) and a clay or organic
 ymer suspending agent for (I). Pref. (I) is impalpable.
 ef. the wt. ratio(I):suspending agent is 10-1:1-10.
 8.76 as 034196 (11pp974)

UL ★ D25 84695B/47 ★GB 2020-688
 n sudsing fabric washing powder - contg. ortho- and poly-
 phosphate builders, calcium sensitive anionic surfactant, e.g.
 ium dodecyl benzene-sulphonate, and alkoxylated alc
 UNILEVER LTD 09.05.79-GB-015959 (10.05.78-GB-018671)
 A97 E19 (E34) (21.11.79) C11d-01/83 C11d-03/06 C11d-10/02

e powder contains, as detergent, a mixt. of 20-29 (22-
 esp. 24.5-25.5)% Ca-sensitive anionic surfactant (I)
 1-3 (1.5-2.5)% 11-24C alcohol alkoxylate (II) having
 0 moles ethylene oxide (opt. mixed with propylene ox-
) per mole alcohol (% are by wt. of powder). The
 lder is a mixt. of $Na_5P_3O_{10}$ and Na_3PO_4 .

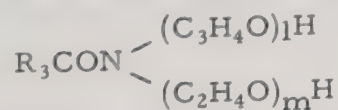
Esp. the compsn. contains ≥ 5 wt.% P and the ratio
 $P_3O_{10}:Na_3PO_4$ is 5:1-1:1, with the builder mixt. being
 ≥ 30 wt.%. Pref. (I) is a 9-16C linear or branched alk-
 benzene sulphonate and (II) is tallow alcohol ethoxylated
 with an average of 25 moles ethyleneoxide (IIa).

Compns. have detergency equivalent to fully built
 ods. but higher sudsing power at relatively high concn.
 free Ca. 9.5.79 as 015959 (5pp1251)

DF ★ D25 85109B/47 ★J5 4132-609
 ansing compsn. for raw wool - contains builder, carboxylic acid
 iv. and polyoxyethylene deriv.

NIPPON OILS & FATS KK 07.04.78-JA-040183
 A97 E19 F01 (15.10.79) C11d-01/83

e cleanser contains components (A) and (B) in a wt. rat-
 of (A):(B) = 90:10-10:90 as the principal components,
 d a weakly acidic, neutral or weakly basic builder. (A)
 $(R)(R_1)(SO_3M)-C-COOR_2$, (where R is 8-20C alkyl; R_1
 H or methyl, R_2 is H or 1-6C alkyl; M is Na, K, NH_4 ,
 ver alkylammonium or lower alkanolammonium). (B) is
 1 cpd. of formula (I) $R_3COO(C_2H_4O)_nH$, (II) R_3CH_2O-
 $(C_2H_4O)_nH$ and/or (III)



where R_3 is straight or side chain 8-23C alkyl or alkenyl;
 $l = 2-6$, $1 + m = 2-8$.

Cleansing can be performed under more acidic condit-
 ns (pH = 3-9) than with usual cleansers, and raw wool
 n bewashed at its ideal equipotential pt. The cleanser
 ntains no polluting materials, such as alkylbenzenesul-
 onate, polyoxyethylenealkylphenyl ether or phosphate.

Pref. the ratio of (A):(B) is 80:20-40:60. In the case
 washing in an acidic bath, the pH of the compsn. is ad-
 justed by acidification with sulphuric acid, citric acid,
 rmic acid, etc. 7.4.78 as 040183 (5pp170)

TY/ ★ D25 85529B/47 ★SU -649-741
 dium bi:carbonate-based domestic cleaning agent - contains
 dium tri:poly:phosphate soda ash, magnesium sulphate or
 lorida, sodium metasilicate and sodium hypochlorite
 BATYGIN VG 07.03.75-SU-112199

(28.02.79) C11d-07/12

domestic cleaning agent comprises (in wt. %): 5-15% Na
 polyphosphate, 3-10% calcined soda, 3-4% Na meta-
 silicate 3-6% Mg sulphate or chloride, 2-3% Na hypo-
 chlorite and Na bicarbonate to 100%. The agent has high
 eaning power and good stability. The components form
 morphous silica (15-40g/kg), which serves as a mild

abrasive additive that is insoluble in water.

Batygin, V.G., Krymskaya, N.A., Medvedeva, N.V. et
 al. Bul. 8/28.2.79. 7.3.75. as 112199 (3pp314)

GETM/ ★ D25 85530B/47 ★SU -649-742
 Aq. cleaning compsn. for metal surfaces - includes a
 polyoxyethylated synthetic fatty acid mono:ethanolamide as a
 surfactant

GETMANSKII K 17.02.76-SU-323606

A97 E16 (A25 E12 E17) (28.02.79) C11d-09/26

Cleaning compsn. is used for cleaning metal surfaces,
 esp. for removing polishing paste, protective grease etc.
 It comprises (in wt. %): 16-32% Na soap of 7-9C synthetic
 fatty acids (I); 4-8% of a polyoxyethylated 10-16C synthetic
 fatty acid monoethanolamide (II); 10-20% triethanolamine,
 10-20% aliphatic alcohol, 0.2-0.5% di-sodium salt of EDT
 A and water to 100%. The compsn. is known as 'Apolir'.
 It has low foaming characteristics. The prefd. aliphatic
 alcohol is ethanol or isopropanol. Standard additives
 such as fragrances etc., may also be included.

In an example, a compsn. contains 160g. (I), 40.0g.
 (II), 100g. triethanolamine, 2.0g. EDTA Na salt, 100g.
 ethanol and 598g. water.

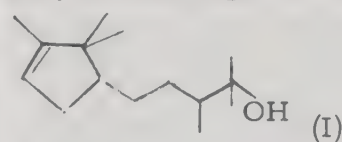
Getmanskii, I.K., Bebeko, M.N., Raevskii, B.M. et al.
 Bul. 8/28.2.79. 17.2.76. as 323606 (6pp314)

INFL ★ D25 85820B/47 ★US 4174-287
 Perfumed solid or liquid detergent prepn. - by admixing 2,3-di:
 methyl-5-(2,2,3-trimethyl-3 cyclopenten-1-yl)-2-pentanol with
 detergent base

INT FLAVORS & FRAGR INC 08.12.78-US-968008 (05.04.78-US-
 893542)

E15 (13.11.79) C11d-03/50

A solid or liquid detergent is prepd. by intimately admix-
 ing with a detergent base 0.01-0.5 wt. % of the detergent of
 2,3-dimethyl-5-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-
 pentanol of formula (I). Pref. the detergent is a soap. The
 added cpd. possesses a long lasting woody, oily, sandal-
 wood aroma reminiscent of sandalwood oil and the natur-
 ally occurring santalols.



US 4149020 claimed an organo-
 magnesium cpd. of formula [(I); OH
 is OMgX, where X is Cl, Br or I]
 which is an intermediate for cpd. (I).

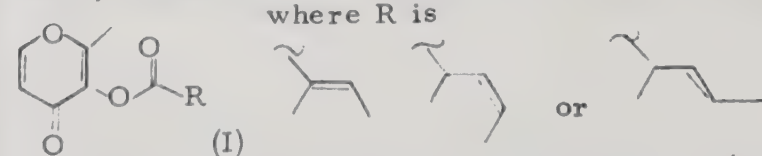
8.12.78 as 968008 Div. ex 4149020 (11pp990).

INFL ★ D25 85821B/47 ★US 4174-288
 Perfumed detergent compsn. prepn. - by mixing solid or liq.
 detergent base with maltyl-2-methyl-alkenoate

INT FLAVORS & FRAGR INC 15.09.78-US-942530 (08.05.78-US-
 884381)

E13 (D23) (13.11.79) C11d-03/50

Prepn. of a detergent comprises intimately mixing with a
 solid or liq. detergent base 0.05-2.0% of a maltyl-2-
 methyl alkenoate of formula (I):



Cpds. (I) impart sweet fresh strawberry/pineapple,
 sweet, fruity, jammy aromas with green floral nuances
 to the detergent. Pref. the amt. of (I) is 0.05-0.2%.
 15.9.78 as 942530 (15pp914).

BADI ★ D25 85822B/47 ★US 4174-289
 Liq. detergent-bleach compsn. for cleaning hard surfaces - e.g. of
 metal processing machines, comprises alkali metal-hypochlorite, -
 alkylated di:phenyl oxide sulphonate, -hydroxide and -chloride

BASF WYANDOTTE CORP 28.08.78-US-937691 (27.07.77-US-
 819261)

E12 (D12 D13 E34) (13.11.79) C11d-07/54

A cleaning and bleaching liquid compsn. consists of an aq.
 soln. of (a) 2-15 wt. % (calculated as available chlorine)
 of Na, K or Li hypochlorite, (b) 15-200 wt. % (based on
 the hypochlorite) of an Na, K or Li salt of an alkylated
 diphenyl oxide sulphonate in which the alkyl gps. con-
 tain 8-22C; (c) 5-20 wt. % of Na, K or Li hydroxide; and
 (d) 0.1-1.5 mole of Na, K or Li chloride per mole of hy-
 pochlorite.

The compsn. is clear; stable at room temp., at elevat-

ed temps. and at low temps.; and is useful, upon dilution with water to 0.5-5 wt. % active soln. concn., for general purpose hard surface cleaning at 15-80°C. It is partic. useful in removing animal and vegetable based oily and fatty soil deposits normally encountered on processing equipment on the meat and poultry industry. 28.8.78 as 937691 (4pp914).

BULL-★ D25 85829B/47 ★US 4174-304
Surfactant system for use in floor stripper, degreaser, etc. - comprises synergistic mixt. of nonionic detergent, tert. amine oxide and quat. ammonium halide

BULLEN CHEMICAL 20.12.77-US-862595 (01.08.75-US-601054)

A97 E19 G04 (A25) (13.11.79) C11d-01/62

A novel surfactant system comprises 25-75 wt. % of a non-ionic detergent, 5-55 wt. % of an amine oxide and 8-50 wt. % of a quat. ammonium halide.

The nonionic detergent comprises the condensation prod. of (a) 4-16 moles ethylene oxide with (b) 1 mole of a 7-10C alkyl, phenol, a 12-16C alkyl amine, a 12-16C aliphatic alcohol, or a hydrophobic base formed by condensing propylene oxide with propylene glycol.

The amine oxide is chosen from (1) 10-20C alkyl di(1-7C alkyl)amine oxides, (2) 10-20C alkyl di(1-7C hydroxy-alkyl)amine oxides, (3) 10-20C alkylamidopropyl di(1-7C alkyl)amine oxides and (4) 10-20C alkyl morpholine oxides.

The quat. ammonium halide is of formula $[NR_1R_2R_3R_4]^+X^-$ where (1) R_1 and R_2 are 1-7C alkyl, and R_3 and R_4 are 8-20C alkyl or (opt. 1-18C alkyl-substd.) phenyl; or (2) R_1 - R_3 are 1-7C alkyl and R_4 is (opt. phenyl-substd.) 8-20C alkyl, or (3) R_1 is (opt. phenyl-substd.) 10-20C alkyl, R_2 is 1-7C alkyl, R_3 is $-(CH_2CH_2O)_xH$ and R_4 is $-(CH_2CH_2O)_yH$ (where $x+y = 2-50$).

The surfactant system can be formulated into ammoniated floor stripper and degreaser; non-phosphate cleaner; wax and floor finish stripper; high foam degreasing cleaner; cleaner for glass or other smooth surfaces; or soap film remover. 20.12.77 as 862595 C.i.p. 4065409 (+ 12.9.77 - US - 832364) (9pp914).

PROC ★ D25 85830B/47 ★US 4174-305
Alkyl benzene sulphonate detergent compsn. - contg. cellulose ether as soil release agent

PROCTER & GAMBLE CO 07.06.77-US-804479 (02.04.75-US-560766)

A97 E14 (13.11.79) C11d-01/22 C11d-03/22

A detergent compsn. comprises (a) 5-50 wt. % of a water-soluble (10-12C)alkyl-benzene sulphonate surfactant, this component being free of ≥ 13 C alkyl benzene sulphonates; (b) 0.1-3 wt. % of a water-soluble (hydroxy)alkyl cellulose ether or hydroxyalkyl alkyl cellulose ether, as soil release component; (c) ≤ 70 wt. % of a builder; and (d) the balance being chosen from water, water/ethanol mixts., perfumes, optical bleaches, fillers, anti-caking agents, fabric softeners, perborate, bleaches and/or enzymes.

The use of alkyl benzene sulphonates in which the alkyl chain length is controlled to 10-12C ensures that the soil release properties of the cellulose ether are not impaired. Thus the detergent compsn. provides excellent through-the-wash soil release properties using much less of the cellulose ether material than previously. 7.6.77 as 804479 (10pp914).

MONT D25 63849A/36 =US 4174
Self-sequestering poly(ol ether carboxylic acid deriv. surfactant) used as wetting agents and textile detergent or dish-wash compsn. components

MONTEDISON SPA 28.02.77-IT-020747

E19 F06 (13.11.79) *DT2808-638 C11d-01/04

Self-sequestering surfactants of formula (I) are prepd.

$$R-OCH_2-\overset{\overset{CH_2O-Z}{|}}{C}-CH_2O-Z$$
 in which R is 6-18C alkyl, aryl or alkylaryl, and ≥ 2 of the Z groups are carboxymethylene

(I) $CH_2COO^-Me^+$ where the Me^+ is Na, K, ammonium, quat. onium ion or their mixts. Z may also be H. Pref. (I) is used in amt. 5-60 wt. % of a detergent compsn. when R is a 12-14C linear chain.

Detergent compsn. contg. (I) are esp. used for washing fibrous articles used in the prepn. and serving of food. Fibres are prepd. for spinning, twisting, weaving, felting and dyeing operations by wetting in the detergent. 27.2.78 as 881390 (6pp931).

BEDD/ D25 79480B/44 =WP 7900
Cleaning soln. for soft contact lenses - contg. lipolytic enzyme phosphate buffer, and opt. a proteolytic enzyme

BEDDING P M J 02.10.78-GB-038873 (21.04.78-SW-004614)

R21 (D16) (15.11.79) *EP---5-131 G02c-07/04 + G02c-13

D/S: N(BR, CH, DT, DK, JA, SW) + E(FR, LU)

Liquid for cleaning soft contact lenses consists of a solution contg. a lipolytic enzyme (I) and a phosphate buffer.

The cleaning soln. is pref. hypertonic, and pref. also contains a proteolytic enzyme (II) with activity ca. 100 tyrosine units/ μ g of protein (substrate).

Prefd. (I) is derived from *Cand. cylindraceae* and is lyophilised, and is used at 100 units/10 ml of 0.1M-phosphate buffer. Prefd. (II) are bromelain and papain and when a (I)-(II) combination is used, pref. an aq. polymer complex (polyethylene glycol, polyvinyl alcohol etc.) is included in the soln.

Cleaning soln. is simple to use, and provides improved cleaning effect. Unlike known cleaning compsns., the soln. may be used daily for cleaning, and also to prevent build-up of lipids and (if it also contains a proteolytic enzyme) proteins.

20.4.79 as SW0097.(19pp478)

(E) ISR: US3910926.

CPI INDEXES

ALERTING PATENTEE INDEX (III)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

M22

*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

In Country Alerting Bulletin only

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502 292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or ≠ sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U A97D15M14
*645 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
*654 49862X A88H01Q4
*655 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A-M cumulations of from a quarter up to 5 years are available as COM.

CALI

Nitrile rubber smooth rolled sleeve for well impression packer - also contg natural rubber, hydrated 49862X/26 *US 3963-654
CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01

Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying earth in dams 49433X/26 *DT 2554-327

CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02

CANA

Emulsifying agents of microbial origin - used esp. for oil spills, are made by cultivating a species of 48076X/26 *CA -990-668
CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX

IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180
Europe	150
France	740
Germany, W. unexamined	1050
Japan unexamined	845*
Netherlands unexamined	240
PCT	40
Research Disclosure	20
South Africa	100
Sweden	260
United Kingdom unexamined	600
	<u>3325</u>

Slow publishing

Canada	450
Germany, E.	100
Germany, W. examined	465
Japan examined	340*
Netherlands examined	60
Soviet Union	1200
Switzerland	260
United Kingdom examined	300
United States	1200
	<u>4375</u>

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140
Denmark	120
Finland	60
Norway	80
Portugal	30
	<u>430</u>

Slow publishing

Austria	125
Czechoslovakia	180
Hungary	35
Israel	40
Italy	155
Rumania	25
	<u>560</u>

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from unexamined applications (OLS) which are given the normal DT code. In the case of Japan J5 represents unexamined applications, and J7 the examined of present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MW
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

- AAGE= 27.01.75 AS ARMN GEN INORGAN D16 *SU-649-748
Clarifying wine and other drinks - 85533B/47
- AAMI= 02.08.76 AS ARMN MICROBIOLOG C03 D16 *SU-649-754
Bacterial rodenticides for cereals - 85536B/47
- ABBO 27.03.78 ABBOTT LABORATORIES A60 C02 D22 E13 *US 4174-342
Fungicidal N-(acenaphthenyl) maleimide(s) - 85848B/47
- ABBO 15.05.78 ABBOTT LABORATORIES B04 D16 *GB 2020-804
Reverse passive haemagglutination test for *Neisseria gonorrhoeae* - 84708B/47
- ABET-06.03.78 A-BETONG AB D15 E17 =SF 7900-720
Large scale mfr. of methane from organic waste e.g. manure - 66325B/37
- ABMI= 09.03.77 AS BELO MICROBIOLOG B05 D16 E16 *SU-649-745
Protein hydrolysate prodn. from yeasts - 85531B/47
- ADAC/ 29.11.68 ADACHI K B04 D16 *J7 9034-813
Complex antitumour agent prodn. - 85392B/47
- AERA- 21.04.78 AERATION INDS INC D15 J02 *WP 7900-958
Aeration of liquid by pumping past gas nozzle - 85934B/47
- AGEN 00.00.72 AGENCY OF IND SCI TECH D16 =J7 9034-833
Alpha-galactosidase prodn - 21645V/12
- AGEN 03.04.78 AGENCY OF IND SCI TECH D15 E32 J01 M25 *J5 4131-502
Removal of trace amts. of cadmium from soln. - 84832B/47
- AGPH= 25.01.77 AS GEOR PHYS-ORG CH C03 D13 *SU-650-600
Fat-contg. ingredient for poultry feed - 85572B/47
- AGRI= 06.06.74 AGRIC EQUIP WKS D16 *SU-652-217
Tissue cell suspension prodn. for virus cultivation - 85719B/47
- AIRW- 27.12.77 AIRWICK IND INC A97 D22 (A18 A25) =J5 4132-488
Uniform release vapour dispensing system - 53043B/29
- AIRW- 31.01.78 AIRWICK INDS INC A97 D22 E12 (E17) *J5 4110-990
Gel compsn. for sterilising and deodorising air - 84719B/47
- AJIN 31.01.70 AJINOMOTO KK B05 D13 E14 =DS 2104-620
Sweetening agent dipeptide ester preparation - 52094S/32
- AJIN 09.10.72 AJINOMOTO KK B05 D16 E16 =J7 9034-835
L-lysine prodn from bacteria - 32981V/18
- AJIN 30.01.73 AJINOMOTO KK B05 D16 E16 =J7 9034-836
Fermentative L-lysine prodn - 16655W/10
- AJIN 07.04.78 AJINOMOTO KK B04 D16 *J5 4132-548
Polypeptide antibiotic pelmycin A - 85087B/47
- ALHA/ 10.05.78 ALHAUSER E D15 J01 *DT 2820-275
Membrane filter for microorganisms - 84273B/47
- ALZA 07.04.77 ALZA CORP B07 C03 D13 (D21 D22) =GB 1556-149
Osmotically acting release device - 74740A/42
- AMAN 03.04.78 AMANO PHARM KK A96 D16 *J5 4132-294
Continuous or batchwise prodn. of enzymes - 85007B/47
- AMCA 23.06.78 AMERICAN CAN CO D11 =US 4173-823
Electrically heated food transporting carton - 07767B/04
- AMCY 12.10.72 AMERICAN CYANAMID CO B04 C03 D16 =J7 9034-838
Antibiotic BM 123 - 33005V/18
- AMCY 12.10.72 AMERICAN CYANAMID CO B04 C03 D16 =RU --64-690
Antibiotic BM 123 - 33005V/18
- AMCY 30.03.78 AMERICAN CYANAMID CO B03 D16 =J5 4132-552
Antibiotics produced by *Nocardia* fermentation - 75558B/42
- AMLE-04.12.78 AMERICAN LECITHIN D21 E19 *US 4174-296
Improving water solubility of lecithin for use in e.g. shampoo - 85825B/47
- AMVI= 11.05.77 A MEDICAL VIROLOGY B04 D16 *SU-650-625
Influenza virus nucleoproteide prodn. - 85575B/47
- ANON 20.10.79 ANONYMOUS D15 *RD-187-012
Drinking water with improved taste - 85443B/47
- ANON 20.10.79 ANONYMOUS A96 D22 (A25) *RD-187-013
Lubricant compsn. for tampons - 85444B/47
- ARCA= 10.10.77 ARCANGEL FOREST ECH D16 F09 *SU-649-756
Purifying vegetable material hydrolysates - 85538B/47
- ASAH 28.04.78 ASAHI CHEMICAL IND KK D25 E19 *DT 2917-131
Molecular aggregate having an ordered structure - 84395B/47
- AUBE-10.02.78 AUBERT & CIE TS D14 *FR 2416-676
Horizontal rotary drum hot water cooker for food prods. - 84613B/47
- AUTH= 03.02.77 AS UKR THERM PHYSIC D13 *SU-651-775
Convective drying of grapes - 85653B/47
- AXFO/ 03.05.78 AXFORD H G B04 D16 =NL 7903-359
Multiple inoculation of bacteria samples - 82821B/46
- BADI 27.07.77 BASF WYANDOTTE CORP D25 E12 (D12 D13 E34) *US 4174-289
Liq. detergent-bleach compsn. for cleaning hard surfaces - 85822B/47
- BADI 28.04.78 BASF AG A97 D22 (A14) =EP ---5-168
Polyvinyl pyrrolidone-iodine prodn. by direct reaction - 56356B/31
- BADI 05.05.78 BASF AG D23 E15 G02 (G03) =EP ---5-196
Octyl-cyclohexane perfume cpds. contg. 2,2,3,4 tetra:methyl-butyl gp. - 82749B/46
- BAEC- 11.01.79 BAECK ENGG NV D15 *BE-877-792
Treatment of mixed cow manure - 84206B/47
- BAEN- 26.11.75 TETRA-W BAENSCH U D15 =GB 1556-213
Elimination of nitrogen cpds. from waste water - 36276Y/21
- BAEN- 05.05.78 TETRA W BAENSCH U D15 =NL 7903-303
Treating water for aquariums using cation exchanger - 66384B/37
- BALF- 29.09.76 BALFOUR BEATTY LTD D22 F09 =US 4174-412
Impregnating wood with preserving fluid - 08410A/05
- *BASH= 01.12.77 BASHKIRSKOE AGRIC C03 D16 *SU-650-558
Plant protection from autumn or spring frost - 85565B/47
- *BAST- 09.02.78 BASTIAN BLESSING D11 *US 4173-942
Automatic pizza making machine - 85756B/47
- *BATY/ 07.03.75 BATYGIN V G D25 *SU-649-741
Sodium bi:carbonate-based domestic cleaning agent - 85529B/47
- BECK- 31.12.75 NATURIN-W BECKER A97 D12 (A25) =US 4174-436
Polyurethane films for sausage casings - 46971Y/27
- BEDD/ 21.04.78 BEDDING P M J D25 (D16) =WP 7900-963
Cleaning soln. for soft contact lenses - 79480B/44
- BEHW 18.07.75 BEHRINGWERKE AG B04 D22 =GB 1556-199
Polyanionic solns. for erythrocyte preservation and kidney perfusion - 05978Y/04
- BEIE 16.02.78 BEIERSDORF AG A96 D22 L02 =SF 7900-239
Plaster compsn. contg. strongly crosslinked polyvinyl ester - 47216B/26
- *BELL/ 29.11.77 BELL W M D16 *US 4174-371
Solar heated organic waste composter - 85867B/47
- BENE 20.05.77 BENECKE J H GMBH A87 D22 =FR 2416-974
Composite absorbent sheet for hygienic and medical uses - 68978A/39
- *BISE- 04.04.78 BISEIBUTSU KAGAKU B04 C03 D16 *J5 4132-226
Live vaccine for avian infections laryngotracheitis - 84988B/47
- BLUE- 03.04.78 BLUE CROSS LAB INC D14 E11 (D23) =J5 4132-252
Pump sprayable lecithin pan lubricant - 63023B/34
- BOEF 20.08.76 BOEHRINGER MANNHEIM GMBH B02 D16 =J7 9034-759
Crystalline beta:nicotinamide-adenine di:nucleotide metal salts - 16121A/09
- BOEF 18.03.77 BOEHRINGER MANNHEIM GMBH D16 E19 J04 =GB 1556-393
Measuring or eliminating formate(s) or their precursors - 63401A/36
- BOEF 02.05.78 BOEHRINGER MANNHEIM GMBH A89 B04 D16 =EP ---5-148
Substrate for serum alpha-amylase determination - 82716B/46
- BOEH 21.02.78 BOEHRINGER SOHN C H D25 =SF 7900-543
Foamable compsn. for cleaning heating elements - 63335B/35
- *BOKN- 04.04.78 BOKN PLAST A32 D15 (A92) *SW 7803-778
Partitioned septic tank or sedimentation basic etc. mfr. - B/47
- BOKN- 07.04.78 BOKN PLAST A32 D15 (A92) #DK 7801-541
Partitioned septic tank or sedimentation basic etc. mfr. - B/47
- *BOLI 03.05.78 BOLIDEN AB D15 E33 F09 J01 *EP ---5-419
Aluminium sulphate soln. contg. polynuclear complexes - 84603B/47
- *BOLI 08.05.78 BOLIDEN AB D15 E31 K07 M25 *EP ---5-420
Selective removal of uranium from substances - 84604B/47
- BORD 22.08.69 BORDEN INC A15 D12 #DS 1942-905
Packaging film consisting of a plasticised vinyl chloride - 12699R/08
- BORW 13.12.76 BORG WARNER CORP D15 E11 L02 M14 =GB 1556-329
Tris-hydroxymethyl-ethyl-phosphonic acid - 44422A/25
- BRAM/ 17.02.78 BRAMS S A31 D14 J02 =SF 7900-522
Drum for mixing and delivering solid materials - 63400B/35
- BREV 24.12.77 BREVETEAM SA C03 D15 J04 K07 (D22 J01) =J5 4132-687
Flexible stratified mass transfer element - 31612B/17
- BRIU 01.11.73 BRIDGESTONE GAS D16 H04 =J7 9034-830
Flavobacterium cell prodn - 68010W/41
- *BROW/ 07.07.77 BROWN J B A96 D22 *US 4173-978
Disposable antiseptic applicator swab - 85760B/47
- BRPE 17.03.78 BRITISH PETROLEUM LTD D15 H05 #BR 7801-646
Oil removal from oily sludge - 63421A/36
- BRPE 05.04.78 BRITISH PETROLEUM LTD D15 H05 J01 =NO 7900-284
Sepn. of oil-water emulsion using oil-water streams - B/46
- BRPE 05.04.78 BRITISH PETROLEUM LTD A88 D15 H05 J01 =NO 7901-109
Coalescer cartridge for removing contaminants from liquids - 75703B/42
- *BRTA 12.05.78 BRIT AMER TOBACCO LTD D18 *GB 2020-538
Aroma-improving tobacco additive from *Nicotinia* plant gum - 84665B/47
- *BULL- 01.08.75 BULLEN CHEMICAL A97 D25 E19 G04 (A25) *US 4174-304
Surfactant system for use in floor stripper, degreaser, etc. - 85829B/47
- BURR- 10.02.78 BURRUS F J & CIE D18 =FR 2416-655
Paper tube for making hand-filled filter tipped cigarette - 44059B/24
- CALY 07.09.76 CALIFORNIA INST OF TECHN A92 D22 #GB 1556-206
Transferring liquid between sterilised containers - 23851Y/14
- CALY 17.03.78 CALIFORNIA INST OF TECHN A26 B04 D16 J04 (A96) =J5 4130-696
Poly:glutaraldehyde, prepn. esp. as protein reactive microspheres - 72078B/40
- *CANP 19.07.78 CANADA PACKERS LTD D23 (D13) *BE-877-779
Continuous bleaching of oils and fats esp. edible material - 84203B/47
- CARL/ 12.04.78 CARLSON L G C04 D15 J01 M25 =WP 7900-920
Treatment of waste water or phosphoric acid - 75737B/42
- *CASS/ 08.02.78 CASSINA M D14 *FR 2416-653
Installation to husk seeds and shell nuts esp. peanuts - 84608B/47
- CELA 13.03.78 CELANESE CORP A88 D18 (A11 A32) =SF 7900-848
Cellulose acetate foam cigarette filter rod - 68589B/38
- CELF- 29.05.70 CELFIL CO D18 =RU --63-754
Cigarette filter tips - made from a band of paper impregnated - 78209S/49

CHFP

- CHFP 23.01.75 CHEM FAB PFERSEE GMBH D18 =DS 2521-126
Dyeing natural hides and furs - 89205X/48
- CHIR- 05.04.78 CHIRON SA D13 =NO 7901-134
Uncooked food prod. contg. meat or fish and cereals - 73612B/41
- CHIR- 05.04.78 CHIRON SA D13 =SW 7901-804
Uncooked food prod. contg. meat or fish and cereals - 73612B/41
- CIBA 28.11.69 CIBA GEIGY AG B02 C02 D22 =DS 2056-983
7-Cyanacetylaminoccephalosporanic acid derivs. - 39819S/23
- CIBA 02.02.78 CIBA GEIGY AG B02 C02 D13 (D22) =DK 7900-432
6-Substd.-2-penem-3-carboxylic acid cpds. and derivs. - 60256B/33
- *CIBA 02.05.78 CIBA GEIGY AG C03 D13 *DT 2917-753
Protein-contg. animal feed with balanced essential aminoacid content - 84408B/47
- CIBA 02.05.78 CIBA GEIGY AG C03 D13 =NL 7903-454
Protein-contg. animal feed with balanced essential aminoacid content - 84408B/47
- *COLG 28.01.75 COLGATE PALMOLIVE CO B06 D21 *US 4174-387
Dentifrice of reduced abrasiveness - 85875B/47
- COLG 24.02.75 COLGATE PALMOLIVE CO A96 D22 F07 =CA 1065-553
Absorbent pad - 56071X/30
- COLG 24.02.75 COLGATE PALMOLIVE CO A96 D22 F07 =CA 1065-554
Diaper having perforated thermoplastic upper sheet - 53796X/28
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 F07 =J5 4133-798
Disposable tampon or towel - 56316B/31
- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) =GB 2020-689
Detergent compsn. for washing powders contg. specified clays - 69974B/39
- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) =GB 2020-690
Detergent compsn. for washing powder contg. meta-kaolin - 69975B/39
- *COPE/ 13.05.77 COPE L A B04 D16 *US 4174-389
Selective lysis of collagen fibrils, esp. scar tissue in the eyes - 85877B/47
- CORP 00.00.71 MAIZENA GMBH D23 =DS 2234-263
Vegetable oil recovery - 08613V/05
- *CORP 08.05.78 CPC INTERNATIONAL INC D16 (D13 D23) *EP ---5-277
Microbiological prodn. of glyceride oil - 84535B/47
- *CORP 20.07.78 CPC INTERNATIONAL INC D16 (D17) *BE -877-754
Neutral glucamylase derived from Stachybotrys subsimplex - 84195B/47
- COUE 26.04.78 COULTER ELECTRONICS INC B04 D16 J04 =DT 2917-004
Testing chamber for bio-hazardous substance falling as droplets - 81224B/45
- *CSIR 27.10.77 COMMONWEALTH SCIENT ORG D15 J01 *GB 2020-569
Fluid pumping system for reverse osmosis appts. - 84674B/47
- *CSIR 13.02.78 COMMONWEALTH SCIENT ORG D15 *FR 2416-870
Treating water contg. salts using regeneratable ion exchange resin - 84625B/47
- *CUPR- 05.05.78 CUPRINOL LTD C01 D22 E12 F06 (F09) *EP ---5-361
Antifungal compsn. esp. for preserving wood - 84573B/47
- *DAGM- 24.07.78 DAGMA DEUT AUTOMAT D15 *BE -877-855
Water carbonator for drinks esp. from vending machines - 84223B/47
- *DAIL 06.04.78 DAICEL KK A97 D15 H01 J01 (A11) *J5 4132-352
Treating turbid water used e.g. in tunnelling or boring (oil) wells - 85010B/47
- DAIL 22.04.78 DAICEL KK A88 D18 (A11) =GB 2020-536
Cellulose acetate fibres cigarette filter - 81098B/45
- *DAIS- 31.03.78 DAISAN GOMEI KK D21 *J5 4132-241
Cosmetic cotton wool - 84998B/47
- *DAMB- 20.12.78 DAMBACH-INDUSTRIE AN D16 *DS 2854-955
Column of cells composting rubbish in descending stages - 84241B/47
- DASP- 17.02.78 DANSKE SPRITFABRIKK D13 E34 =SF 7900-461
Peeling fruit and vegetables - 63401B/35
- *DAVY- 12.04.78 DAVY INT OIL & CHE D15 E31 K07 M25 *EP ---5-319
Recovery of uranium values from organic extractant - 84556B/47
- *DEEG/ 20.10.79 DEEGAN R O D22 E13 G06 (D15) *RD -187-051
Microbiological growth control in photo processing washing water - 85468B/47
- DEGS 31.03.78 DEUTSCHE GOLD & SILBER D21 M26 =J5 4133-423
Low gold content alloy for baking on dental porcelain - 06146B/04
- *DOJI 06.04.78 DOJIN YAKAGAKU RES B04 D16 *J5 4133-191
Quantitative agent gamma-L-glutamyl-4-hydroxy-anilido - 85195B/47
- *DOLV/ 04.04.78 DOLVA R D14 *NO 7801-179
Ensilage appts. - B/47
- DOWO 24.03.78 DOW CORNING CORP A96 D22 =J5 4131-394
Surgically implantable tissue expanding device - 46997B/25
- *DRAG 29.05.78 DRAGERWERK AG D36 J04 (E23) *DS 2823-318
Oxygen sensor for use with gas streams - 84236B/47
- DRIA- 11.02.78 DRIAM METAL RODUKT D14 =FR 2416-740
Granulates esp. pastilles coated and dried in revolving drum - 61638B/34
- DUNK/ 02.03.78 DUNKERS K R D15 =SF 7900-587
Overflow water relief system - 73807B/41
- EBAI 07.07.73 EBARA INFILCO KK D15 J01 =J5 0029-475
Osmotic filtration device - 85428B/47
- *EBAI 07.07.73 EBARA INFILCO KK D15 J01 *J7 9035-194
Osmotic filtration device - 85428B/47
- *EBAI 04.04.78 EBARA INFILCO KK A91 D15 *J5 4132-353
Treatment of municipal sewerage - 85011B/47
- *EIKE- 31.03.78 EIKEN KIZAI KK B04 D16 *J5 4132-292
Identifying bacteria in a culture medium - 85005B/47
- *EISA 25.02.72 EISAI KK D11 *J7 9023-977
Prepn. of puddings - 85338B/47
- *ELIL 04.02.76 ELI LILLY & CO B04 C03 D16 *US 4174-390
Improved feeds for increased feed utilisation efficiency in ruminants - 85878B/47
- *ELIL 20.10.77 ELI LILLY & CO B03 C02 D13 *US 4174-404
20-Deoxy-narasin and 20-deoxy-epi-17-narasin - 85885B/47
- *ENZY= 17.01.77 APPLD ENZYMOLOGY RES INS D16 *SU -649-749
Clarifying wines using e.g. polygorskite suspension - 85534B/47
- ERBS- 03.02.76 ERBSLOH & CO A97 D13 (A21 D16) #CA 1065-673
Removing tannin(s) from drinks etc. - 17545A/09
- ERIC/ 13.02.78 ERICKSON LG A91 D15 =FR 2416-871
Processing of waste waters - 54379B/29
- *ESIT= 05.05.77 EAST SIBE TECH INST D13 (D16) *SU -649-755
Choosing microorganisms for joint cultivation in ferment prodn - 85537B/47
- ESSO 31.07.74 EXXON RES & ENG CO B05 C01 D22 E11 =CA 1065-899
Microbiocidal quaternary phosphonium salt surfactants - 13372X/08
- ETHI 09.02.78 ETHICON INC A25 D22 F01 (A96) #FR 2416-912
Synthetic absorbable sutures of isomorphous poly:oxalate copolymer - 19773B/10
- *EURO- 12.05.78 EURO HAUSGERATE GMB D15 *DT 2820-818
Water softening media regenerating brine - 84340B/47
- *EVER- 21.07.78 EVERS & ASSOCIATES C04 D15 E17 H06 *BE -877-817
Treating biodegradable effluent anaerobically to recover methane - 84213B/47
- FARB 30.09.76 BAYER AG A26 D21 (A60 A96) =US 4174-338
Crosslinking paste for organo-polysiloxane - 27121A/15
- FARB 23.12.76 BAYER AG B03 C02 D16 (B04 C03 D13) =GB 1556-345
Amino sugar derivs. - 51041A/28
- FARB 04.05.77 BAYER AG A91 B03 D16 =US 4174-439
Amino-sugar saccharase inhibitor isolation - 84216A/47
- FARB 14.02.78 BAYER AG A26 C02 D17 E13 (A25 A60) =J5 4132-589
Modified azulminic acid contg. amino and carboxyl gps. - 61659B/34
- FARB 30.03.78 BAYER AG B02 C02 D22 E13 (D13) =J5 4132-591
Antibacterial penicillin and cephalosporin cpds. - 75452B/42
- FARB 18.04.78 BAYER AG D21 E14 =EP ---5-182
Cosmetic light-protective compsn. - 80936B/45
- FARB 27.04.78 BAYER AG D15 E14 =EP ---5-203
Purifying waste waters contg. nitro-hydroxy aromatic cpds. - 81028B/47
- *FARB 06.05.78 BAYER AG D23 E13 *DT 2819-931
Textile detergent compsn. for low temp. use - 84261B/47
- *FARB 13.05.78 BAYER AG A60 D25 E23 F06 *DT 2821-116
Benzofuranyl-benzimidazole(s) - 84359B/47
- *FARH 00.00.77 HOECHST AG A60 D25 E13 F06 *DT 2820-322
Optical brightening stilbene derivs. - 84282B/47
- FARH 14.02.78 HOECHST AG A96 B07 D21 (A14) =FR 2416-723
Thickening cosmetic, pharmaceutical compsns. etc. - 61669B/34
- FARH 04.03.78 HOECHST AG D12 =SF 7900-696
Sausage meat filling device - 66505B/37
- *FARH 24.04.78 SOC FRANC HOECHST A21 D15 (A97) *EP ---5-390
Quaternised melamine glyoxal resins - 84590B/47
- *FARH 12.05.78 HOECHST AG C04 D15 *DT 2820-729
Granular fertiliser prodn. from organic sludge - 84324B/47
- *FARM- 28.02.78 FARMATIS SRL D22 E14 *J5 4115-360
Antibacterial 6-iso-bornyl-3,4-xyleneol prepn. - 84723B/47
- *FERM= 27.07.76 FERMENTATION PRODUC D14 J02 *SU -651-835
Free-flowing materials proportionator - 85662B/47
- FIRM 30.03.72 FIRMENICH SA D23 E15 (D13) =DS 2315-640
Alicyclic ketones - 62779U/42
- FIRM 04.02.74 FIRMENICH SA D23 E13 (D13) =US 4174-327
Pentamethyl (1)-oxa-spiro decadiene perfume and flavouring agent - 13216Y/08
- *FIRM 11.05.78 FIRMENICH SA D23 E15 *DT 2917-450
Unsaturated cyclopentenyl ketone perfume components - 84404B/47
- *FOOD= 28.12.76 FOOD IND AUTOM RES D16 *SU -652-211
Alcohol from starch-base material prodn. - 85717B/47
- *FRAL/ 13.05.78 FRALING R D13 (D16) *DT 2821-139
Alcohol-contg. fruits prepn. from fruits contg. sugar - 84364B/47
- FUXK/ 19.08.74 FUX K D15 =CA 1065-765
Removing precipitated solids from a sedimentation tank - 11288X/07
- GEFI- 15.03.78 GENERAL FILMS INC D22 =SF 7900-845
Retaining asepsis of a sterile web of bags during filling - 68492B/38
- GELM- 21.10.74 GELMAN INSTRUMENT D15 =CA 1065-763
Water filter for household tap has annular filter chamber - 34315X/19

- GELM- 16.05.78 GELMAN INSTR CO D15 J01 *GB 2020-570
Filter element for cross-flow filtration - 84675B/47
- GENA 30.12.77 GAF CORP C02 D22 E13 K04 (D21) *US 4174-443
Biocidal aza-bis-lactam(s) - 85900B/47
- GENM 16.10.75 GENERAL MILLS INC D11 =GB 1556-034
Breeding material compsn. and prepn. - 97977X/52
- GENO 03.04.78 GENERAL FOODS CORP D13 #J5 4132-270
Two-component chewing gum, esp. bubble gum - 67030A/38
- GENO 12.05.78 GENERAL FOODS CORP A97 D13 (A11) *DT 2917-289
Stable salad etc. dressing emulsion prepn. - 84399B/47
- GENO 12.05.78 GENERAL FOODS CORP A97 D13 (A11) =GB 2020-534
Stable salad etc. dressing emulsion prepn. - 84399B/47
- GERV- 09.01.78 CIE GERVAIS-DANONE D13 *FR 2416-646
Cheese making process - 84607B/47
- GETM/ 17.02.76 GETMANSKII K A97 D25 E16 (A25 E12 E17) *SU -649-742
Aq. cleaning compsn. for metal surfaces - 85530B/47
- GEUR- 09.05.78 MACH GEURTSSEN DEVEN D15 J01 =DT 2914-007
Appts. for sepg. oil and water - 82928B/46
- GLMI- 04.05.78 GLM ITALIA D15 *DT 2827-294
Water filter and purifier - 84371B/47
- GOLD 06.02.75 GOLDSCHMIDT TH AG A26 D21 F06 (A87 A96) =DS 2555-053
Polysiloxane-polyoxyalkylene block copolymers - 46070X/25
- GRAI 04.04.78 GRAIN PROCESSING CORP A11 D17 E16 F06 =NO 7901-119
Cationic starch pastes prepn. - 75729B/42
- GREa- 22.06.77 GREAT WESTERN SUGAR D17 E13 (D16) =GB 1556-401
Glucose prepn. by enzymatic hydrolysis of cellulosic material - 63250A/35
- HAGI/ 03.04.78 HAGIWARA Y D16 *J5 4132-297
Brewing miso, soyoy, etc. - 85009B/47
- HENK 24.10.70 HENKEL KG AUF AKTIEN D22 E16 =DS 2117-427
Quaternary ammonium base solns - 11148T/07
- HENK 29.12.77 HENKEL KG AUF AKTIEN D25 E33 =DT 2819-233
Machine washing and cleaning solid material - 58554B/32
- HENK 12.05.78 HENKEL KG AUF AKTIEN A97 B07 D21 G04 (A25) *DT 2820-806
Sealant for container for aq. compsn. e.g. cosmetic gel pencil - 84339B/47
- HIGA/ 09.06.75 HIGASHIJIMA S D22 G04 =CA 1065-728
Heat generating package, e.g. for medical use - 83065X/45
- HITA 10.04.78 HITACHI KK D15 *J5 4133-755
Purificn. of water contg. organic and nitrogenous cpds. - 85332B/47
- HITB 07.04.78 HITACHI CHEMICAL KK D15 *J5 4133-476
Continuously feeding waste liq. from reservoir to treating tank - 85245B/47
- HOFF 14.02.78 HOFFMANN-LA ROCHE SA B03 D16 =FR 2416-901
Trestatin amino sugar derivs. - 61777B/34
- HOFF/ 19.04.78 HOFFGEN G A82 D11 (A26) =EP ---5-197
washing machine water hose connection - 80944B/45
- HOHN 07.04.78 HOHNEN OIL KK D13 *J5 4133-503
Mfg. cooking oil for use on hot plates - 85262B/47
- HONE- 10.02.78 HONEY BEE CORP D13 =FR 2416-651
Soft drink contains full milk - 61699B/34
- HOON- 04.05.78 HOONET OGLIO SAS D14 *DT 2917-960
Washer and dryer esp. for fruit and vegetables - 84417B/47
- HOWA/ 16.05.75 HOWARD A N B05 D13 =CA 1065-672
Mineral and vitamin dietary supplement - 91788X/49
- HUBE 06.09.72 HUBER J M CORP D21 E36 G01 =DK 7900-967
Silicon oxide pigments used for toothpaste prodn. - 22262V/12
- ICEC- 22.05.76 ICECHIM INST CHIMIC D15 *RU --65-136
Magnesium-contg. water coagulation - B/47
- ICEC- 22.05.76 ICECHIM INST CHIMIC D15 *RU --65-138
Complex inorganic coagulant recovery - B/47
- ICIL 12.11.76 IMPERIAL CHEM INDS LTD A96 D21 L01 =US 4174-334
Dental or orthopaedic powdery cement - 36916A/21
- ICIL 13.02.78 ICI AUSTRALIA LTD D15 *FR 2416-870
Treating water contg. salts using regeneratable ion exchange resin - 84625B/47
- ICIL 24.02.78 IMPERIAL CHEM INDS LTD D25 E16 F06 =SF 7900-623
Quat. ammonium cpd. mixt. used as softening agent - 63152B/35
- ICIL 23.03.78 IMPERIAL CHEM INDS LTD A25 D15 H03 (A97 H08) =J5 24132-492
Surfactant compsn. for emulsifying oils in aq. media - 72160B/40
- IHLE- 27.04.78 IHLE INGENIEUR GMBH D15 =EP ---5-235
Disinfecting and/or removing algae from water - 81000B/45
- INCH- 31.01.74 INST IND CHIMICA D15 *RU --66-577
Recovery of aluminium ion-contg. inorganic coagulant - B/47
- INFL 26.05.77 INT FLAVORS & FRAGR INC D18 E14 (E15) *US 4173-982
Enhancing taste or aroma of tobacco - 85762B/47
- INFL 17.03.78 INT FLAVORS & FRAGR INC D23 E15 (D18) *US 4174-286
Perfumed solid or liq. detergent compsn. prepn. - 85819B/47
- INFL 05.04.78 INT FLAVORS & FRAGR INC D25 E15 *US 4174-287
Perfumed solid or liquid detergent prepn. - 85820B/47
- *INFL 08.05.78 INT FLAVORS & FRAGR INC D25 E13 (D23) *US 4174-288
Perfumed detergent compsn. prepn. - 85821B/47
- *INHO/ 21.04.78 INHOFER HG D15 J02 *WP 7900-958
Aeration of liquid by pumping past gas nozzle - 85934B/47
- INLO- 23.12.73 GRUP INTR IND LOCAL D13 =RU --65-189
Sugar, glucose and saponin halva prepn. - B/20
- *INPL 17.05.78 INT PLAYTEX CORP A11 D22 (A96) *BE -876-273
Particulate water-insoluble CMC prepn. - 84161B/47
- INRG 23.10.74 INST NAT RECH AGRON D13 =US 4174-313
Purifying proteins esp from sunflower kernels - 36304X/20
- INTT 28.02.78 ITT INDUSTRIES D11 =J5 4132-248
Edible moisture-barrier coating for doughnuts - 66560B/37
- INTT 28.02.78 ITT INDUSTRIES INC D11 =SF 7900-199
Edible moisture-barrier coating for doughnuts - 66560B/37
- *ISHF 06.04.78 ISHIFUKU KINZOKU KO D21 M26 *J5 4132-426
Palladium-silver dental alloy with good bondability to ceramics - 85025B/47
- IZUM/ 21.07.75 IZUMI M D16 (D13) =GB 1556-178
Koji diastase production chamber - 11486Y/07
- JANC 27.01.75 JANSSEN PHARMACEUT NV B03 C02 D22 =CA 1065-873
Fungicidal and bactericidal imidazole derivs - 60212X/32
- *JAPE 03.04.78 JAPAN EXLAN KK A14 D15 J01 (A94) *J5 4131-666
Prodn. of sepg. membrane from acrylonitrile based polymer - 84927B/47
- *JAPE 05.04.78 JAPAN EXLAN KK A88 D15 J01 (A14) *J5 4132-480
Mfg. acrylonitrile membrane e.g. for water desalting - 85048B/47
- *JAPS 06.04.78 JAPAN SYNTHETIC RUBBER A96 D21 *J5 4132-387
Dental mould compsn. for e.g. mfg. false teeth - 85015B/47
- JOHJ 28.03.78 JOHNSON & JOHNSON A94 D22 F04 (A96) #BR 7801-881
Water absorbent and retentive matted fibre material - 75430B/42
- JOHJ 30.03.78 JOHNSON & JOHNSON D21 M26 =J5 4133-795
Non-precious metal dental alloy - 79432B/44
- JOHJ 30.03.78 JOHNSON & JOHNSON D21 M26 =NO 7901-044
Non-precious metal dental alloy - 79432B/44
- JOHJ 05.05.78 JOHNSON & JOHNSON A97 D21 E11 (D25) =NL 7903-526
Novel phospho-betaine(s) and phosphitane(s) - 80842B/45
- JOHN/ 05.12.73 JOHNSON G W D22 #US 3955-565
Reusable lightweight orthopaedic device - 80562A/45
- *JONE- 24.04.75 JONES & ATTWOOD LTD D15 *GB 1556-110
Apparatus for removing solids from sewage flow - 84651B/47
- *KAET/ 00.00.76 KAETHER W D17 *DT 2819-719
Low pressure preliminary dewatering of bagasse - 84257B/47
- KALI 02.09.71 KALI-CHEMIE AG D25 =DS 2143-945
Insoluble dry enzyme addition products - 10835U/08
- *KANE 31.03.78 KANEBO KK D21 E16 (E13) *J5 4132-242
Cosmetic compsn. for hair, skin etc. - 84999B/47
- *KANF 31.03.78 KANEGAFUCHI CHEM KK D23 E17 J04 *J5 4130-994
Determin. of content of volatiles in non-aq. liq. - 84783B/47
- KAOS 04.06.75 KAO SOAP KK D25 E13 (E34) =DS 2622-761
Stabilising bleaching compsn. contg. inorganic peroxide cpd. - 96565X/52
- KAOS 08.02.78 KAO SOAP KK A96 D22 F07 =FR 2416-722
Absorbent article, esp. sanitary towels, with pref. cellulose core - 20067B/11
- *KAOS 10.05.78 KAO SOAP KK D23 E15 *GB 2020-656
Tri:cyclo-alpha,beta-unsatd. ketone derivs. - 84687B/47
- KATA- 05.04.78 KATAYAMA KAGAKU KOG A97 C03 D22 F09 (A25 D15) =J5 4132-230
Microbicide for industrial cooling water and paper pulp - 77643B/43
- KATA- 05.04.78 KATAYAMA CHEM WKS A97 C03 D22 F09 (A25 D15) =SW 7902-934
Microbicide for industrial cooling water and paper pulp - 77643B/43
- *KDPO= 17.01.77 KRASD POLY D16 *SU -649-749
Clarifying wines using e.g. polygorskite suspension - 85534B/47
- KESL/ 04.05.78 KESLING P C A96 D21 =DT 2917-452
Tooth positioning and retaining device - 82935B/46
- *KFOO= 30.04.75 KAZA FOOD IND DES D11 *SU -651-769
Baking tray greaser - 85651B/47
- *KHPO 25.10.76 KHARKOV POLY D23 *SU -649-740
Hydration of fats and oils - 85528B/47
- *KIFO= 07.06.76 KIEV FOOD IND TECHN D16 *SU -652-212
Hops bitter substances extractor - 85718B/47
- KIHA- 31.03.78 KIHARA SANGYO KK A83 C03 D22 F07 =J5 4131-444
Multilayer inner sole for shoes - 75572B/42
- *KIMB 14.10.75 KIMBERLY CLARK CORP A11 D22 F04 (A96) *US 4174-417
Highly absorbent web prodn. from chemically modified cellulose fibres - 85891B/47
- *KIRI 12.05.78 KIRIN BREWERY KK B04 D16 *DT 2919-132
Antitumoural and antiviral substances ks-2-B - 84476B/47
- KNVS 13.12.75 KERNENERGIE VERWERTUNG D15 =GB 1556-040
Water desalination by reverse osmosis - 45410Y/26
- *KOKA- 03.04.78 KOBAYASHI KOSEI KK D21 E13 (E17) *J5 4132-244
Manicure remover - 85001B/47
- KOBM 05.04.78 KOBE STEEL KK D15 M14 (M26 M27) =J5 4132-474
Reactive anode preventing corrosion of copper alloys - 42638B/23

- * KOHL/ 29.04.78 KOHLER V B04 D16 *DT 2819-129
Topical compositions e.g. ointment contg. beta glucuronidase - 84245B/47
- KRFT 30.11.77 KRAFT INC D13 =FR 2416-648
Cheese-making process using concentrate of protein fat and salts - 25998B/14
- KROJ/ 02.03.78 KROJER K K K A81 D22 F04 =SW 7901-817
Binder-contg. fibrous sheet mfr. - 52566B/29
- KROY/ 02.03.78 KROYER K K K A81 D22 F04 =SF 7900-697
Binder-contg. fibrous sheet mfr. - 52566B/29
- KURE 31.03.78 KUREHA CHEM IND KK A83 C03 D22 F07 =J5 4131-444
Multilayer inner sole for shoes - 75572B/42
- KURS 05.11.71 KURARAY KK D15 E36 J01 =J7 9034-718
Regeneration of active charcoal - 64710U/43
- * KURS 03.04.78 KURARAY KK B04 D16 J04 *J5 4132-291
Bio-reactor for enzymic reactions - 85004B/47
- * KUZM/ 05.10.77 KUZMIN A A D15 *SU -652-125
Effluent purification automatic control - 85711B/47
- * KYOW 06.04.78 KYOWA HAKKO KOGYO KK B03 D16 *J5 4132-550
Antibiotic 477-2h - 85088B/47

- * LANN- 06.03.78 LANNEN TEHTAAT OY D13 *SF 7800-722
Machine for cutting up cauliflower - B/47
- * LEAT= 04.10.77 LEATHER SHOE IND RE D18 *SU -649-757
Tanning of hide for leather sole mfr. - 85539B/47
- * LEON/ 23.05.77 LEON J L D13 *US 4173-925
Variable tilt rotating pot cooker and mixer - 85755B/47
- LICL- 31.03.78 LIC LANDSTINGEN INKOP A96 D21 (D22) =J5 4132-225
Disinfecting skin ointment based on alcohol - 14251B/08
- LICL- 31.03.78 LIC LANDSTINGENS INKOPSC A96 D21 (D22) =NO 7802-936
Disinfecting skin ointment based on alcohol - 14251B/08
- LIFE- 05.05.78 LIFE SAVERS INC A97 D13 =NL 7809-638
Chewing gum with long lasting sweetness - 04517B/03
- * LINO- 05.04.78 LINOTEK OY D24 E12 F09 *SW 7901-608
Purification of crude soap from sulphate cellulose prodn. - B/47
- LITT 13.08.75 INVERESK RES INT A89 D15 E19 J04 (A11 A14) =GB 1556-050
Monitoring metal content of water - 53212A/29
- * LUCH- 27.04.78 LUCHAIRE SA D12 *EP ---5-398
Working platform facilitating cutting animal carcasses - 84594B/47
- LYON/ 16.05.73 LYON R L D21 M26 #DS 2324-820
Dental alloy - 48220U/34

- MACA- 25.11.77 MACANDREWS & FORBES B05 D13 E19 =J5 4132-279
Low calorie food sweetener compsn. - 42700B/23
- MACA- 25.11.77 MACANDREWS & FORBES B05 D13 E19 =J5 4132-280
Sweetener for food and drinks - 42699B/23
- MACL/ 08.11.77 MACLENNAN M E D12 (D16) =FR 2416-650
Mycelial meat analogues and extenders - 37610B/20
- MAEJ/ 01.09.73 MAEJIMA T D15 M11 =J7 9035-023
Metal removal from wastewater - 67428X/36
- * MANC- 28.11.75 MANCHEM LTD D21 E12 G02 (D18 E17) *GB 1556-376
Film forming compsn. contg. oxo-aluminium carboxylate - 84662B/47
- MAYB 08.12.76 MAY & BAKER LTD B03 C02 D13 =US 4174-391
Spiramycin di:carboxylic acid ester(s) - 42169A/24
- MCDD 03.05.76 MCDONNELL DOUGLAS CORP B04 D16 =DS 2717-978
Culture medium for selective determ. of Serratia - 83228Y/47
- MCDD 03.05.76 MCDONNELL DOUGLAS CORP B04 D16 =DS 2717-980
Detection of Candida and fungi in urine - 75870Y/43
- MEAT= 07.03.78 MEAT IND RES INST D16 (D12 D13) #SF 7800-739
Lactic acid bacteria mass prepn. - 73753B/41
- MECH- 08.03.76 INST MECH PRECYZYJN D15 M11 (M25) =GB 1556-240
Treatment of concentrated plating solns. and effluents - 67149Y/38
- MEIJ 08.02.78 MEIJI SEIKA KK B04 D16 =FR 2416-899
Antibiotic antitumour derivs. of substance SF-1739 - 68342B/38
- MEIJ 14.02.78 MEIJI SEIKA KK B04 D16 =FR 2416-900
Antibiotics SF-2050 and SF-2050b - 61757B/34
- * MEIJ 06.04.78 MEIJI SEIKA KAISHA B04 D16 *J5 4132-577
Antibiotic BN-227 - 85097B/47
- MEIT 03.05.78 MEITO SANGYO CO KK B04 D16 #NL 7804-812
Lipase prodn. from Alkaligenes microorganism - 48599A/27
- MERI 03.04.78 MERCK & CO INC D22 E13 H07 M21 =DK 7901-347
Microbe resistant metal working fluids - 35102B/18
- METG 18.07.73 METALLGESELLSCHAFT AG D23 =DS 2336-639
Semi-continuous deodorising of oils and fats - 09111W/06
- METG 11.02.74 DRAVO CORP A91 D15 =CA 1065-789
Waste water flotation purificn - 55905W/34
- METG 21.10.74 DRAVO CORP D15 J03 =CA 1065-790
Industrial wastes treatment - 34261X/19
- MEYH- 10.05.78 MEYHALL CHEM AG A11 C03 D17 H01 =GB 2020-677
Phosphated locust bean gum soluble in cold water - 61444B/33
- * MICR= 23.08.76 MICROBIOLOGY INST B04 D16 *SU -649-746
L-asparaginase prodn. for use in medicine - 85532B/47
- MILE 13.02.78 MILES LABORATORIES INC B04 D16 J04 =FR 2417-105
Test reagent for uric acid determ. - 61704B/34

- MILE 01.05.78 MILES LABORATORIES INC A96 B04 D16 J04 (A11 A14) =DT 2914-544
Deoxyribonuclease determination device - 81227B/45
- MILK= 07.03.78 MILK IND RES INST D16 (D12 D13) #SF 7800-739
Lactic acid bacteria mass prepn. - 73753B/41
- MINN 02.06.75 MINNESOTA MINING CO A96 D22 (A23) =CA 1065-719
Orthopaedic splint of coated fabric - 80897X/43
- * MIRA- 27.06.75 MIRAJ INTR COSMETIC D21 E19 *RU --64-734
Aq. make-up removal emulsion - B/47
- * MIRA- 27.06.75 MIRAJ INTR COSMETIC D21 E19 *RU --65-294
Aq. tonic skin lotion - B/47
- MIRK- 05.05.78 MIRKOZ DIESEL HUTOT D15 J01 =DT 2917-849
Flotation separator partic. to skim surface oil from sewage - 68156B/38
- MIRK- 05.05.78 MIRKOZ DIESEL & HUT D15 J01 =NL 7903-457
Flotation separator partic. to skim surface oil from sewage - 68156B/38
- * MITK 06.04.78 MITSUI TOATSU CHEM INC C02 D22 E13 F09 *J5 4132-203
Fungicidally treated decorative ligneous board prodn. - 84982B/47
- MIT 05.03.75 MITSUBISHI CORP D12 E34 (E14 E17) =J5 1104-061
Preventing discolouration of meat - 85395B/47
- * MITS 05.03.75 MITSUBISHI CORP D12 E34 (E14 E17) *J7 9034-821
Preventing discolouration of meat - 85395B/47
- MIT 26.06.75 MITSUBISHI CORP D12 E34 =J5 2003-856
Preservation of cooked meat - 85396B/47
- * MITS 26.06.75 MITSUBISHI CORP D12 E34 *J7 9034-822
Preservation of cooked meat - 85396B/47
- MITU 13.09.71 MITSUBISHI CHEM IND KK D15 =J7 9034-706
Removal of mercury from solns. - 35234V/19
- * MITU 05.04.78 MITSUBISHI CHEM IND KK D16 *J5 4132-295
Phosphofructokinase prodn. from Thermus bacteria - 85008B/47
- MJOL- 23.11.77 MJOLKCENTR ARLA EKO D13 =GB 2020-532
Protein concentrate prodn. from skimmed milk - 24015B/13
- * MIFO= 03.02.77 MOLD FOOD IND RES INST D13 *SU -651-775
Convective drying of grapes - 85653B/47
- MOLN 03.04.78 MOLNLYCKE AB B06 D22 E34 (E32) =SW 7803-697
Sterile solid compress for application to discharging wounds - 82522B/45
- MONA 05.05.78 MONA INDS INK A97 D21 E11 (D25) =NL 7903-526
Novel phospho-betaine(s) and phosphitane(s) - 80842B/45
- MONT 28.02.77 MONTEDISON SPA D25 E19 F06 =US 4174-306
Self-sequestering poly:ol ether carboxylic acid deriv. surfactants - 63849A/36
- * MOSU 14.06.77 MOSCOW LOMONOSOV UNIV D16 *SU -649-751
Identifying microorganisms by their DNA content - 85535B/47
- MOTE= 14.02.78 MOSC TEXTILE INST A11 D15 (A14 A91 D17) =FR 2416-909
Graft copolymers of cellulose with vinyl pyridine(s) - 64161B/35
- MOTE= 14.02.78 MOSC TEXTILE INST A11 D15 E14 (A14 A91 D17) =FR 2416-910
Graft copolymers of cellulose - 64162B/35
- MURP/ 08.02.78 MURPHEY J D D14 =FR 2417-146
Vending dispenser for snow cones - 66703B/37
- NAKA- 12.08.75 NAKANO SUMISE KK D13 =J5 2021-399
Preservation of miso with vinegar which has been semi-neutralised - 85398B/47
- * NAKA- 12.08.75 NAKANO SUMISE KK D13 *J7 9034-839
Preservation of miso with vinegar which has been semi-neutralised - 85398B/47
- NATR 03.05.77 NATIONAL RES DEV CORP D15 J01 =US 4174-281
Countercurrent decantation for liquid treatment of solids - 82554A/46
- NATT 20.03.78 NAT STARCH & CHEM CORP A11 D17 (A97 D13) =GB 1556-400
Cold water swelling starch prodn. - 74669B/41
- NEST 21.10.74 SOC PRODS NESTLE SA D13 =CA 1065-674
Instant tea powder - 34240X/19
- * NEST 11.05.78 SOC PROD NESTLE SA D13 *DT 2914-301
Protein esp. for children's diets and cheese mfr. - 84384B/47
- NEST 11.05.78 SOC PRODS NESTLE SA D13 =GB 2020-667
Protein esp. for children's diets and cheese mfr. - 84384B/47
- * NEUM- 06.05.78 NEUMO ARMATURENFAB D14 *DT 2819-921
Connector for two pipes or fitting for transporting milk etc. - 84260B/47
- * NICR- 06.04.78 NIPPON CREATE KK A96 D21 *J5 4132-387
Dental mould compsn. for e.g. mfg. false teeth - 85015B/47
- * NIHG 06.04.78 NIPPON GAKKI SEIZO KK D16 (D13) *J5 4132-293
Culturing chlorella in high yield - 85006B/47
- * NIHS 06.04.78 NIPPON SURFACTANT KK A25 D21 E17 *J5 4132-491
Solubilisation agent for toilet water or lotion - 85057B/47
- * NIIO- 31.03.78 NIPPON ION KK A87 B06 D22 F06 (A97 F09) *J5 4131-016
Impregnated germicidal cloth or paper mfr. - 84791B/47
- * NIIO- 31.03.78 NIPPON ION KK A82 D22 F08 *J5 4132-201
Mould resistant synthetic leather prodn. - 84980B/47
- * NIIO- 31.03.78 NIPPON ION KK A82 D22 F08 *J5 4132-202
Porous synthetic leather prodn. for footwear - 84981B/47
- * NIKN 07.04.78 NIPPON KOKAN KK D15 E33 L02 (E36) *J5 4133-475
Treating waste water in gypsum mfr. - 85244B/47
- * NIOF 07.04.78 NIPPON OILS & FATS KK A97 D25 E19 F01 *J5 4132-609
Cleansing compsn. for raw wool - 85109B/47

* NIOF 10.04.78 NIPPON OILS & FATS KK A97 B05 D16 E16 *J5 4133-484
Additive for fermentative prodn. of L-glutamic acid - 85252B/47

* NISY 05.04.78 NIPPON SYNTH CHEM IND A88 D15 J01 (A17) *J5 4132-481
Ethylene-vinyl-alcohol copolymer membrane for selective sepn. - 85049B/47

* NISY 05.04.78 NIPPON SYNTH CHEM IND A88 D15 J01 *J5 4132-489
Alpha:olefin-vinyl alcohol copolymer dialysis membrane mfr. - 85056B/47

* NITL 03.04.78 NITTO ELECTRIC IND KK A88 D15 J01 *J5 4131-575
Semipermeable membrane appts. - 84866B/47

* NITL 04.04.78 NITTO ELECTRIC IND KK A88 D15 J01 *J5 4131-576
Composite, high strength, semipermeable tube prodn. - 84867B/47

* NITL 04.04.78 NITTO ELECTRIC IND KK A88 D15 J01 *J5 4131-577
Mfg. composite semipermeable tubes - 84868B/47

* NITT 06.04.78 NITTO CHEM IND KK A93 D16 E12 L02 (A25) *J5 4132-624
Prodn. of cement having improved strength, workability etc. - 85115B/47

NMHB 06.04.78 NORDISCH MASCH R BAADER D12 #SW 7803-881
Fish processing machine conveyor - 59939B/33

NMHB 07.04.78 NORDISCH MASCH R BAADER D12 #DK 7801-560
Fish processing machine conveyor - 59939B/33

* NONF= 28.01.77 NONFERR METAL RES D15 E37 *SU -650-980
Removal of cyanide and thiocyanate from aq. waste - 85591B/47

NPIC-08.05.78 NPI CORP D14 =DT 2904-586
Patty feeder removing the bottom patty from a stack - 38730B/20

NPIC-08.05.78 NPI CORP D14 =GB 2020-637
Patty feeder removing the bottom patty from a stack - 38730B/20

* NWCO= 19.10.76 NW CORRESP POLY B05 D23 J04 *SU -649-995
Quantitative analysis of solid phase in fat - 85553B/47

OCEA- 19.09.75 OCEAN ECOLOGY LTD D15 H03 =CA 1065-768
Recovery of pollutants from water - 07602Y/05

* OLSH= 10.05.78 OLSHANSK CEMENT COMPLEX D16 L02 M25 *DT 2918-738
Portland cement clinker mix - 84456B/47

OPUS- 24.02.78 OPUS CHEMICAL AB D16 E12 (D22) =SF 7900-541
Liquid or tableted preservative for bacteriological samples - 66558B/37

OREA 08.06.73 L'OREAL SA A96 D21 (A14) =DS 2427-671
Fatty compn. for lipstick and eye shadow - 88666V/52

OREA 19.08.77 L'OREAL SA D21 E14 (E12) =J5 4131-088
Hair colouring compsn. contg. oxidn. dyes - 14189B/08

OREA 06.04.78 L'OREAL SA D21 E34 =J5 4132-531
(N)-Hydroxyalkyl-(N)-mesyl:aminoalkyl-para phenylene:di:amine cpds. - 73616B/41

PEAR/ 19.03.74 PEARSON E O D25 E13 (E33 E34) *CA 1065-730
Phosphate-free detergent compsn. - 84229B/47

PENN 05.04.78 PENNWALT CORP D11 E34 (D17) =J5 4132-255
Potassium bromate powder additive to flour and starch - 75603B/42

PERE/ 04.05.78 PEREZ R D D21 L02 M22 *GB 2020-556
Artificial tooth with ceramic core - 84669B/47

PFIZ 18.02.76 PFIZER INC D13 (D16) =GB 1556-297
Foodstuff compsn. contg. fatty material and microbial protein - 59399Y/34

PIME/ 28.06.77 PIMENOV B I B07 C03 D22 *SU -651-774
Disinfecting hen eggs - 85652B/47

PLAS/ 04.04.78 PLAST B A32 D15 (A92) *SW 7803-778
Partitioned septic tank or sedimentation basic etc. mfr. - B/47

PROC 13.05.74 PROCTER & GAMBLE CO D23 =CA 1065-887
Low temp. refining and dewaxing of crude vegetable oils - 22545X/12

PROC 08.07.74 PROCTER & GAMBLE CO D15 E33 =US 4174-291
Lower of metal ion concn of aq solns - 69744U/46

PROC 27.12.74 PROCTER & GAMBLE CO D22 =CA 1065-819
Mfg. tampons for feminine hygiene - 83610X/45

PROC 02.04.75 PROCTER & GAMBLE CO A97 D25 E14 *US 4174-305
Alkyl benzene sulphonate detergent compsn. - 85830B/47

PROC 18.08.75 PROCTER & GAMBLE CO D25 E16 F06 =GB 1556-437
Softening and antistatic compsns. for textiles - 12732Y/08

PROC 21.06.77 PROCTER & GAMBLE EU A97 D25 E33 (A14 E14 E17 E34) =FR 2416-945
Low phosphate fabric washing detergent compsn. - 02331B/02

PROC 23.06.77 PROCTER & GAMBLE CO D25 E17 (E36) =FR 2416-946
Suds regulated detergent compsn. - 02332B/02

PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 (A25) =FR 2416-944
Low phosphate laundry detergent compsn. - 02345B/02

PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 =FR 2416-948
Detergent compsn. water-releasably loaded on a substrate - 02340B/02

PROC 18.07.77 PROCTER & GAMBLE CO D25 E19 =FR 2416-947
Antistatic, fabric softening detergent additive - 08409B/05

PROC 18.04.78 PROCTER & GAMBLE CO D22 E34 (D15 E33) *EP ---5-286
Solid disinfectant esp. for toilet bowl tanks - 84539B/47

PROC 28.04.78 PROCTER & GAMBLE CO A97 D12 E19 *EP ---5-290
Liq. crystalline food additive emulsion - 84541B/47

PROC 07.07.78 PROCTER & GAMBLE CO C03 D13 *US 4174-314
Protein granule recovery from comminuted seed, e.g. soya bean - 85834B/47

* PROC 07.07.78 PROCTER & GAMBLE CO C03 D13 *US 4174-315
Recovery of vegetable seed protein from the seed - 85835B/47

PURD 27.02.78 PURDUE RESEARCH FOUNDATI A97 D16 J01 =SF 7900-628
Dialysis compsn. for blood purification in artificial kidney - 63170B/35

PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 F09 =SF 7900-788
Solid or aq. solvent for extracting cellulose - 68397B/38

PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 =SF 7900-789
Glucose prodn. by cellulose acid hydrolysis - 68608B/38

PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 F01 =SF 7900-790
Glucose prodn. from cellulosic materials - 70256B/39

PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 F09 =SF 7900-791
Recovering cellulose from waste materials - 73955B/41

QUAK 08.05.78 QUAKER OATS CO C03 D13 #DT 2820-429
Base compsns. for pet foods - 42159A/24

RALS 01.05.78 RALSTON PURINA CO D13 =GB 2020-666
Eliminating foreign matter from vegetable protein esp. soya - 66381B/37

RALS 01.05.78 RALSTON PURINA CO D13 =NL 7903-396
Eliminating foreign matter from vegetable protein esp. soya - 66381B/37

RAUW- 25.10.77 RAU W LEBENSMITTELW B07 D23 (B05 D13) =DS 2747-765
Fat rich in 1,3-di:palmitoyl-2-oleoyl-glycerol - 33571B/18

RECU- 20.08.75 SOC IND RECUP DECHE C03 D13 (D12) =GB 1556-439
Protein concentrates from animal blood - 03952Y/03

* REDP- 12.01.78 REDPATH SUGARS LTD D16 (D17) *GB 1556-398
Immobilising enzymes with mercapto substituents - 84664B/47

RHON 15.10.75 RHONE-POULENC INDUSTRIES A91 D15 (A25) =SU -650-509
Alkyl sulphonated phenoxy resin membranes - 27172Y/16

RHON 14.04.76 RHONE-POULENC INDUSTRIES A14 D15 (A97) =CA 1065-792
Water soluble, high mol. wt. acrylic (co)polymers - 74153Y/42

RHON 14.03.78 RHONE-POULENC INDUSTRIES A35 D15 E36 J02 =SF 7900-832
Contactor for substances in different phases - 68134B/38

RHON 03.05.78 RHONE-POULENC INDUSTRIES A88 D15 J01 (A25) =DT 2917-903
Poly:aryl:ether:sulphone(s) mixt. compsns. - 80833B/45

RHON 03.05.78 RHONE-POULENC INDUSTRIES A88 D15 J01 (A25) =NL 7903-450
Poly:aryl:ether:sulphone(s) mixt. compsns. - 80833B/45

RHON 03.05.78 RHONE-POULENC INDUSTRIES A88 D15 J01 (A25) =NL 7903-451
Semipermeable membrane partic. for ultrafiltration - 80832B/45

RIKA 19.10.73 RIKAGAKU KENKYUSHO D16 =J5 0069-284
Inoculating vegetable virus onto leaf - 85397B/47

* RIKA 19.10.73 RIKAGAKU KENKYUSHO D16 *J7 9034-831
Inoculating vegetable virus onto leaf - 85397B/47

RIZZ- 03.09.75 RIZZIL & C SPA D18 =US 4173-904
Hide drying machine belt centralisation - 20325Y/12

ROHM 12.05.71 ROHM & HAAS CO B03 C01 D22 E12 =CA 1065-876
Metal complexes of 3-isothiazolones - 76318T/48

ROUS 31.03.78 ROUSSEL UCLAF B02 C02 D22 =J5 4132-593
7-thiazolyl-acetamido-cephalosporin oxime derivs. - 73876B/41

RUHS 05.04.78 RUHR-STICKSTOFF AG C03 D13 =DK 7901-392
Mineral additive for animal nutrition - 75693B/42

RYDE- 27.08.76 RYDER INT CORP D22 #DT 2638-646
Sterilising contact lenses with hydrogen peroxide soln. - 23410Y/13

* SAFI 22.03.78 SAFR INVENTIONS D16 *J5 4130-995
Improvement on immunological specimen - B/47

* SANY 05.04.78 SANKYO KK A60 C03 D22 E16 *J5 4132-228
Insecticidal compsn. esp. for combating ants - 84990B/47

* SANY 05.04.78 SANKYO KK D16 E12 J04 (E14) *J5 4132-527
Stable aq. iron complex salt soln. prepn. - 85074B/47

* SANY 06.04.78 SANKYO KASEI KK A97 D15 H01 J01 (A11) *J5 4132-352
Treating turbid water used e.g. in tunnelling or boring (oil) wells - 85010B/47

SAOK 21.10.75 SANYO KOKUSAKU PULP C03 D22 F09 =J5 2051-003
Prevention of bacterial decay by covering timber - 85391B/47

* SAOK 21.10.75 SANYO KOKUSAKU PULP C03 D22 F09 *J7 9034-802
Prevention of bacterial decay by covering timber - 85391B/47

* SAOK 04.04.78 SANYO KOKUSAKU PULP A96 B03 D13 E13 *J5 4132-599
Isolating sweet substances from Stevia rebaudiana Bartoni leaves - 85106B/47

* SARB/ 23.08.74 SARBAEV A N C03 D13 *SU -650-601
Synthetic additive for animals fodder - 85573B/47

SARS 13.04.78 SARTORIUS GMBH A88 D15 E36 J01 (A11) =EP ---5-193
Asymmetric cellulose hydrate ultrafiltration membranes - 77583B/43

* SATO/ 05.04.78 SATO M D22 (D16) *J5 4132-238
Deodorant for use in shoes - 84996B/47

* SCHO/ 08.05.78 SCHONERT K D13 *DT 2820-081
Stable, aromatised carbohydrate food flavouring material prepn. - 84266B/47

SCHU 26.11.76 SCHULKE & MAYR GMBH D22 E14 (D15) =GB 1556-323
Solid antimicrobial agents contg. stable percarboxylic acids - 21575A/12

SCIE 16.02.78 SCIENCE UNION & CIE B04 D16 =SF 7900-483

- *SEIS 03.04.78 SEISAN KAIHATSU KAGAKU D13 E12 *J5 4132-600
Pectic acid alkali salt prodn. - 85107B/47
- *SELW- 13.05.78 SELWIG & LANGE MASC D17 *DT 2821-129
Massecuite crystalliser column - 84361B/47
- SHEL 12.05.78 SHELL INT RES MIJ BV D23 E15 =DT 2918-901
Ester(s) of (1,5)-di:methyl-bi:cyclo-(3,2,1)octanol-8 - 82556B/46
- SHEL 12.05.78 SHELL INT RES MIJ BV D23 E15 =GB 2020-659
Ester(s) of (1,5)-di:methyl-bi:cyclo-(3,2,1)octanol-8 - 82556B/46
- *SHIN- 03.04.78 SHINKA SHOKUHIN KK D13 *J5 4132-258
Rapidly permeating liq. sugar in fruit - 85003B/47
- SHIO 23.02.78 SHIONOGI KK B02 C02 D22 =SF 7900-582
7-Beta 5-oxo-4-phenyl-imidazolidine-1-yl 3-chloro 3-cephem-4-acids - 49025B/27
- *SHOW- 08.04.78 SHOWA KOJI KK D15 *J5 4133-746
Preparing drinking water from fluorine-contg. water - 85331B/47
- SIMM- 11.05.78 SIMMERING-GRAZ-PAU D16 =DT 2828-029
Preliminary extn. of hops for use in beer prodn. - 52591B/29
- SIMM- 11.05.78 SIMMERING-GRAZPAUK D16 =GB 2020-693
Preliminary extn. of hops for use in beer prodn. - 52591B/29
- *SINT- 12.12.75 SINTOFARM INTR MEDI D15 *RU --64-671
Purifying residual waters contg. sulphide - B/47
- SIRE/ 21.02.78 SIREN M J A35 D18 J01 (A11) =SF 7900-530
Filter material for gas or liq. media, esp. tobacco smoke - 63432B/35
- SNAM 12.05.78 SNAMPROGETTI SPA A96 B04 D16 =GB 2020-668
Reduction of phenylalanine levels in blood and other media - 82559B/46
- SNKM 12.05.73 SANKIN KOGYO KK D21 =J5 0001-589
Composition for evaluating decayed teeth - 85350B/47
- *SNKM 12.05.73 SANKIN KOGYO KK D21 *J7 9034-278
Composition for evaluating decayed teeth - 85350B/47
- SNKM 05.04.78 SANKIN KOGYO KK D21 M26 =J5 4132-423
Cast alloys with low m.pt. for mfg. dental prostheses - 75605B/42
- SNOW 08.02.78 SNOW BRAND MILK PRODUCTS A97 D13 =FR 2416-649
Small ice piece-contg. ice cream mfr. - 60197B/33
- SOLL- 13.08.75 SOLICH KG D13 =GB 1556-449
Regulating and conditioning system for chocolate - 13111Y/08
- *SPIT/ 03.03.75 SPITZER J G D21 E17 (E32 E33) *US 4174-386
Aerosol antiperspirant compsn. - 85874B/47
- STAD 22.09.72 STANDARD OIL CO (IND) A97 D15 =SU -650-494
Low molecular weight, oxygen-contg polymers - 28390V/15
- STAH 14.02.78 STANDARD OIL CO (OHIO) A13 B07 D21 G02 (A14 A82 A96 A97) #FR 2416-911
Crosslinked maleic anhydride-indene copolymer - 49747A/28
- STBR 08.04.70 STANDARD BRANDS INC D16 E13 (D13 D17) #J7 9034-819
Enzymatic isomerisation of glucosesyrups in the presence of - 68398S/43
- *STEAG- 22.07.78 STEAG AG D15 *DS 2832-274
Aerator for water returned from turbine condenser - 84237B/47
- *STOP- 21.07.78 STOPPANIL SPA B05 C03 D13 *BE -877-807
Stable anti-haemorrhagic vitamin/k adducts with other vitamin cpds. - 84211B/47
- STRA- 29.10.75 STRAHLEN-U UMWELT G D16 J04 =GB 1556-038
Air-permeable closure for shaker flask - 54444Y/31
- SULA- 24.02.78 SUOMEN LAAKETHDAS B06 D13 =SF 7800-627
Compsns. contg. desired sodium potassium magnesium calcium ratios - 49035B/27
- *SULZ 10.05.78 GEBRUDER SULZER AG D15 J01 *DT 2852-316
Drainage and filtration plant, esp. for water purificn. - 84377B/47
- SULZ 10.05.78 SULZER BROS LTD D15 J01 =GB 2020-562
Drainage and filtration plant, esp. for water purificn. - 84377B/47
- *SUMI- 31.03.78 SUMIKIN KAKO KK D15 *J5 4131-348
Activated sludge treatment of waste water contg. nitrogen cpds. - 84819B/47
- SUMO 12.09.75 SUMITOMO CHEMICAL KK B04 D16 =J7 9034-834
Antitumor procidine derivs. - 05729Y/04
- *SUNZ 04.04.78 SUN STAR HAMIGAKI K D21 E14 *J5 4132-243
Skin-colouring compsn. contg. ferrous salt - 85000B/47
- SUOV/ 28.02.78 SUOVANIEMI O B04 D16 J04 =SF 7800-670
Automatic measurement of agglutination test samples - 64904B/36
- SUPE- 08.05.78 SUPERFORNI RINALDI D11 =DT 2918-277
Continuous electric oven for cooking pizzas on plates - 64747B/36
- *SUZU/ 07.04.78 SUZUKI K D15 E31 (D22) *J5 4133-500
Mfg. ferrous sulphate tablets used for water treatment - 85261B/47
- SVSO 03.04.78 SVENSKA SOCKERFAB AB B04 D16 =SW 7803-732
Modification of enzyme characteristics - 82524B/45
- SYND- 09.02.78 SYNDICAT NAT SUCRE D17 =FR 2416-652
Purificn. of sugar syrup by electrodialysis - 59810B/33
- *SZOL- 12.05.78 SZOLNOKI VAS ES FAI D15 *DT 2820-844
Thermal degasifier for boiler feed water - 84343B/47
- TABA- 09.02.78 FAB TABAC REUNIES D18 (D16) =FR 2416-654
Tobacco treatment for selective nitrate and nitrite decomposition - 82495A/46
- TABU/ 19.05.77 TABUSHII D15 E13 J01 K05 =US 4174-319
Alkyl-substd. cyclic alkylene tetramine(s) - 74814A/42
- TAIS 10.02.78 TAISHO PHARMACEUT KK B04 D16 =FR 2416-949
Amylase inhibitors TAI-A and TAI-B - 59814B/33
- TAKE 30.08.67 TAKEDA CHEMICAL IND KK B05 D16 E16 #DS 1643-539
Production of d-pantoic acid or d-pantolactone - 35741F/00
- TAKE 08.02.72 TAKEDA CHEMICAL IND KK B04 D16 =J7 9034-837
Plasminostreptin a protease inhibitor - 46814U/33
- *TAKE 05.04.78 TAKEDA CHEMICAL IND KK D15 E36 J01 *J5 4132-468
Treating gas contg. ozone - 85039B/47
- *TAKE 05.04.78 TAKEDA CHEMICAL IND KK B04 D16 *J5 4132-501
Antibiotic C-15462A used as bactericide and disinfectant - 85063B/47
- *TAKE 06.04.78 TAKEDA CHEMICAL IND KK D22 E36 J01 *J5 4132-471
Deodorising gas contg. ammonia, amine and/or thioether - 85042B/47
- TAMM/ 10.03.78 TAMMINENT TTT D11 =SF 7800-769
Plaited pastry prodn. machine - 68453B/38
- *TECN- 16.03.78 TECNAL-PROJETOS ASS D23 J04 *BR 7801-609
Quick-action fluorescent lamp reactor - B/47
- *TECN- 20.03.78 TECNAL PROJETOS ASS D14 *BR 7801-681
Drying-cooling unit for cereals - B/47
- TETR 05.04.78 TETRA PAK INT AB D22 =SW 7803-828
Packaging strip sterilising device - 75582B/42
- TEXC 26.12.73 TEXACO INC A25 B05 D25 E16 =DS 2461-075
Prim. sec.-alkylamines prepd. from paraffins continuously - 46059W/28
- *TINT- 26.05.77 TINTOMETER GMBH D15 J04 *GB 1556-082
Determination of pH and chlorine content of swimming pool water 84649B/47
- TIPE- 04.04.78 TIPE REVENT AB D11 =SW 7803-786
Grill oven with access in one vertical side - 58051B/32
- TKAG 06.10.71 TAOKA CHEMICAL KK C02 D22 E12 =J4 8040-919
Organic copper complex useful as pesticide etc. - 85382B/47
- *TKAG 06.10.71 TAOKA CHEMICAL KK C02 D22 E12 *J7 9034-738
Organic copper complex useful as pesticide etc. - 85382B/47
- *TOKA- 10.04.78 TOYO KAGAKU KENKYUS A96 D21 (A26 A60) *J5 4133-794
Rubber stopper used to measure length on root canal in dentistry 85334B/47
- TOPP 04.04.78 TOPPAN PRINTING KK D13 E37 =J5 4132-246
Foodstuff freshness keeping agent - 02461B/02
- TORA 13.02.78 TORAY IND INC A88 D15 J01 (A25) =FR 2416-711
Reverse osmosis membrane contg. tri:isocyanurate polymer - 61748B/34
- *TOSE- 11.05.78 TOSENO-BETRIEB GR D D13 *DT 2820-579
Continuous fatty emulsion prodn. - 84314B/47
- *TOXN 10.05.78 TOYO JOZO KK B04 D16 *GB 2020-647
Macrolide antibiotics with antibacterial and anti:mycoplasma activity 84686B/47
- *TOYM 04.04.78 TOYOBO KK A96 B04 D16 J04 *J5 4131-995
Fixed enzyme membrane for enzyme electrode - 84974B/47
- *TOYM 06.04.78 TOYOBO KK A88 D15 E14 J01 (E36) *J5 4132-487
Liq. sepg. membrane appts. - 85055B/47
- *TRAN- 11.05.78 TRANSMATIC FYLLAN L D14 J04 *DT 2840-029
Dispenser for liquids, pastes, flour, sand, roots - 84374B/47
- TRAN- 08.08.78 TRANSMATIC FYLLAN L D14 J04 =GB 2020-635
Dispenser for liquids, pastes, flour, sand, roots - 84374B/47
- TRIO- 23.12.70 TRIO TURFSTROOIS NV C03 D13 =DS 2158-104
Oral iron preps for young pigs - 40545T/25
- TSUH 23.08.71 TSUKISHIMA KIKAI KK D15 =J4 8029-269
Chemical treatment of waste water - 85407B/47
- *TSUH 23.08.71 TSUKISHIMA KIKAI KK D15 *J7 9035-022
Chemical treatment of waste water - 85407B/47
- *TURI- 23.04.74 MINISTERUL TURISMUL B05 D21 *RU --66-661
Medicinal tooth-paste compsn. - B/47
- UNIC 09.03.78 UNION CARBIDE CORP D12 =SF 7900-723
Inserting sizing disc into casing esp. for viscous meat emulsion 56110B/30
- UNIC 02.05.78 UNION CARBIDE CORP B02 D16 E17 #NL 7804-722
Glutaraldehyde sterilisation of fermentation media - 76297A/43
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 =DT 2918-164
Conc. aq. smoke flavour compsn. for coating tubular food wrapping 82544B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 =DT 2918-258
Wrapping for food products esp. sausages - 82545B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 =GB 2020-533
Conc. aq. smoke flavour compsn. for coating tubular food wrapping 82544B/46
- *UNIC 31.07.78 UNION CARBIDE CORP A97 D12 *US 4174-368
Curved sausage casing prodn. - 85865B/47
- *UNIC- 04.04.78 UNI-CHARM KK A96 D22 *J5 4132-389
Highly absorptive sanitary towel - 85016B/47
- UNIL 27.06.69 UNILEVER NV D13 E13 #SW 7906-939
Food flavouring imparting a roast-meat - 02084R/02
- UNIL 14.02.78 UNILEVER NV A97 D25 =FR 2416-943
Detergent and esp. dishwashing compsn. - 61747B/34
- *UNIL 10.05.78 UNILEVER LTD A97 D25 E19 (E34) *GB 2020-688
High sudsing fabric washing powder - 84695B/47
- UNIL 09.05.79 UNILEVER LTD D25 (D24) =GB 2020-687
Prepn. of spray dried soap contg. washing powders - 82563B/46

NTC 18.09.78 ECODYNE CORP D15 J01 K06 *US 4174-282
Water precoat filter with replaceable filter elements - 85815B/47
JO 15.05.78 UPJOHN CO B03 D22 E13 F09 (D15) *BE -876-261
Alpha-amino-3-chloro-alpha-isoxazoline-5-acetic acid and analogues -
84158B/47
BA/ 12.05.78 URBASCH G D13 *DT 2820-719
Food seasoning and mixing drum - 84321B/47
AT 12.10.77 US DEPT OF ENERGY A81 D15 K07 L02 (A13) *US 4174-293
Disposal of radioactive waste aq. solns. - 85824B/47
DA 12.04.77 US SEC OF AGRICULTURE A35 D22 E12 F06 *US 4174-418
Rendering cellulose bacteriostatic in one or two bath processes -
85892B/47
DA 30.01.78 US SEC OF AGRICULTURE D13 J04 *US 4174-300
High activity copper-silica catalysts prepn. - 85826B/47
MC 04.11.76 USM CORP D18 =CA 1065-637
Skins and hide processing machine - 36714A/21
VO= 16.06.77 VORON UNIV C04 D15 J01 M11 *SU -649-689
Maize and fodder beet fertiliser prodn. - 85486B/47

ER- 15.05.78 VAN DEN BERGH ENGG D13 *GB 2020-544
Steam peeling fruit and vegetables - 84667B/47
BB 20.03.78 VEB BERGMAN BORSIG D15 M11 =J5 4132-440
Electrochemical machining of metals - 72042B/40
AD= 04.01.77 VLADIMIR MILK COMB D13 *SU -650-598
Kefir having low fat content - 85571B/47
AG= 16.06.77 VORON AGRIC INST C04 D15 J01 M11 *SU -649-689
Maize and fodder beet fertiliser prodn. - 85486B/47
LG= 02.02.77 VOLGODONSK SURFACE D16 E16 *SU -650-995
Microbial fatty acid mono-or di:ethanolamide prepn. - 85605B/47
LK- 28.02.74 VEB VOLKSWERFT STRA D12 =SU -651-772
Automatic fish filleting machine - 11035W/07
RM- 27.02.74 VYRMETODER AB D15 =DS 2409-423
Eliminating iron, manganese, etc from water supply - 59043W/36

ACK 02.05.78 WACKER CHEMIE GMBH D15 E32 J03 =DT 2819-153
Mercury and its cpds. removal from waste industrial water - 84527B/47
ACK 02.05.78 WACKER CHEMIE GMBH D15 E32 J03 *EP ---5-262
Mercury and its cpds. removal from waste industrial water - 84527B/47
AKP 08.04.78 WAKO PURE CHEM IND KK A60 D15 E16 (A14) =J5 4133-
Polymerisation of water-soluble monomers e.g. acrylamide - 77796B/43
BB/ 06.04.78 WEBB W G D15 J02 *WP 7900-895
Apparatus for adding gas to liquid - 85915B/47
IS- 17.07.78 GEBRUEDER WEISS KG D15 *BE -877-725
Filtration agent for treating cloudy water and suspensions - 84189B/47
LL 04.05.78 WELLCOME FOUNDATION LTD A96 B04 D16 *EP ---5-271
Determin. of biological substances esp. antigens and haptens - 84531B/47
SS/ 12.09.77 WESSELSKI F A D11 *US 4174-408
Dry powder mix for batter - 85888B/47
EL- 09.02.78 WIELAND FA T A96 D21 =FR 2416-684
Dental device for impressions or holding crowns during insertion -
51613B/34
NK 02.06.73 WINKLER FA KG D11 =DS 2328-250
Front-loading back-discharging multi-zone baking oven - 89000V/52
BLR 04.04.78 WOLVERINE WORLD WID D12 #SW 7803-779
Animal carcass skinning machine - 33717A/19

RD- 29.07.75 YARDNEY CO A96 D21 =GB 1556-184
Splint for immobilising damaged limb - 09316Y/06
SH/ 04.04.78 YASHIMA S D13 *J5 4132-247
Mfg. sterilant for food - 85002B/47
SH 05.04.78 YOSHITOMI PHARM IND KK A97 C03 D22 F09 (A25 D15)
5 4132-230
Microbicide for industrial cooling water and paper pulp - 77643B/43
SH 05.04.78 YOSHITOMO PHARM INDS A97 C03 D22 F09 (A25 D15)
W 7902-934
Microbicide for industrial cooling water and paper pulp - 77643B/43
JD/ 20.02.75 YOUDELIS W V D21 M26 =DS 2606-488
Amalgamable dental powder - 52114X/28

ID 15.12.71 ZH BISEIBUTSU KAGAKU KEN B03 C03 D13 (C02) *J7 9022-
Zasugamycin deriv. feedstock additive promoting growth acceleration -
5337B/47
PO= 10.05.78 ZAPOROZHE TITAN MAG D16 L02 M25 *DT 2918-738
Portland cement clinker mix - 84456B/47
EM- 19.05.78 ZUID NED MELKIND D13 *BE -876-343
Cooking fat giving good browning - 84175B/47



741-F BDE	11148-T DE	FR 2182-187 V05+	11035-W D	34315-X D	67428-X DM	FR 2324-808 Y25	SW 7613-242 Y27
R 1542-706 Q00	BE -770-927 T07+	J4 9061-951 V33+	DL -109-798 W07	DT 2546-881 X19	J5 0048-748 X36	US 4032-438 Y27	J5 2081-964 Y34
B 1198-530 R28	J4 7007-949 T18	GB 1424-406 X07+	DT 2500-349 W37	BR 7506-855 X42	J7 9035-023 B47	GB 1516-602 A27	DK 7605-325 Y37
S 3600-279 S37	DT 2052-321 T19	CA -991-942 X29	SW 7500-955 W42	FR 2299-065 X49		CA 1065-768 B47	FR 2336-354 Y43
L -136-347 T41	NL 7110-656 T19	CH -577-028 X29+	NO 7500-097 W43	US 4025-438 Y22	80897-X AD		BR 7607-915 Y48
L 6712-459 Q01	FR 2103-942 T28	CA -992-423 X30	SU -651-772 B47	GB 1499-347 A05	US 3985-128 X43	09316-Y AD	ZA 7607-096 A20
S 1643-539 B47+	ZA 7107-059 T32	CA -992-832 X31		CA 1065-763 B47	NL 7605-258 X51	BE -844-687 Y06	OE 7608-761 A22
	DT 2117-427 T43	OE 7303-777 A11+	16655-W BDE		DT 2624-531 X51	US 4006-741 Y07+	US 4126-544 A48
084-R DE	GB 1320-996 U25	US 4174-291 B47	J4 9100-289 W10	36304-X D	FR 2313-082 Y12	NL 7608-402 Y08	CA 1056-963 B27
T 1932-799 R02	CH -557-328 W05+		J7 9034-836 B47	DT 2546-787 X20	PT -65-128 Y43	DT 2634-122 Y08	GB 1556-213 B47
2012-073 R23	DS 2052-321 B29	08613-V D		NL 7512-342 X20	ZA 7603-222 A08	SW 7608-511 Y14	
2012-074 R23	DS 2117-427 B47+	NL 7210-264 V05	46059-W ABDE	SW 7511-691 X24	CH -594-401 A09	FR 2319-381 Y19	45410-Y D
A 6904-539 S13		DT 2234-263 V06+	BE -823-733 W28	J5 1076-299 X33	GB 1511-771 A21	BR 7604-877 Y34	DT 2556-210 Y26
A 6904-568 S13	40545-T CD	FR 2196-648 W20	NL 7414-654 W29	FR 2288-476 X34	CA 1065-719 B47	ZA 7604-548 Y35	NL 7602-532 Y26
B 1283 913 T31	BE -776-445 T25	GB 1402-769 W33	DT 2461-075 W29	GB 1487-650 Y40		DL -126-689 Y45	SW 7609-299 Y30
B 1283 912 T31	NL 7018-715 T28	DS 2234-263 B47+	J5 0095-212 W39	US 4131-607 B02		IL -50-036 A33	J5 2073-189 Y31
S 3697-295 T43	DT 2158-104 T30		FR 2256-148 W42	SU -632-291 B34	83065-X DG	US 4136-686 B06+	DK 7603-573 Y35
S 3004-548 U07	CH -567-564 W46	21645-V D	US 3917-706 W47	US 4174-313 B47	BE -842-684 X45+	CH -610-757 B23	FR 2334-628 Y39
S 3004-779 U07	DS 2158-104 B47	J4 8026-979 V12+	GB 1438-216 X23		DT 2625-427 Y02	US 4169-469 B41+	ZA 7605-995 Y43
S 3024-268 U30		J7 9034-833 B47	CA 1029-040 A16	46070-X ADF	FR 2314-453 Y13	GB 1556-184 B47	DS 2556-210 A19
S 931-152 U33	76318-T BCDE		IT 1027-988 B11	BE -837-635 X25	J5 2113-383 Y44		US 4115-274 A39
S 541-296 U47	NL 7205-866 T48	22262-V DEG	DS 2461-075 B47	NL 7601-202 X35	GB 1503-435 A10+	11486-Y D	IL -50-782 B29
S 552-348 V39	DT 2216-108 T49	NL 7311-813 V12+		DT 2555-053 X35	CH -596-830 A15	DT 2632-139 Y07+	J7 9020-473 B33
S 3904-655 W38	BE -783-251 U01	DT 2344-805 V13+	55905-W AD	J5 1103-200 X43	US 4106-478 B08+	FR 2318-595 Y18+	GB 1556-040 B47
S -150-120 X33	FR 2139-421 U12	FR 2208-950 V40+	DT 2500-495 W34	FR 2309-584 Y09	CA 1065-728 B47	US 4048-340 Y38+	
S -150-663 X43	J4 8048-465 U37	ZA 7305-759 V35	FR 2260-538 W48	DL -125-495 Y25		GB 1556-178 B47+	46971-Y AD
S 1932-799 Y06	DL -101-094 V01	J4 9091-994 V45	GB 1473-481 Y19	GB 1494-541 Y49	83610-X D		BE -850-017 Y27
S 4020-170 Y18	CH -552-338 V39	US 3893-840 W29	DS 2500-495 A30	J7 7050-240 A04	FR 2295-878 X45	12732-Y DEF	NL 7614-585 Y29
S 4080-367 A17	GB 1390-443 W15	GB 1445-635 X33	CA 1065-789 B47	US 4136-239 B05	DT 2557-638 X47	BE -845-282 Y08+	DT 2559-318 Y29
S 1035-777 A33	OE 7308-694 W19	GB 1446-471 X34		DS 2555-053 B47	US 4089-149 A27+	DT 2636-673 Y09+	SW 7614-697 Y32
S 4134-901 B04	US 4150-026 B18	CA -996-307 X39	59043-W D		GB 1525-410 A38	NL 7609-155 Y10+	NO 7604-382 Y33
S 7906-939 B47+	J5 4073-776 B30	CA 1009-848 Y21	DT 2409-423 W36	52114-X DM	CA 1052-334 B16	SW 7609-159 Y13+	J5 2083-973 Y35
	J7 9023-968 B37	DK 7900-967 B47	SW 7402-452 W42+	BE -838-429 X28+	CA 1065-819 B47	FR 2321-565 Y21+	DK 7605-893 Y38
99-R AL	CA 1065-875 B47	28390-V AD	DS 2409-423 B47	NL 7600-993 X37		US 4025-444 Y22+	SF 7603-711 Y38
S -737-870 R08		NL 7312-961 V15		DT 2606-488 X37	89205-X D	J5 2053-095 Y23+	FR 2336-883 Y41
S 1942-905 S10	10835-U D	FR 2200-203 V25	68010-W DH	NO 7600-513 X41	FR 2298-638 X48+	GB 1556-437 B47+	ZA 7607-712 Y50
S 2057-459 S33	BE -787-686 U08	US 3832-301 V36	J5 0070-582 W41	SW 7601-977 X41	DT 2521-126 X49+		DL -128-098 A08
S -882-177 S40	DT 2143-945 U12	J4 9087-575 V43	J7 9034-830 B47	BR 7601-018 X45	GB 1524-486 A37+	13111-Y D	US 4123-589 A45
S 1283-544 T30	NL 7211-170 U12	ZA 7305-909 W22		J5 1107-222 X45	DS 2521-126 B47+	DT 2536-063 Y08	DT 2560-007 A47+
S 959-190 Y52+	J4 8033-087 U27	IL -43-145 X34	11288-X D	DK 7600-693 X46		DK 7603-642 Y18	DS 2559-318 B15
S 1942 905 B47+	FR 2154-447 U28	GB 1448-695 X37	CH -570-942 X07	FR 2301-227 X52	91788-X BD	BR 7605-276 Y34	OE 7609-847 B44
	GB 1403-257 W34	SU -650-494 B47	BE -832-550 X10	SF 7600-219 X52	NL 7605-169 X49	DS 2536-063 Y40	US 4174-436 B47
19-S BCD	CS 7205-928 W39		NL 7509-822 X10	ZA 7600-135 Y04	DT 2621-215 X50	DT 2559-647 Y42	
S -759-570 S23+	CH -575-962 X25	32981-V BDE	DT 2535-636 X11	PT -64-824 Y04	GB 1493-993 Y49	US 4059-047 Y48	54444-Y DJ
S 2056-983 S24	DS 2143-945 B47	DT 2350-647 V18	SW 7508-862 X15	US 4039-329 Y32	FR 2361-878 A20	GB 1556-449 B47	FR 2329-348 Y31
S 7017-401 S24		FR 2202-154 V28	NO 7502-859 X16	GB 1521-632 A33	CA 1065-672 B47		GB 1556-038 B47
S 2073-428 T01	46814-U BD	J4 9061-386 V41	DK 7503-729 X20	OE 7600-532 B18		13216 Y DE	59399-Y D
S 7007-786 T02	BE -794-975 U33	US 3871-960 W13	SF 7502-335 X22	CA 1053-034 B21+	96565-X DE	DT 2634-077 Y08	BE -851-561 Y34
S -91-032 T41	DT 2304-780 U34	GB 1425-648 X08	FR 2282-406 X23	DS 2606-488 B47+	DT 2622-761 X52	NL 7608-250 Y08	DT 2651-464 Y35
S 37-9-673 U12	NL 7301-822 U35	CA -998-955 X46	DL -120-420 X32		J5 1143-010 Y04	J5 2017-460 Y12	NL 7701-679 Y36
S -535-261 U25	FR 2181-710 V05	J7 9034-835 B47	BR 7505-257 X34	53796-X ADF	US 4046-705 Y37	US 4014-905 Y14+	J5 2102-444 Y40
S -535-259 U25	J4 8082-089 V06		ZA 7505-216 X35	US 3965-906 X28	J7 9032-644 B45	FR 2319-640 Y19	SW 7701-800 A13
S 1336-318 U45	GB 1414-696 W47	33005-V BCD	OE 7506-278 Y31	BE -838-759 X29	DS 2622-761 B47	GB 1496-098 Y51	FR 2365-964 A26
S -556-357 V52	US B328-077 X17	DT 2351-344 V18	GB 1501-480 A07	NL 7601-793 X37		CH -599-758 A24	FR 2365-968 A26
S 5017-075 W28	CH -575-467 X25	BE -806-029 V18	IL -47-908 B02	DT 2605-551 X37	97977-X D	CH -599-757 A24	DT 2660-254 A51
S -972-363 W34	CA -994-692 X35	NL 7314-099 V18	CS 7505-651 B06	BR 7601-126 X45	US 3997-673 X52	US 4114-630 A39+	GB 1556-297 B47
S 7307 973 X51	US 4014-860 Y14	FR 2202-680 V29	CA 1065-765 B47	DK 7600-773 X45	GB 1556-034 B47	US 4174-327 B47+	
S 7008 019 X51	J7 9034-837 B47	ZA 7305-897 V35		SW 7600-861 X47			
S -507-245 A32		J4 9075-796 V39	13372-X BCDE	FR 2301-186 X52	03952-Y CD		20325-Y D
S 2056-983 B47+	48220-U DM	DL -111-403 W19	DT 2533-275 X08	PT -64-792 Y04	BE -845-046 Y03		DT 2635-435 Y12+
	US 3749-570 U34	GB 1439-668 X25	BE -831-929 X08	ZA 7600-462 Y43	DT 2637-362 Y09		FR 2322-927 Y23+
94-S BDE	GB 1373-076 V45	CH -584-287 Y09	NL 7509-135 X08	GB 1539-786 B06	NL 7609-140 Y10		US 4173-904 B47+
S 2104-620 S32+	NL 7305-931 V46	IL -43-295 Y16	SW 7508-257 X13	CH -608-699 B09	GB 1556-439 B47	23410-Y D	
S 2077-172 T04	SW 7305-040 V49	CS 7307-048 A51	J5 1043-722 X22	DK 7900-157 B43		US 4013-410 Y13	74153-Y AD
S -517-076 T13	DT 2324-820 V52	SU -618-053 B23	FR 2285-396 X27	CA 1065-554 B47	05729-Y BD	FR 2361-118 A19+	BE -853-559 Y42
S 1309-605 J11	J4 9122-816 W05	RU -64-690 B47	BR 7504-874 X31		BE -846-035 Y04+	GB 1531-035 A44+	DT 2716-606 Y43
S 3798-206 V13+	FR 2228-469 W09	J7 9034-838 B47	US 3998-754 Y01	56071-X ADF	NL 7610-032 Y13+	CA 1064-668 B45+	NL 7704-035 Y44
S 4014-744 V18	J4 9122-816 W10		GB 1508-157 A16	BE -838-886 X30	DT 2640-420 Y14+	DT 2638-646 B47+	SW 7704-252 Y47
S -947-279 V22+	CA -971-004 W31	35234-V D	CA 1065-896 B47	NL 7601-792 X37	SW 7609-960 Y16+		J5 2126-494 Y48
S 4014-217 V18	CH -572-526 X15	J4 8036-091 V19		DT 2605-552 X37	J5 2034-982 Y17	23851-Y AD	NO 7701-276 Y48
S 4014 218 V18	IL -42-247 X45+	J7 9034-706 B47	22545-X D	BR 7601-125 X45	J5 2038-086 Y18	DT 2639-584 Y14	SF 7701-162 Y51
S 2104-620 B47+	NL -156-447 A17+		US 3943-155 X12	DK 7600-772 X45	J5 2038-087 Y18	NO 7602-874 Y19	DK 7701-637 A02
	J7 8015-452 A25+	88666-V AD	GB 1458-800 X51	US 3994-299 X50	FR 2323-394 Y24+	SW 7609-243 Y19	FR 2348-227 A06
98-S DE	DS 2324-820 B47+	BE -815-977 V52	CA 1065-887 B47	FR 2301-189 X52	J7 7035-759 Y40	US 4022-256 Y20+	BR 7702-303 A21
S 7004-989 S43		DT 2427-671 W02		PT -64-776 Y04	J7 8007-517 A15	FR 2325-563 Y26	CA 1065-792 B47
S 2016-569 S45	62779-U DE	FR 2232-303 W12	34240-X D	US 4014-341 Y14	US 4091-093 A28+		75870-Y BD
S 3623-953 T01	NL 7304-365 U42	US 3937-811 X08	DT 2544-384 X19	ZA 7600-461 Y43	GB 1519-101 A30+	GB 1556-206 B47+	BE -853-720 Y43
S 2086-752 T11	DT 2315-640 U43	GB 1476-194 Y23	SW 7510-949 X23	GB 1540-474 B07	J7 9034-834 B47		DT 2717-980 Y46
S 1267-496 T12	FR 2178-221 V02	CA 1024-895 A07	NO 7503-522 X24	CH -608-698 B09		27172-Y AD	SW 7705-042 Y50
S -775-736 T22	J4 9007-250 V13	CH -603-157 A37	SF 7502-914 X31	DK 7900-156 B43	05978-Y BD	BE -847-353 Y16+	J5 2134-015 Y51
S -937-884 U52	GB 1391-736 W17	US RE29-871 B02	FR 2288-474 X34	CA 1065-553 B47	DT 2532-183 Y04	NL 7611-446 Y18+	FR 2350-397 A08
S RE28-885 X28+	CH -560-663 W21	DS 2427-671 B47	US 3976-804 X36		BE -844-286 Y05	SW 7611-416 Y21+	BR 7702-807 A14
S 9034-819 B47+	CH -561-514 W25		ZA 7506-435 X44	60212-X BCD	J5 2049-298 Y22+	J5 2049-298 Y22+	DL -130-489 A23
	CH -561-677 W25	89000-V D	GB 1495-468 Y51	DT 2602-770 X32+	NO 7603-506 Y22+	DT 2646-655 Y23+	DS 2717-980 B47
99-S D	CH -561-676 W25	DT 2328-250 V52	CH -594-361 A09	BE -837-831 X33+	DT 2646-655 Y23+	FR 2328-007 Y29	
S -767-769 S49	US 3923-896 W51	DS 2328-250 B47	OE 7507-989 A35	NL 7514-381 X33+	FR 2327-943 Y17	BR 7606-858 Y38+	83228-Y BD
S 7107-325 S50	US 3968-161 X29		CA 1062-952 B41	SW 7600-637 X42+	ZA 7604-229 Y35	DL -127-632 A06+	DT 2717-978 Y47
S 2126-444 S50	J7 8046-834 B03	09111-W D	CA 1065-674 B47	J5 1100-073 X42+	US 4061-537 Y50	FR 2354-359 A12+	J5 2134-012 Y51
S -518-685 T20	DS 2315-640 B47	BE -817-803 W06		DK 7600-302 X42+	GB 1556-199 B47	US 4087-391 A25+	DS 2717-978 B47
S -90-308 T31		NL 7408-657 W06	34261-X DJ	SF 7600-175 X44+		SU -650-509 B47	
S 7103-381 T36	64710-U DEJ	DT 2336-639 W07	DT 2545-875 X19	FR 2298-328 X48+	07602-Y DH		88410-A DF
S 1336-889 U46	J4 8052-695 U43	SW 7409-357 W11	SW 7511-646 X23	PT -64-741 Y27+	BE -846-363 Y05		BE -859-194 A05
S -946-245 V20	J7 9034-718 B47	FR 2237-958 W18	US 3969-245 X30	GB 1528-639 A42+	NL 7610-370 Y14	36276-Y D	DT 2743-525 A14
S -403-130 W05		GB 1467-819 Y12	FR 2288-710 X34	HU T016-923 B36+	DT 2641-830 Y14	BE -848-652 Y21	FR 2366-109 A26
S -63-754 B47	69744-U DE	US 4036-865 Y30	GB 1522-204 A3				

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CENTRAL PATENTS INDEX CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

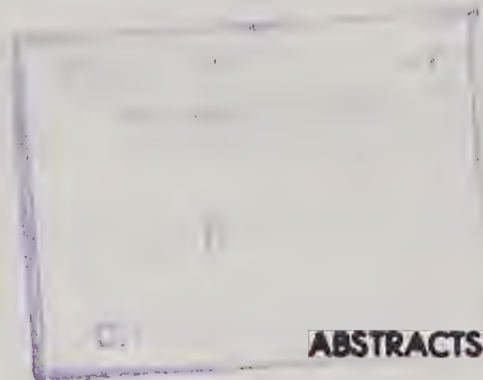
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ABSTRACTS

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COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	20 NOV - 26 NOV 79	876,396 - 876,563
-Non Delayed	16 NOV 79	877,858 - 878,005
CANADA	13 NOV 79	1,066,001 - 1,066,450
DENMARK	5 NOV 79	7,801,571 - 7,901,578
W. GERMANY		
-DAS	22 NOV 79	1,500,597 - 2,918,284
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UNITED KINGDOM	28 NOV 79	1,556,451 - 1,556,920 2,020,951 - 2,021,370
ISRAEL	31 OCT 79	39,367 - 57,003
JAPAN		
-Unexamined	— 18 OCT - 24 OCT 79	47,027,792 - 53,062,764 54,133,901 - 54,137,300
-Examined	1 NOV - 7 NOV 79	79,035,201 - 79,036,200
NETHERLANDS	15 NOV 79 12 NOV - 18 NOV 79	161,966 - 162,290 7,804,908 - 7,903,791
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UNITED STATES		
-Reissues	20 NOV 79	Re30,151 - Re30,158
-Patents	20 NOV 79	4,174,542 - 4,175,291

*Printed patents actually published mid November, 1979

**Includes numbered Basics from Weeks B36, B38 and B41

Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Other Classes	Publication Date	Main CPI Class for Section	Latest Priority	Earliest Disclosure Basic Patent	Accession No	Earliest Priority	Patent No	IPC
MEDA-				A89			69369W/42		=US 3964-992	
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)										
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)										
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26										

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

BERN D11 78922W/48 = DS 2422-560
Dough mixing and kneading machine - supports kneading bowl by claws from lid on bracket with mixing tool and drive
WERNER & PFLEIDERER 09.05.74-DT-422560
(22.11.79) *DT2422-560 A21c-01/14
Dough mixing and kneading machine is fitted with a kneading trough which has along the top rim a solid flange. This fits against a flange of the cover which is a part of the machine structure. Several claws are distributed over the periphery of the lid. They are actuated by vertical double-acting power cylinders and have trunnions which slide in L-shaped grooves. In the applied position, they clamp the two flanges together.
To break the connection, the claws are lowered and finally automatically swung outward. This is a simple method of positioning and fixing the kneading trough and requires little space. 9.5.74 as 422560 (6pp39)

MAAS/ D11 40662A/23 = DS 2654-318
Dipping plate for rolls - with detachable cups in plate recesses for easy cleaning
MAAS-MORANT A 30.11.76-DT-654318
(22.11.79) *DT2654-318 A21c-11
Dipping plate for baking crusty rolls has a pattern of hemispherical recesses, each of which can accept a loose cup of similar shape. Each cup has a wide flange on the periphery with which it rests on a flange around a recess. Four round-headed pins are arranged at the underside of the cup flange, these fit into keyhole-shaped openings in the recess flange in which they are locked by a bayonet movement.

This greatly facilitates the cleaning operation because only the cups need cleaning or replacing. 30.11.76 as 654318 (9pp39)

RIJK- D11 87114B/48 = EP ---5-570
Forming a continuous layer of emulsified material - using shearing action to break down structure of material and improve its workability
MACHINEFAB RIJKAAR (RUTT/) 09.05.78-NL-004983
+P62 Q36 (28.11.79) *NL7804-983 A21c-09/04 +A21c-03/02 B26d-04/78 B65h-29/66
S: E (DT, FR, GB, NL).

A mass of an emulsified material, such as butter or margarine, is formed to a layer of desired thickness by scraping a quantity of the material from the mass and separating a part of that quantity with the required thickness. The parts are then fed together to form a continuous layer of the same thickness.

The scraper pref. comprises a number of scraper blades rotating about a common shaft with a backwardly inclined edge zone. The continuous layer produced is removed from the scraper blades by a fixed blade protruding into the trajectory of the scraper blade tips by an amt. equal to the thickness of the layer. The blade tips are flexible and deform as they pass the fixed blade.

The device is ideally suited to prodn. of pastry crust where it is necessary to form layers of dough and butter or margarine together. The initial shearing action of the scraper blades breaks down the structure of the blocks of emulsified material enabling it to be worked more easily in the further prodn. stages. The material produced is far more workable than layers produced by traditional extrusion or cutting processes and the machinery required is therefore lighter and uses less energy.

5.79 as 200227(12pp1370).
(C) ISR: GB1290704; DT2050803.

INGR- ★ D11 86408B/48 ★GB 1556-815
Easily dispersed gluten additive for food prods. - prepd. by reaction of gluten and xanthan gum
IND GRAIN PROD LTD 27.08.76-GB-035670
A97 (28.11.79) C07g-07
Vital or undenatured wheat gluten modified by reaction with xanthan gum is claimed. The prod. is made by mixing xanthan gum with a dough of wet gluten at pH below 8 until a malleable extensible mass is obtd. which is then frozen or dried.

The prod. is esp. useful as an additive for baked goods. It is easily dispersed, has no tendency to agglomerate, and has greater malleability and water-inhibiting power than ordinary gluten, and gives bread with higher volume and softer crumb.

The pH of the prod. is 5-8 esp. 6.5-7.5. The wt. ratio of gluten to xanthan gum is 200:1 to 4:1 esp. 60:1-40:1. Pref. a buffering or sequestering agent is added, e.g. a citrate EDTA, a phytate, or a phosphate or polyphosphate. Esp. pref. is 0.25-4.0 wt % Na citrate. In preparing the prod. it is important that wheat solubles are excluded as far as possible, and that mixing is not carried out for too long, or a useless pale inextensible rubbery mass is formed.
25.11.77 (14pp955)

FODA D11 62066U/42 = NL-161-972
Dough-loosening additive - contg amino acid with sulphhydryl gp, dried whey, ascorbic acid and dried soya proteins
FOREMOST-MCKESSON I (PAT-) 29.02.72-US-230421
(15.11.79) *DT2309-254 A21d-02/26

Dough improving prepn. comprises a mixt. of (by wt.) (a) 0.5-2.0% cysteine and/or glutathion, (b) 1.0-3.0% ascorbic acid, (c) 20-40% dried whey and (d) 78.5% dried soya protein. The mixt. is added to the usual dough-forming agents comprising flour, yeast, salt and water to give (by wt.) 0.003-0.01% (a), 0.005-0.015% (b), 0.10-0.20% (c) and 0.12-0.40% (d) w.r.t. the flour. The dough is divided into pieces, allowed to rise and baked in the usual way.

The additive mixt. is mixed in at the dough-making stage and gives a considerable redn. in rising time. The additive adapts well to the prodn. of breads of different types. 15.5.72 as 006518 (10pp513)

KALK D11 08216R/06 = NL-162-038
Preparation of granular calcium phosphate for use as - a feed additive
CHEMISCHE FAB KALK GMBH 01.08.68-DT-792185
E33 (15.11.79) *NL6908-608 C01b-25/32

Easily pourable granular calcium phosphate suitable for use as a food supplement is made by spraying a moving bed of calcium hydrogen phosphate with conc. phosphoric acid with a P₂O₅ concn. of 45-60 wt. %, a F-content of < 0.15 wt. % and an ash content of < 10 ppm, whilst maintaining a reaction temp. of 30-150°C and a mol. ratio CaO:P₂O₅ of 1.15 to 1.5. The resulting granules are allowed to mature at 15-30°C and are then dried at 80-150°C.

The process gives a granular prod. which is easily stored and which takes up little moisture even in atmospheres of high relative humidity. The prod. pours easily and can be mixed easily with other components such as Na and Mg cpds. 6.6.69 as 008608 (4pp513)

RUTT/ ★ D11 87114B/48 ★NL 7804-983
Forming a continuous layer of emulsified material - using shearing action to break down structure of material and improve its workability
RUTTEN J P 09.05.78-NL-004983
+P62 Q36 (13.11.79) A21c-03/02 A21c-09/08 B26d-04/78 B65h-29/66

A mass of an emulsified material, such as butter or margarine, is formed to a layer of desired thickness by scrap-

ing a quantity of the material from the mass and sepg. a part of that quantity with the required thickness. The parts are then fed together to form a continuous layer of the same thickness. Pref. the scraper comprises a number of scraper blades rotating about a common shaft with a backwardly inclined edge zone. The continuous layer produced is removed from the scraper blades by a fixed blade protruding into the trajectory of the scraper blade tips by an amt. equal to the thickness of the layer. The blade tips are flexible and deform as they pass the fixed blade. The device is ideally suited to prodn. of pastry crust where it is necessary to form layers of dough and butter or margarine together. The initial shearing action of the scraper blades breaks down the structure of the blocks of emulsified material enabling it to be worked more easily in the further prodn. stages.

The material produced is far more workable than layers produced by traditional extrusion or cutting processes and the machinery required is therefore lighter and uses less energy. 9.5.78 as 004983 (10pp1370)

NACO- ★ D11 87116B/48 ★ NL 7805-155
Inhibition of dust from flour by oil coating - using metering device to proportion atomised oil onto flour pref. in an amt. of 1.5 wt. per cent

NAT COOP AAN CEBECO 12.05.78-NL-005155
(14.11.79) A21d-02 B01f-03/12 B01j-04/02

Flour, esp. tapioca flour, is rendered dust free by spraying it with atomised plant or animal oil in an atomised condition and in the proportion of ca. 1.5% by wt., this being the best proportion to prevent dust without adversely affecting the fluid properties of the powder. The appts. comprises a feeder/seive for the flour, a metering device for the oil, a mixing arrangement for the flour with the atomised oil and a conveyor for removing the mixt.

Used esp. in inhibiting dust pollution of the atmosphere in transferring the flour from sea ships into inland barges or coasters; pref. the installation is built into an intermediate ship between the sea ship and the elevator ship or built into the elevator ship itself.

Fluid properties of the flour are not affected and since the oil is applied to the flour in its finest form, there is no subsequent breakdown of the flour particles to reduce the effectiveness of the treatment. 12.5.78 as 005155 (6pp)

STAM- ★ D11 B/48 ★ OE 7807-6
Meal-based bakery prods. mfr.
STAMAG AG 25.10.78-OE-007659
(15.11.79) A21d-13/02

KHSU= ★ D11 87228B/48 ★ SU -651-7
Baking laminar dough cakes etc. - using two/stage ultra high frequency electromagnetic field treatment to improve storability
KHARK SUPPLY INST 27.04.77-SU-481502
(18.03.79) A21d-06

Cakes etc. are prepd. from a dough stored in the frozen state; the baking is carried out in two stages; in the first stage, cyclic ultra-high-frequency electromagnetic field is used.

This method is improved by carrying out the thawing the frozen dough in an ultra-high-frequency field in 30-45 sec. periods at 60-90 sec. intervals.

The method is used in mass of high quality prods. with increased storage life.

Belyaeva, L.M., Odarchenko, N.S., Vasilchenko, N.S.
Bul. 10/15.3.79. 27.4.77. as 481502 (2pp70)

GRAI= ★ D11 87322B/48 ★ SU -652-9
Grain e.g. buckwheat cleaning and grading - includes mechanical impurities removal, sieving into fraction, dehushing, husked grain sepn. and aspiration to remove fines

GRAIN PRODS RES (MOFO=) 18.11.77-SU-545707
P41 (28.03.79) B02b-01

The process includes sepn. of mechanical contaminants, preliminary and final sorting into fractions, dehushing fractions, to sieving to separate the clean grain from the non-husked grain, with the latter being returned to the husking stage, and aspirating the grain to take away the fines.

The quality and grading of the grain are improved, by layering the grain into light and heavy fractions after the aspiration, taking out the seeds from the latter and completing the final separation. The remainder of the material, in the heavy and light fractions, are separated according to their resilient and frictional properties, to remove the seeds.

Gortinskii, V.V., Sokol, E.N., Alterman, A.E. et al.
Bul. 11/25.3.79. 18.11.77. as 545707 (3pp29)

D12: MEAT; FISH PROCESSING

SECA- ★ D12 86347B/48 ★ FR 2417-259
Preheater for animal carcass by immersion prior to depilation - recycles soaking water via electric heat exchanger and filter
SECATOL 16.02.78-FR-004669
(19.10.79) A22b-05/08

In an appts. in which a carcass is heated in a hot water tank, the water is recycled via a system outside the tank where it is heated to maintain required temp. and also continuously cleaned, e.g. by filtration.

Recycling pref. takes place by pumping water through a filter and an electric heat exchanger. All parts in contact with soiled water are pref. made of stainless steel. The plant is pref. started up automatically, with the filter out of circuit, during night hours when low tariff electricity can be used.

Used for preheating carcasses of slaughtered animals, partic. pies, to make them ready for depilation. 16.2.78 as 004669 (6pp448)

SCHI- D12 55133A/31 = GB 1556-644
Machine for removal of bacon rind - with pivoting conveyor belt and pressure roller to accommodate prods. of different thicknesses
MAJA-MASCH SCHILL H 07.04.77-DT-715546
(28.11.79) *BE-865-413 A22c-17/12 + A22c-25/17

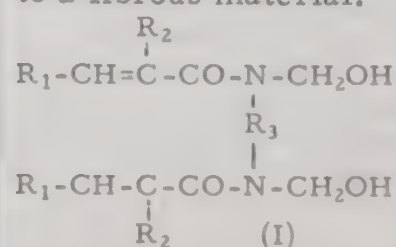
Rind or skin can be removed from bacon, meat or fish by appts. which includes a conveyor for supplying bacon, for example, to a traction roller. The plane of the conveyor

is tangential to or in the cross-section of the roller, and the end of the conveyor near the roller can be moved relative to the roller to vary the engagement area of the bacon with the roller. A pressure roller is located at the same end of the conveyor. Pref. the conveyor is pivotable about the end remote from the roller.

The appts. can be used continuously irrespective of irregular thickness. 10.3.78 aa 009638 (9pp1376).

FARH D12 16424Y/10 = GB 1556-8
Tubular film, esp. for sausage skin, from chemically-modified albumin - by treating and extruding onto fibre support
HOECHST AG 04.09.75-DT-539302
A97 E19 + R58 (A11) (28.11.79) *BE-845-760 H04q-09

A fibre-reinforced article is prepd. by applying a soln. of protein that has been modified with ≥ 1 cpd. of formula (I) to a fibrous material.



In the formula R_1 and R_2 are each H or 1-6C alkyl, R_3 is $(CH_2)_p$ gp. where p is 1-18, a $-CHR_4$ gp. where R_4 is 1-alkyl. After standing, the protein mixt. is admixed with an aq. dispersion of an alkyl-trimethylol urea or alkyl-ethylene-urea, an aq. soln. of an alkylamine-bis(dimethylene-triazinone-tetramethylol or an alkylamide-bis(dimethylol

-triazinone-tetramethylol. The mixt. is allowed to stand until it becomes a spinnable liq.
The modified protein soln. prepd. is esp. used in the mkn. of tubes such as synthetic sausage casings. 2. 9. 76
036407 (12pp931)

D12 44455A/25 =GB 1556-865
bended hook device for overhead rail - with head supported on vertical bearing and nylon runners, used for suspension of carcasses in abattoirs
BLAIR J N LTD 23.09.76-GB-039434 (28.02.69-GB-010845)
Q35 + Q61 (28.11.79) *FR2365-501 + F16b-45
pendible hook structure as described in Claim 1 of 1257220 has grippers in which a part-spherical terminal portion of the shank of the hook is mounted to swivel and is held by a hanger. The hanger comprises a length of extruded metal of channel cross-section. The free ends of the flanges of the hanger incorporate inwardly cranked lips which embrace opposed laterally extending flanges of an overhead rail from which the hook structure is slidably suspended. The part-spherical terminal portion of the shank of the hook is received in a 2-part socket located in an opening in the base or web of the hanger.
The hook structure is used for hanging carcasses in abattoirs, cold-stones, etc. 20. 9. 77, Add to 1257220 (4pp393)

D12 86701B/48 ★J5 4135-260
fish processing - involves immersing in dil. acid soln., treating with warm water, removing sepd. skin and fat and heat pressing
TOSHIN TANPAKU KK 11.04.78-JA-042467
(20.10.79) A22c-25/17 A23I-01/32
The method comprises (a) immersing fish body in dil. soln. of mineral acid or organic acid for the time, during which the fish meat is not remarkably damaged, (b) treating the fish body with warm water to induce the sepn. of epidermis and the sepn. of subcutaneous fat, (c) removing the sepn. of epidermis and fat and (d) heat-pressing the fish body to remove the remaining fat.
By the method fish bodies can be easily treated continuously for the peeling of epidermis and the sepn. of crude fat or fish oil under non-rancidifying condition and fish fat and the fish protein which can be favorably used as material for processed fish foods, can be obtd.
As the acid HCl, acetic acid, citric acid, etc. can be used and the fish body is pref. immersed in 1-5% dil. HCl for an hour to a week. Then fish body is immersed in the warm water of 45-80°C for 1-10 mins. and the epidermis and the subcutaneous fat of the fish body are sepd. by contacting fish bodies each other. The fish body is then adjusted to pH 5.8-6.5 and the remaining fat is removed by heat-pressing the fish body at 80-100°C. Finally the fish body is either dried to obtain fish meal or treated for removal of bone from the fish body, washed with water and deboned to obtain the material for processed fish foods.
14. 78 as 042467 (5pp5)

D12 22682S/13 =NL -161-971
fish food plastics supply apparatus
FRACK M (RAC /) 20.09.69-DT-947736
A88 P14 (A18) (15.11.79) *NL7012-011 A01k-61/02
Feed dispenser for fish comprises a feed holder whose lower end is funnel shaped with an opening at the bottom in which a closure element is located. This element is in the form of a toadstool, is capable of vertical displacement and incorporates a head in the form of a truncated cone attached to a cylindrical part. The top of the cone and the bottom of the cylinder are in contact with the walls of the holder funnel so that an enclosed chamber is formed between the two contact lines.
The stem of the closure element is extended by means of a pendulum and is shielded against ingress of water by a funnel shaped casing fixed to the lower end of the holder funnel. When the pendulum is moved so that the closure element is tilted, one half of the above mentioned enclosed chamber is exposed to the water so that the feed can drop whilst the other half is in communication with the holder funnel so that the enclosed chamber is filled again.
This arrangement provides accurate dosing of the fish food into the water whilst preventing water from entering the holder with the consequent bridging. 14. 8. 70 as 22011 (7pp1370)

D12 43635Q/00 =NL -161-973
Collagen-encased sausage
UNILEVER NV 18.06.68-GB-028919
A97 (15.11.79) *NL6909-339 + A22c-13 B29f-03/04

A consumable material such as sausage meat is extruded with a casing material in a device comprising a rotating hollow mandrel and around the mandrel a sleeve rotating in the opposite direction. The casing material is extruded through the tapered annular space between the two rotating elements. A further stationary pipe is placed inside the rotating mandrel for introducing the consumable material into the casing.

The casing produced is considerably stronger than that produced in conventional extrusion procedures. 18.6.69 as 009339 (14pp1370)

D12 87229B/48 ★SU -651-773
Smoked lean fish prod. mfr. - includes coating salted and partly dried fish with oily liquid e.g. vegetable oil, fish fat or glycerol
KALIN FISHING IND (ATLA=) 09.08.77-SU-516713
(19.03.79) A23b-04/04

The prod. is improved by coating the fish, after the drying, with an oil liquid, in particular a vegetable oil(s), 80% glycerol or an edible fat obtd. by scalding the first (having an acid number less than 5; the polymerisation products contact 1).

By this method, the process is accelerated, the yield is increased and the quality of the product is improved.
Grigorev, V.S., Laptev, A.P., Airapetov, F.S. et al.
Bul. 10/15.3.79. 9.8.77. as 516713 (2pp70)

D12 87307B/48 ★SU -652-939
Animal carcass cleaving unit - with suspended track conveyor and sloping trough along which carcasses are drawn towards pneumatic cutter

LENGD ROSMYASOMOLRE 07.07.76-SU-383384
(28.03.79) A22b-07

The unit for cleaving animal carcasses along the spine, consist of suspension trolley and means to transfer from a single track to a double track, conveyor with fold-back pins, sloping shaped troughs mounted on the support structure, pressing orienter, and transfer to move the half-carcasses from double-to single-track conveyor.

The cleaving mechanism is pneumatically operated and incorporates vibration damping, with a sealed container and cutter connected to the shaft of the pneumatic mechanism. Rigid fixing and quality cutting of different weight carcasses is guaranteed as the latter move continuously along the conveyor, by hingeing the first of the troughs and spring-loading it so that its angle of rotation can be regulated. The support structure has guides for the cutter, and V-shaped guides to prevent lateral movement of the carcass during cutting.

Kulinich, V.V., Shevchenko, V.A. Bul. 11/25.3.79.
7. 7. 76. as 383384 (6pp29)

D12 87390B/48 ★US 4174-551
Feather plucking drum with peripheral rubber projections - with compressible bosses on drum ends for mounting on shaft
MCKENDREE S W 03.01.78-US-866568
(20.11.79) A22c-21/02

A feather plucking device comprises a resilient drum having parallel ends. A central aperture extends from one end to the other, and similarly a series of angularly spaced apertures extend through the drum near its periphery.

A boss is formed integrally with a central portion of each end face of the drum, the bosses extending outwardly from the central aperture. In use the drum is mounted on a rotatable shaft which passes through the central aperture and is firmly secured to the drum by washers which are pressed against the bosses.

The drum is formed with soft rubber projections which pull the feathers from a poultry carcass as the shaft is rotated. The bosses allow the washers to be pressed tightly against the central region of the drum with min. deformation of the peripheral region of the drum. 3.1.78. as 866568 (4pp295)

See Also

D13 NL 162138 D13 SU 635635

D13: OTHER FOODSTUFFS

WELL ★ D13 85978B/48 ★ BE -876-563
Compsns. contg. eicosa:penta:enoic acid - for treatment or prophylaxis of thrombosis, used e.g. as additive for butter, margarine, cooking oil or fat
WELLCOME FOUNDATION LTD 26.05.78-GB-023575 (26.05.78-GB-023574)

B05 C03 (26.11.79) A61k C07c
Compsns. contg. (all Z) -5, 8, 11, 14, 17-eicosapentaenoic acid (I), or a salt, ester or amide thereof, together with a pharmaceutically acceptable carrier are claimed, with the proviso that (a) (I) or its deriv. accounts for $\geq 50\%$ (pref. $\geq 90\%$) of the fatty acid content, or (b) the compsn. is practically free of other more satd. acids or their derivs., or (c) the compsn. is practically free of vitamins. Also claimed are (i) tablets comprising a solid deriv. of (I), and (ii) margarine, butter or cooking oil or fat contg. $\geq 3\text{wt.}\%$ of (I) or its deriv.

(I) and its derivs. inhibit thrombocyte aggregation and cause disintegration of existing thrombi. They are thus useful for the treatment or prophylaxis of thrombosis in humans and other mammals. 25.5.79 as 876563 (36pp367)

AQUA/ ★ D13 85982B/48 ★ BE -877-880
Lollipop production machine with stick insertion mechanism - has cam driven stamps which form sphere without leaving raised collar or seam

AQUARIUS C 25.07.79-BE-877880
(16.11.79) A23g

Lollipops are formed from a continuous strip of candy material on a rotating drum mounted on a horizontal shaft. The forms for the lollipops are distributed around the periphery of the drum, the raw material being pressed into the form and then stamped by two stamps capable of vertical movement only which move towards each other to stamp the raw material in the form to a sphere.

At the stamping station, sticks, fed from a magazine are inserted into the spheres by a pusher mechanism. After withdrawal of the stamps, the clearance between them is sufficiently great to allow the formed lollipops to fall away from the drum at the bottom of the rotation. The sticks are pref. inserted radially inwards and are held in position by a disc rotating with the drum with its plane vertical and with the grooves for the sticks lying along radii.

The mechanism is subjected to less wear than the traditional machines for forming lollipops and the lollipop itself does not have a raised collar or seam to interfere with its consumption. 25.7.79 as 877880 (18pp1370) (F1)

BAUD/ ★ D13 86005B/48 ★ BE -877-941
Milk-shake base prods. also used to make desserts - easily whipped to highly expanded prods. of good stability
BAUDACH G 28.07.78-DT-833173
(16.11.79) A23c

New milk shake bases comprise (a) 86.2% skimmed milk, 3.45% whipping agent not contg. milk fat or saccharose, 0.2% pectin, 1.3% maltodextrin, 8.6% sugar, and 0.2% sodium citrate; (b) 87.92% skimmed milk, 4.26% whipping agent as above, 0.12% thickener (Viscarine (RTM)) and 7.66% sugar; and (c) 87-89% skimmed milk, 7-9% sugar and 2-3.5% of a combination of stabilisers composed of carroub flour, guar gum flour, starch, gelatine, and a vegetable hydracolloid (Hydroma (RTM)) hydrolysed vegetable protein.

In (a), to form the milk shake the prod. is stirred or shaken at $\leq 15^\circ\text{C}$ for 4 secs to at least double the vol. to obtain a liq. prod. stable for 3-4 hrs; with a 9 secs time a prod. of a pudding consistency is obtd. In (b), the mixt. apart from the whipping agent is heated to $40-50^\circ\text{C}$, the whipping agent is then dissolved and the mixture is homogenised first at 144°C , then at 75°C and then cooled. In (c), the dissolved mixt. is homogenised and then heated to a high temp. In all cases a milk powder may be used with the appropriate amt. of water. When the prods. are strongly cooled after 1-2 hrs., an ice cream, dessert, iced food or ice mixture is obtained.

Prods. may be stored without cooling for a long period.

They can be rapidly expanded to whipped prods. having ≤ 15 hrs. stability and which are easily converted into prods. of a pudding consistency. 27.7.79 as 877941 (F1)

QUAK ★ D13 86025B/48 ★ CA 106
Solid, semi-moist animal foods - with caseinate replacement protein isolate and starch system

QUAKER OATS CO 19.05.75-US-578729
C03 (13.11.79) A23k-01/18

Food consists of (all by wt. of food) 5-50 (esp. 20-30) meat or meat prods, 15-50 % moisture content, 10-35 sugar, 1-10% of one or more polyhydric cpds. (I), 0-10% antimycotic agent, 4-25% of a starch system, 0.25% of a protein system, and 7.5-25% of a protein system.

The protein system consists of 1-25% of a soy protein isolate (II), and 0-25% of a casein salt (III). In the compsn, (II) partially replaces (III), and the starch system and (II) combine to replace all the functions of (III).

Replacement of part or all of (III) gives a less expensive, readily extrudable, high protein, palatable semi-moist compsn. 6.5.76 as 251915 (16pp478)

GENO ★ D13 86026B/48 ★ CA 106
Dry mixt. compsn. for acidified milk-based drinks - contg. carboxymethylcellulose dispersed on soluble sugar, acid e.g. adipic, fumaric, lactic, or esp. citric and opt. milk solids

GENERAL FOODS CORP 10.03.76-CA-247514
A97(A11) (13.11.79) A23c-09/10

Dry, beverage mix compsn. for use in prepg. milk-based compsns. consists of (a) a readily soluble mixt. of sugars (I) and/or milk solids (II) with carboxymethylcellulose (III), and (b) an edible acid (IV) to bring the milk-based drink to pH ≤ 5 .

(I) is dextrose or lactose etc, pref. sucrose, (IV) is adipic, malic, fumaric, or lactic acid, etc, pref. citric acid. Compsns. pref. contain 0.15% by wt. of (III) (v. sucrose as (I), wt. ratio sucrose, (III) is pref. 7:1) of particle size 270 US standard mesh, and pref. of lower viscosity. Dry compsns. pref. also contain sweetening agents (pref. sucrose 8-10 wt. % of reconstituted drink), flavours, colours, emulsifying or bulking agents etc. The reconstituted beverage pref. has pH ca 3, and contains pref. 50-90 % by wt. of milk (ie. (III) is present in the dry compsns, and/or reconstitution is with milk). Generally 15-30 g of dry mix (35-50 g if (II) present) are reconstituted with 170 ml of milk (opt. so H_2O if (II) is present).

The compsn may be rapidly and simply reconstituted in aq. media, when (III) is readily solubilised. (III) stabilises the resulting beverage so that it does not deteriorate on standing for relatively long periods of time. 10.3.76 as 247514 (10pp478)

PROC D13 31248S/18 #DS 175
Chip type product cut from dough and fried - in moulds
PROCTER & GAMBLE CO 07.10.69-US-865339 (04.07.757986)

(22.11.79) *US3576-647 +A21c-09

Machine for the continuous prodn. of potato chips and similar edible prods. consists of a punching station where chips are punched between upper and lower dies from an endless tape of rolled-out dough. An endless conveyor under the punching station carries pairs of moulds, each of saddle shape and with perforations. The lower mould receives the chip and the second mould, which is then moved over it, leaves a gap of ≤ 2 mm.

Machine is fully automatic and has a high output with a minimum of labour. 4.7.68 as 757986 (13pp39)

UNIL D13 33803T/21 =DS 21
Pourable margarine - contains aq and oily phases with surface stabilise the suspension

UNILEVER NV 13.11.70-GB-054119
(22.11.79) *BE-775-304 A23d-03/02

A liquid margarine contains a surfactant obtd. by reacting 80-92 pts.wt. of a polycondensate of a 12-20C aliphatic hydroxyacid (acid no. < 70) with 8-20 pts.wt. of a poly-

ate of a 3-6C aliphatic polyvalent alcohol at 180-210°C until the acid no. of the reaction mixt. <10. The margarine also contains a hydrophilic emulsifier comprising Na or K stearate and/or a phosphatide contg. 5-35 wt % of a monoacyl glycerophosphatide.

The margarine contains 0.5-2.5 wt % surfactant (based on the fat phase) and 0.5-3.5 wt % emulsifier (based on the oil phase). The margarine contains 10-25 wt % aq. phase and 90-75 wt % liquid oil and may be used in soups, ragouts, sandwiches, etc. 11.11.71 as 156121 (6pp068)

VA D13 54032W/33 =DS 2405-589
Water soluble protein materials prodn - by treating natural protein aq suspension with proteolytic enzyme

AGFA-GEVAERT AG 06.02.74-DT-405589

C03 (D16) (22.11.79) *BE-825-026 A23j-01 A23l-01/34

asily wettable, water soluble, natural albumin prod. free of bitter taste is prepd. by treating an aq. suspension of a raw material with proteolytic pancreas enzyme at pH 7.5-10 and at 40-60°C so that max enzyme activity is ensured.

The raw material may be whey, milk, soy, maize, potato, meat, oil seed, nut kernal, sunflower seed or egg white. In addn. gelatine or its decompn. prods. are present. Wt. ratio of raw material to gelatine is 1:10-10:1.

The prod. can form aq. solns. stable at temps. >80°C and of concns. up to 50%. The solns. may be stabilised and are useful in the food industry e.g. in the mfr. of fruit and veg. concentrates. Also the prod. is useful in the mfr. of food, medicaments, etc. 6.2.74 as 405589 (5pp945)

HW- D13 36013X/20 =DS 2459-505
Milk spray dryer exhaust fines recovery - by washing in milk which is de-foamed before recycling to evaporator

SCHWARTE A GMBH 17.12.74-DT-459505

(22.11.79) *BE-836-557 A23c-01

Very fine milk powder is recovered from the exhaust air of dryers in the prodn. of milk powder from a preconcentrate of milk in a scrubber in which a washing medium is sprayed in a venturi tube and the dust laden medium is recovered by a swirl insert. This medium is collected in a tank with a froth skimmer near its fluid level which passes the froth to a froth destructor. The fluid is finally returned to the tank.

This ensures a troublefree operation of the drying circuit, free from froth. It only requires simple appts. which operates with a good efficiency. 17.12.74 as 459505 (6pp39)

INA- D13 34600Y/20 =DS 2548-285
Vegetable food processing - in twin worm extruders with tapered worms, dewatering slots and heating section

ET FINANCIERE MEDUN 29.10.75-DT-548285

C03 + P71 (22.11.79) *DT2548-285 A23p-01 + A21d-13 A23k-01 A23l-01

Method for processing starch-contg. materials such as corn, rice, flour, pulses and soya or soya protein in an extruder comprises passing the material in powder form, without pre-moisturising and/or post-drying, into a heated double-screw extruder having conical interengaging screws and subjecting the prod. to an adiabatic expansion at the outlet of the extrusion nozzle.

The double screw arrangement provides a uniform output of extruded prod. Method is suitable for prepn. of textured products for use as foodstuffs or animal feedstuffs. 29.10.75 as 548285 (3pp927)

UDD * D13 86066B/48 ★DT 2820-942
Over-acid solid metal lactate for food additive use - is prepd. by reacting aq. lactic acid soln. with metal, esp. calcium, cpd.

SKW TROSTBERG AG 12.05.78-DT-820942

A23-E12 (A97) (22.11.79) A21d-02/14 A23l-01 A23l-02 C07c-59/08

Over-acid, solid metal lactates having formula $M(C_3H_5O_3)_x$ ($C_3H_6O_3)_n$ (I) (where n is 1-20; x corresponds to valency of metal M and M is pref. Li or an alkaline earth metal) are claimed.

(I) esp. the Ca lactates, are used in foods and drinks. They are water-soluble, contain 1-2% moisture, are free-flowing and do not agglomerate; have a pleasant, acid taste and are free from polylactic acids and lactide and allow the use of lactic acid obtd., for acidifying, up to >80wt. %. 12.5.78 as 820942 (13pp200)

HOEY- ★ D13 86191B/48 ★DT 2919-097
Frozen sweets extraction device - with obliquely crossing needles actuated by two cross arms

HOEYER O G A/S 19.05.78-DK-002239

(22.11.79) A23g-09/22

A mechanism to extract frozen sweets from the pockets of a mould adds an oblique divergent motion to the pickup needles in addn. to their lowering motion. The needles are pref. arranged to move in intersecting directions. Pref. to facilitate the extraction of the frozen sweets, the mould is warmed up before the extraction operation.

This requires only one set of needles and these need not be frozen into the sweets as in the conventional process nor do they need thawing out. 11.5.79 as 919079 (19pp39)

BARH/ ★ D13 86240B/48 ★DT 2920-272
Cereal and seed grain modification - by absorbing synergetically acting mixt. of finely divided solids and oil vehicle

BARHAM H N 19.05.78-US-907834

C03 (22.11.79) A23b-09 A23l-01/10 A23p-01

Whole cereal- and seed grains are treated by contacting with a mixt. of a finely-divided solid material (I), an an oily vehicle (II), in which (I) and (II) act synergistically w.r.t. absorption of grains. Treatment is continued until the mixt. is absorbed by grains.

Process can be used to change nutrient content and/or encapsulate chemicals inside grain or seed tissue. Solids can be incorporated in whole seeds to increase nutrient value for foods and animal feeds and/or increase safety in handling grains. The grains can be treated whole. The mixts. are absorbed in <5 min. 18.5.79 as 920272 (41pp200)

CLER- ★ D13 86348B/48 ★FR 2417-260
Refrigerated reception and storage of milk - allows precooled chilled water to be diverted via storage tank base

CLEREN SA 17.02.78-FR-005263

Q75 (19.10.79) A23c-03/04 F25d-17/02

Appts. is of the type in which incoming milk is precooled on its way to a storage tank by passage through a heat exchanger. The heat exchanger uses, as a cooling medium, chilled water drawn from a refrigerated tank of iced water.

Improvement is that chilled water from the refrigerated tank can now be passed also through a heat exchanger in the base of the storage tank. The tank base heat exchanger pref. takes the form of flat coil similar to those used in evaporator plates of vapour compression refrigeration systems. The condenser of the ice tank refrigeration system is pref. used to heat up a supply of water for other purposes.

Used for cooling and storing milk collected directly from a milking installation, e.g. in a dairy farm.

Cooling is effected much more quickly in the heat exchanger than in the bulk storage tank. The cooling coil in the tank does not entail major structural arrangements for tanks of large capacity. 17.2.78 as 005263 (8pp448)

INRG ★ D13 86349B/48 ★FR 2417-263
Simultaneous extrn. of lipid and protein from oil seed - by boiling in water, adjusting pH, sepg. lipoprotein fraction and extracting lipid

INST NAT RECH AGRON 20.02.78-FR-004799

C03 (D23) (19.10.79) A23j-01/14 C11b-01/14

Lipids and proteins are extracted from oil seeds by (i) making proteins insol. and inactivating enzymes by boiling the milled seed with water, (ii) adjusting the pH of the suspension to 3.7-8.5, (iii) sepg. the lipoprotein fraction, and (iv) extracting the lipids from the lipoprotein and isolating lipid and protein. Suitable oil seeds include oil-rich seeds such as arachis, sunflower, rape, copra, palm and cotton, esp. rape which is normally unsuitable for cattle cakes because of its high content of cellulose and toxins.

The process avoids preliminary defatting of the seeds and gives substantially pure protein and food-grade lipids suitable for man or animals. 20.2.78 as 004799 (20pp288)

LLEG- ★ D13 86355B/48 ★FR 2417-345
Spray tunnel washing screens for draining cheese curds etc. - has conveyor which automatically grips and releases each screen

LLEGOMAT 15.02.78-FR-004672

P13 P43 (19.10.79) A01j-25/11 B08b-03/02

Washing machine of the type comprising a horizontal tun-

nel through which items to be washed are conveyed. Inside the tunnel the items are sprayed with washing liq. which drains to a tank below the tunnel to be recycled.

The conveyor is of the overhead type passing longitudinally along the top of the tunnel. From the conveyor are suspended spaced carriers to which the items can be temporarily attached to be transported through the tunnel. Attachment is by means of a spring gap dog which automatically holds the item as it is inserted. Release of the dog is automatic at the discharge end of the tunnel.

Used for washing, cleaning and sterilising equipment for re-use in food factories, in partic. washing curds draining screens used in the mfr. of cheese. Very thorough cleaning is achieved without manual labour. As complete mechanisation for washing curds draining screens, etc., the machine can be installed in a continuous prodn. line. 15.2.78 as 004672 (15pp448)

KALK D13 38149Y/22 =GB 1556-518
Feed for hens to strengthen eggshells - contains sodium, partly as the (bi)carbonate

CHEMISCHE FAB KALK GMBH 11.06.76-DT-626167
C03 (28.11.79) *BE-850-795 A23k-01/17

A feedstuff for laying hens has a mineral sodium content which is partly sodium chloride and partly sodium (bi)carbonate, the chloride and (bi)carbonate being present in equal amts. by wt. Pref. the feedstuff contains 0.1-1.0 wt. % each of NaCl and Na₂CO₃.

Permanent admin. of the feedstuff leads to the prodn. of eggs having favourable properties in respect of breaking strength and thickness. 27.4.77 as 017577 (2pp990).

BAKX ★ D13 86397B/48 ★GB 1556-614
Liquid infusion bag made from dielectric thermoplastics web - having perforations produced by electrical discharge

BAKELITE XYLONITE LTD 12.06.75-GB-025246
A92 Q34 (28.11.79) B65d-81/34

A liq. infusion bag (e.g. tea bag) is at least partly made from a dielectric web of thermoplastics material having perforations produced by passing electrical discharges through it.

The thermoplastics material is a heat-sealable polymeric film, e.g. of a polyolefin. It can contain voids or cells or regions of lower dielectric breakdown strength than other regions. The spark perforation can be carried out before or after the web is formed into a bag.

It is partic. used for infusions such as tea, coffee and herbs, but also for boil-in-the-bag foods such as rice which must contact water during cooking but must drain before serving. The bag can also be used to contain lavender, camphor or silica gel. 11.6.76 (6pp1302).

MORG D13 26440A/14 =GB 1556-801
Momen Tofu prepd. from soybean milk - by adding coagulant to form a curd and dehydrating

MORINAGA MILK IND C 11.08.76-JA-094952
(28.11.79) *J53020-451 A23l-01/20

Rough textured soya bean curd of long shelf life is prepd. by sterilising soya bean juice by heating to > 120°C then cooling, and adding a coagulant to the sterilised juice to form coagulum at 20-90°C.

The coagulum is then dehydrated to a water content of 78-90 wt % and packed into a container. The container is then sealed hermetically and heated at 60-135°C. Pref. the coagulant is a salt of a divalent metal, an organic acid or glucone-delta-lactone.

Rough textured soya bean curd is prepd. by a continuous mfr. method which has superior flavour, texture and shelf life and is esp. suitable as the material for boiled or broiled dishes. 5.8.77 as 032975 (11pp931)

GREC ★ D13 86411B/48 ★GB 1556-883
Fibre contg. powder food additive - prepd. from edible bamboo shoots

GREEN CROSS CORP 02.02.77-GB-004326
(28.11.79) A23l-01/34 A61k-35/78

Powdered water swellable fibrous bamboo shoot is claimed. It is prepd. by heating bamboo shoots with steam at 3-8 kg/cm² and 130-180°C, suddenly releasing the pressure to expand the material, then drying and pulverising it. Pref. it is washed with water until the washings are tasteless and

odourless, either before or after the steam treatment, and the dried powdered prod. is sieved.

The material is intended to supplement the fibre content of the human diet. It may be added. 2.2.77 as 004326 (6pp)

DAIR-★ D13 86444B/48 ★GB 2021-14
Dairy blend butter substitute - prepd. from butter, water, gelling agent, and vegetable oil

DAIRY DEV LTD 10.05.78-NZ-187226
A97 (28.11.79) A23d-03

Dairy blend comprising a homogeneous compsn. of butter (I) and vegetable oil (II) is prepd. by (a) softening (I) so that it can be blended, (b) blending in an H₂O-soluble gelling agent (III), (c) blending (II) in, and (d) cooling the prod.

Blend is suitable for use as a butter substitute, and has improved spreadability over butter at refrigeration temp. In addn. the blend has satisfactory consistency. 9.5.79 as 016011 (5pp478)

KAWA-★ D13 86834B/48 ★J5 4135-82
Colourant compsn. - contains vegetable oil, gum arabic, water, white sugar and beta-carotene

KAWAI SEIYAKU KK 14.04.78-JA-043296
E24 (22.10.79) A23l-01/27 C09b-61

The compsn. comprises 8-10 parts of vegetable oil, 8-15 parts of gum arabic, 20 to 30 parts water, 35-55 parts white sugar and 0.02 to 0.06 % of β-carotene. The compsn. is prepared as follows; in vegetable oil is dissolved 0.3-0.5 % of β-carotene, and to 8-10 pts. of soln. are added 8-15 pts. of gum arabic and 20-30 pts. of water to cause emulsification, and the 35-55 pts. of white sugar is added to the emulsion. The vegetable oil includes soybean oil, corn oil, salad oil, etc.

In an example 0.5 g of β-carotene was mixed with soybean oil to give 100 g mixt., followed by heating with agitation. After cooling to room temp., 10 g of gum arabic and 25 ml of water were added, followed by emulsification with the use of homogeniser. To the emulsion was added 50 g of white sugar and heated at 50°C with agitation. 14.4.78 as 043296 (5pp22)

FURU ★ D13 87097B/48 ★J7 9036-11
Feed additive for livestock - comprises a mixt. of rubber on plastic and nutrients expanded into a cellular structure

FURUKAWA ELECTRIC CO 21.12.72-JA-128669
A97 C03 (07.11.79) A23k-01 A61k-09/18

Feed additive comprises a mixt. of rubber or plastic (I) and nutrient additives (II), expanded into a cellular structure. (I) is, e.g., polyolefins, polyurethane, etc. (II) is e.g. salt, minerals, vitamins, etc.

Compsn. is used as additives to feed for cattle, pigs, etc. 21.12.72 as 128669 A23k-1/00, A61k-9/18 (7.11.79) FURUKAWA ELECTRIC CO (3pp83) (J4 9084864)

TSUB ★ D13 87098B/48 ★J7 9036-11
Feed additive contg. chitinase - opt. in combination with beta-1,3-glucanase and/or protease

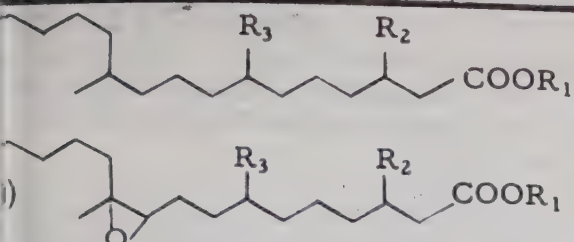
KUMIAI CHEM IND KK (AMAN) 19.09.72-JA-093167
C03 (D16) (07.11.79) A23k-01/16 A61k-37/54

Feed additive contains chitinase, opt. in combination with β-1,3-glucanase and/or protease. Chitinase is obtd. from *Aspergillus niger*, *Streptomyces albus*, etc. Used for promoting growth of farm animals, e.g. pigs, chickens, etc. 19.9.72 as 093167 (A23k-1/165, A61k-37/54) (7.11.79) KUMIAI CHEM IND KK; AMANO PHARM KK (5pp83) (J4 9047152)

AJIN ★ D13 87099B/48 ★J7 9036-11
Breeding of silkworms - by administering alkyl ester of 3,7-dialkyl 11-methyl (opt. 10,11-epoxy) palmitic acid as hormone active substance

AJINOMOTO KK (KATA) 29.00.73-JA-001840
C03.P14 (C02) (07.11.79) A01k-67/04 A23k-01/18 A61k-31/22

Method comprises applying to silkworm cpd. of formula (I) or (II) (where R₁₋₃, 1-5C alkyl), as hormone-active substance. The cpd. is effective for increasing bodyweight, cocoon wt. and number of eggs.



12.72 as 001840 A23k-1/18, A01k-67/04, A61k-31/22
(11.79) KATAKURA KOGYO KK; AJINOMOTO KK (8pp83)
(9091873)

YA-★ D13 87100B/48 ★J7 9036-120
ed mfr. for fish farming - by adding specified bacteria of
stridium species to feed and anaerobically fermenting
MIYAIRI KINZAI KEN 15.03.71-JA-014264
C03 (D16) (07.11.79) A23k-01/18

ethod comprises adding Miyairi bacteria a kind of Clos-
dium butyricum and water to fish feed, and holding the
ed in anaerobic condition to effect fermentation. The
ethod prevents decompsn. of feed, and produces useful
acteria and vitamins in the feed. 15.3.71 as 014264
3k-1/18 (7.11.79) MIYAIRI KINZAI KENKYUSHO KK
pp83) (J4 7027792)

UK D13 50975W/31 =NL-161-974
ervative compsn. for agricultural prods. - contg. a dispersion of
drophobic microparticles in an aq. medium contg. water soluble
h polymer
TSUKIBOSHI KASEI KK 26.10.74-JA-124123 (13.03.74-JA-029691)
A97 (15.11.79) *BE-826-614 A01n-03 A23b-05/06 A23b-07/16
A23b-09

esh fruit, vegetable, nuts, seeds and eggs are preserved
applying an aq. dispersion of fine particles of a hydro-
obic solid and/or non-volatile liq. chosen from natural
axes, and (hydrogenated) vegetable fatty oils, in an aq.
ln. of a water-soluble polymer chosen from polysacc-
rides and their derivs., proteins, alginates and PVA.
e wt. ratio hydrophobic substance to water soluble poly-
er is 10:0.2 to 10:3 and the particle size of the dispersed
drophobic material is 0.1-10 μ .

The coating is dried to form a membrane composed of
roparticles dispersed in a matrix, the membrane hav-
g fine microbubbles continuously dispersed between the
roparticles and the matrix to suppress the respiration
the coated fruit etc. The coatings have an excellent
reserving effect on the fruit, etc. and are easily applied,
g. by dipping or spraying. 13.3.75 as 002989 (15pp513)

OR- D13 44426W/27 =NL-161-975
ed centre sweet-forming rotary moulds - spun by self-aligning
atch element to give shells ready for filling
STORCK A KG 16.07.74-DT-434024
(15.11.79) *BE-825-405 A23g-01/20

allow confectionary articles are formed by spinning a
um filled with a certain quantity of the raw material.
e forms are carried on an endless conveyor equipped
h fill and metering stations for the raw material. The
nning motion is imparted to each form during a short
ntact with a driven spinning hub which works against a
ve plate on the underside of the form.

To avoid misalignment of the driven plate with the
ve hub during the contact period, the drive hub is moun-
via a flexible coupling device to the drive shaft so that
me degree of misalignment can be tolerated and the link
ween drive hub and driven plate is so arranged that the
p and plate are self aligning. 23.1.75 as 000794 (11pp)

CA- D13 17830W/11 =NL-161-976
ep-frozen fried potato chips - prepd. by two-stage blanching in
water, drying and frying
MCCAIN FOODS LTD 29.08.73-CA-179932
(15.11.79) *DT2359-672 A23l-01/21

the prodn. of deep frozen fried potato chips, raw potat-
s are first cleaned, peeled, cut into pieces and washed.
e potato pieces are then blanched for 12-25 mins. in
ter at 65-70°C, cooled to about 37°C in 10-20 mins.,
d then blanched again in water at 80-90°C for 2-6 min.
e blanched pieces are then partially dried in hot air to a
loss of 12-18%. The pieces are then equilibrated at
om temp. for 3-10 mins. and fried in hot fat for 35-65

sec. at 160-190°C to a wt. loss of 20-25%. The chips are
then deep frozen. The wt. loss figures are w.r.t. the wt.
of the peeled and washed potato pieces.

The process gives frozen chips which can be cooked by
any suitable means (oven, frying pan, etc.) to give chips
with excellent colour, texture and flavour. 30.11.73 as
016404 (3pp513)

UNIL D13 02828V/02 =NL-161-977
Cheese flavour improvement - by adding 2,4-dithiapentane or
trans-anethol

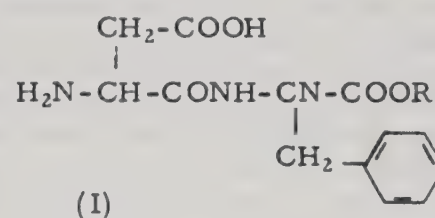
UNILEVER NV 21.06.72-GB-029053
E19 (15.11.79) *NL7308-548 +A23l-01/22

The cheese aroma of food prods. is improved by incorpor-
ating 0.05-5 mg/kg of trans-anethol (1-(p-methoxyphenyl)
prop-1-ene) (I).

In an example, Gouda cheese spread was made contg.
0.75 mg/kg (I) together with a known cheese flavour mixt.
contg. butanoic acid, hexanoic acid, octanoic acid, decan-
oic acid, dodecanoic acid, tetradecanoic acid, methyl-
propylketone, methylpentylketone, ethylhexanoate, δ -
dodecalacetone, dimethylsulphide, diacetyl, methional, 4-
heptenal, monosodium glutamate, methionine and L-lysine
HCl. The presence of (I) gave a marked improvement in
cheese flavour of the prod. 8.6.78 as 006222 Div. ex.
20.6.73-008548 (3pp513)

SEAR D13 82782R/44 =NL-161-978
Sweetening compn contg l-aspartyl-l-phenyl - alanine
SEARLE G D & CO 09.05.69-US-823482
B05 E14 (15.11.79) *BE-750-131 A23l-01/23

The method of sweetening foodstuffs and luxury goods with
an ester of N-(α -aspartyl)-phenylalanine and an (1-7C) al-
kanol, of general formula (I) of which at least half of both



assymetric C-atoms is in
the L-configuration, acc.
to NL 149.361, is im-
proved by using (I) in
combination with sacchar-
ine or a cyclamate.

Pref. the methyl ester
is used. The mixt. of (I)
and saccharine or cycla-

mate have a synergistic sweetening effect, e.g. (I) with
saccharine is ca. 1000 times sweeter than saccharose,
and may be added to foodstuffs and luxury goods. 8.5.70
as 006712 Add to 149361 (4pp279)

BOEF D13 40672S/24 =NL-161-979
Low-calorie sweetened sugar substitute
BOEHRINGER CFUND 09.12.69-DT-961769
B03 E13 (15.11.79) *DT1961-769 A23l-01/23

Sweetening agents (I) are prepd. by mixing fructose and/or
xylitol with saccharine and/or cyclamate in a sweetening
capacity-ratio of 50:50 to 90:10.

(I) may be used as sugar replacement in diets and low-
calory foods. They do not have the bitter after-taste and
"empty" taste of saccharine, esp. in non-alcoholic
drinks, marmalade, jams, sweets and bakery prods.

Mixt. of esp. fructose and to a lesser degree of xylitol
with saccharine and/or cyclamate have synergistic effect
on sweetening capacity. The same mixts. have also a flav-
our transfer effect esp. for fruit prods. (I) also has high-
er energetic results than known synthetic sweetening ag-
ents and really has the effect of stilling hunger without in-
terfering with the hormonal sugar-regulatory system.
3.12.70 as 017678 (4pp279)

MILE D13 29162Y/17 =NL-161-980
Glycinamide salt food seasoning compsns. - esp. with sodium
glutamate, inosinate or guanylate, as salt replacement
MILES LABORATORIES INC 18.10.76-US-733156
E16 (15.11.79) *BE-849-487 A23l-01/23

Food is given a salty taste without using NaCl by adding
a glycinamide salt (I), esp. glycinamide hydrochloride (II).
The (I) is pref. used in conjunction with one or more flav-
our builders such as monosodium glutamate (III); sodium
5'-inosinate (IV) or sodium 5'-guanylate (V). A pref. seas-
oning agent is a mixt. of 20-91 wt. % (I) and 9-80 wt. %
flavour builder, adding at 0.1-4.0 wt. % on the food in place
of NaCl.

In an example, hamburgers were seasoned with 0.8 wt. % of a mixt. of 86 wt. % (I) and 14 wt. % of equal parts of (IV) and (V). 14.12.76 as 013871 (5pp513)

KONN D13 90985X/49 = NL-162-136
Antibiotic dihydromocimycin and its salts - for control of treponema dysentery in pigs and intermediate by oxidn., for mocimycin (BE161176)

GIST-BROCADES NV 22.07.75-GB-030646 (16.05.75-GB-020926)
B03 C02 (15.11.79) *DT2621-615 A61k-31/43 C12d-09/14

An antibiotic dihydromocimycine (I) is prep'd. by culturing a species *Streptomyces ramocissimus* in suitable conditions and isolating (I) from the fermented culture. *S. ramocissimus* produces known mocimycine as well as (I). (I) has a greater activity against many micro-organisms than mocimycine and may be used as an antibiotic in human and veterinary medicine. (I) is very active against the cause of *Treponema dysentery* or *Vibrio Doyle* in pigs and is more active against this than known tylosine. The ratio between mocimycine and (I) increases in favour of (I) by aerating the medium with oxygen.

The culture medium contains customary C- and N-sources as well as P, Ca, Fe, S, Mg, K, vitamins and trace-elements. Temp. is e.g. 26-34°C at pH 5-9; aeration pref. at 1-3 l air/min/2 l medium. Small concentrations of Fe, Co and Ni increase the yield of (I). 13.5.76 as 005093 (12pp279)

KONN D13 87202V/51 = NL-162-138
Antibiotic residues determination in milk and meat - using solid agar-agar inoculated with sensitive microorganism spores

GIST-BROCADES NV 31.05.73-GB-025947

B04 R16 (D12) (15.11.79) *BE-815-759 C12k-01/06 G01n-33/02

Method is described for indicating the presence or absence of antibiotic residues in fluids of animal origin. Spores of antibiotic-sensitive microorganism in an agar medium are placed in transparent containers, so that they can not germinate because of a deficient nutrient. The medium is so heavily inoculated, that after addn. of sufficient nutrient and incubation of optimal temp, growth is perceptible within 4 hrs. The medium is allowed to solidify with the meniscus perpendicular to the side wall.

The containers used are tubes with i.d. of 3-20 mm. Nutrients in storable form and the sample, are added to the medium and incubated at optimal temp. The presence or absence of antibiotic residues is indicated by the growth or growth inhibition observed, using an indicator added either to the nutrient or to the medium.

Pref. the nutrient is in the form of tablets, coated with a layer which inhibits passage of moisture from the medium into the tablet at normal temp., but permits passage of nutrients during the determination. 30.5.74 as 007251 (7pp913)

STIC-★ D13 87118B/48 ★NL 7903-483
Instant fat-contg. spray dried milk powder - made by injecting a surfactant, esp. lecithin, into the concentrate stream passing to the drier

STICHTING BEDRIJVEN 09.05.78-NL-004979 (03.05.79-NL-003483)

(13.11.79) A23c-09/16

Instant-dissolving, fat-contg., spray dried milk prods. are made by introducing a surfactant into the feed stream between the milk concentrate buffer tank and the atomiser of the spray drier. Pref. the surfactant is lecithin, added in an amt. to give a concn. of 0.1-1.0 wt. % lecithin in the final prod. The lecithin is added e.g. as an aq. emulsion or as a soln. in butter fat.

The treated prods. have excellent dispersibility in use. The process avoids the necessity of additional equipment which was used e.g. to coat spray dried prods. with surfactants and uses less surfactant (lecithin) than when this is added to the dil. liq. milk. 3.5.79 as 003483 (7pp)

SAUK/★ D13 B/48 ★OE 7900-121
Drinking straw with flavouring
SAUKEL H 08.01.79-OE-000121
P27 (15.11.79) A47g-21/18

KOML/★ D13 87167B/48 ★SU-635-4
Protein hydrolysate prodn. from waste collagen contg. material includes treatment with lime, phosphoric acid and its disubst. alkali metal or ammonium salt, useful in cosmetics etc. mfr.

KOMLEV A P 15.07.77-SU-507159

C04 (D12 D25) (29.05.79) A23j-01/10

The yield can be increased to 80-90% by carrying out the purification of the product with phosphoric acid, and then with an alkali metal hydrogen phosphate or the corresp. ammonium salt before drying.

The product can be used e.g., in the mfr. of cosmetics or the prodn. of surfactants.

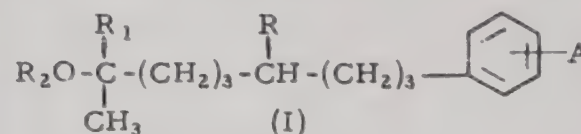
Wastes from the prodn. of sausage skin can be utilized as a collagen contg. starting material. This material is treated with 4-fold quantity of $\text{Ca}(\text{OH})_2$ soln. (density 1.1 g/cm³) at 80-100°C for 10-16h. As a result, proteins are split to peptides and amino acids. The hydrolysis product is treated with H_3PO_4 to pH 7-8, whereby CaHPO_4 is pptd. Further pptn. of CaHPO_4 is effected by addn. of $\text{Na}_2\text{HPO}_4 \cdot 12\text{H}_2\text{O}$, within 24-36h. The CaHPO_4 ppte. is sepd. and used as a fertiliser. The protein hydrolysate soln. is concentrated to 40-60%, or evaporated to dryness. Komlev, A.P., Popernatskii, O.A., Chekhovskoi, A.A. et al. Bul. 19/25.5.79. 15.7.77. as 507159 (2pp70)

STAU D13 16835X/10 = SU-651-6
2,6-Dialkyl-9-aryl-3-nonyl alkyl ethers - for use as hormone insecticides for control of specified flies

STAUFFER CHEMICAL CO 01.08.75-US-599731

C03 (05.03.79) *BE-832-492 A01n-09/24

(A) Aryl terpenoid cpds. of formula (I) are new (where A is 1-5C alkyl, 1-4C alkoxy, 1-4C alkylthio, NO_2 or 3,4-methylenedioxy; R and R_1 are Me or Et)



R_2 is 1-4C alkyl).

Cpds. (I) are growth hormones which inhibit the development of the pupae of the following insects into the adult forms: *Musca domestica*, *Musca autumnalis*, *Stomoxys calcitrans*, *Haemotobia irritans*, and *Anopheles quadrimaculatus*. They have high activity (LD_{90} values of 0.000. 4-0.0245 ppm) and can be incorporated in animal feeds (in doses of 0.125-2.5 mg/kg/day) to inhibit the growth of the above insects on the faeces of livestock and poultry.

Schwartz, M., Miller, R.W., Wright, J.A. Bul. 9/5.3.79. 26.1.75. as 304400 (6pp)

COKE D13 16370U/12 = SU-651-6
High protein processed whey - useful as additive to drinks

COCA-COLA CO (COC-) 01.09.71-US-177082

(09.03.79) *NL7211-742 A23c-21 A23j-01/20

Protein concentrates are made by passing milk whey through a diatomaceous earth filter, followed by ultra-filtration coupled with injection of water, and finally contacting with a strong acid ion exchanger, to give a product with a high protein content, a low total and vital microbe count, a low mineral salt content and pH of 2.7-3. Pref. the liquid products are dried, e.g. by spray drying to give acid soluble protein concentrate powders. The products are useful as additives to drinks to increase the protein content. Morett, R.H., Malaspina, A. Bul. 9/5.3.79. 1.9.72. as 826138 (3pp)

JELK/ D13 16796X/09 #SU-651-6
Proc. for incg. digestibility of cellulosic plant matter to ruminant by oxidn. in the presence of metal and acid catalysts followed hydrolysis

JELKS J W 21.10.74-US-516596 (16.02.76-SU-325359)

C03 (09.03.79) *US3939-286 A23k-01/12

Fodder is produced from coarse cellulosic materials such as wood, parts of maize plants, straw, etc. by performing acidic hydrolysis of the starting material under elevated temp. and press. in presence of a metallic catalyst to break up the lignin-cellulose bonds.

The nutrient value of the product is increased by carrying out the hydrolysis first at 105-110°C and 1.4-2.1 kg/cm² (partial press of oxygen) for 12-20 min., and then at 135-150°C and 9-10.5 kg/cm², whilst simultaneously treating the material with satd. vapour, until cellulose

recharified. Subsequently, the final product is neutralised to pH 5.5, and opt. can be dried.

ks, J.V. Bul. 9/5.3.79. 16.2.76. as 325359 (3pp70)

U- D13 39280X/21 =SU -651-653
 ing of lucerne by pressing - and heating and recycling part of the
 ss liquor to reduce energy requirement
 FRANCE LUZERNE 04.11.74-FR-036628
 C03 (09.03.79) *NL7512-820 A23k-01/14
 een leaf vegetable matter, esp. lucerne, is prepd. for
 ying then pressed to dry it to the required moisture
 content. Some of the press liquid is heated and returned
 the first step where it is mixed with and heats the feed
 the press.

The process is continuous and saves heating fuel. It is
 ed esp. for processing lucerne to form animal or human
 adprods.

stino, C., Matan, O.De., Diet, D. Bul. 9/5.3.79.

11.75. as 186203 (3pp)

DO/ D13 70058W/42 =SU -651-654
 ady-to-eat rice product - by soaking, gelatinising, pressing and
 ating rice grains in hot oil

ANDOM 27.03.74-JA-034917

(05.03.79) *NL7416-833 A23l-01/10

ady-to-use rice which is prepd. by pouring boiling
 ter over it when required, is made by (1) soaking the
 ce in water, (2) gelatinising, (3) pressing and (4)
 eating it in edible oil at 130-200°C. Rice is rapidly
 epd. when required and has good flavour and feel on the
 ngue. Typically the rice is washed, soaked in water or
 uid spice mixt. and then treated with surface active
 ents such as glycerine, fatty acid esters, sugar esters,
 ible oil, etc. The grains are then gelatinised by boil-
 g. The gelatinised rice is then exposed to the air at 20-
 0°C until the moisture content is 18-70%. The rice is
 en pressed, e.g. by rollers with a nip of 0.1-1.0 mm.
 d treated in edible oil at 130-200°C, esp. 130-170°C.
 e rice may be degreased after this treatment e.g. by
 ntrifuging or by treatments e.g. with ethanol. Ando, M.
 nami, Y., Takatsu, M. et al. Bul. 9/5.3.79. 20.3.75.
 115493 (2pp)

AN= ★ D13 87225B/48 ★SU -651-761
 nthetic plant eating insect culture medium - contg. agar-agar,
 aize flour, benzoic and ascorbic acids, yeast, malt, methanol and
 ater

PLANT PROTECTION 15.11.77-SU-544036

C03 P14 (18.03.79) A01k-67

ae medium comprises (by wt.): 1.3-1.8% agar-agar, 9.
 10.2% maize flour, 5.8-6.2% malted barley, 3.9-4.1%
 ied brewers yeast, 0.58-0.62% ascorbic acid, 0.095 -
 11% p-oxybenzoic acid methyl ester, 0.095-0.11% ben-
 ic acid, 0.50-0.57% 20% formalin and balance water.
 orisova, A.E. Bul. 10/15.3.79. 15.11.77. as 544036
 pp314)

IT= ★ D13 87230B/48 ★SU -651-776
 ink based on soured milk prepn. - using starter contg.
 reptococcus lactis, yeasts Candida and Lactobacterium and
 tidophilum microbial strains

E-SIBE TECH INST 12.05.77-SU-488291

(15.03.79) A23c-09/12

rink Kurunga (RTM) is prepd. by purifying milk, pasteu-
 sing, cooling to the souring temp., introducing lactic
 ora bacteria, in particular Streptococcus lactis and
 actobacterium acidophilum, and Candida yeasts; for
 uring; mixing and cooling.

This method is improved by additionally introducing
 to the souring preparation Lactobacterium bulgaricum.
 the mixing is continued for 10-15 min. with aeration until
 e acidity rises to 85-90°T. The lactic flora bacteria
 ultures and the yeasts are introduced into the milk sep-
 arately in a ratio of (2-2.5):1.

By this method the quality of the drink is improved,
 sp. its nutrient and biological value is increased. The
 ontent of proteolytic enzymes is increased by 18-20%.
 the contents of lactic acid, volatile fatty acids and CO₂
 re also increased.

ev. G.B., Patkul, G.M. Bul. 10/15.3.79. 12.5.77. as
 38291 (2pp70)

AKFB= ★ D13 87231B/48 ★SU -651-777
 Compound feed for animals and poultry - contg. bark extract fish
 fat, grass and fish flour, silkworm larvae and protein-vitamin-
 mineral additive

AS KAREL BIOLOGY 07.02.77-SU-450198

C03 (15.03.79) A23k-01

Compound feed is improved by using a vitamin concen-
 trate increasing the assimilability of the feed and its
 utilisation.

The compsn. contains (in wt. %) a concentrate from esp.
 bark 0.04-0.20, fish fat 1.50-2.00, killed mulberry silk-
 worm pupa 2.00-5.00, grass flour 3.00-1.00, fish flour
 0.50-1.00, mineral substances 0.40-0.06; an ordinary
 compound feed is the balance.

Bolotnikov, I.A., Demchenko, E.A., Nekrasova, V.B.
 Bul. 10/15.3.79. 7.2.77. as 450198 (3pp70)

BLAC= ★ D13 87232B/48 ★SU -651-778
 Urea-enriched grain fodder for ruminants - prepd. by soaking
 cereals with urea soln. and so that biuret is formed, thermal
 treatment in high temp. dryer to reduce toxicity

BLACK SOIL AGRIC 15.01.76-SU-315345

C03 (15.03.79) A23k-01/22

The initial temp. of the heat-carrier is 300-350°C, and
 the final temp. is 90-105°C. The duration of the drying is
 3-5 min.

Under these conditions, most of the urea is converted
 into biuret, which is hydrolysed at a lesser rate than urea
 so that the evolution of ammonia in the rumen is slowed
 down and the somewhat toxic effect is suppressed.

Timofeev, Yu.P., Vorotnikov, L.D., Shevchenko, V.E.
 et al. Bul. 10/15.3.79. 15.1.76. as 315345 (2pp70)

TFOO= ★ D13 87233B/48 ★SU -651-779
 Non-alcoholic medicinal herbal drink compsn. - contg. specified
 wild fruit and herb tissue extracts, sugar, citric acid, carbon di:oxide
 and water

TADZ FOOD IND TECH 26.07.77-SU-511435

(15.03.79) A23l-02

Non-alcoholic herbal drink with improved organoleptic
 and medicinal characteristics contains (in kg/100 decal-
 litre): dog rose fruit 5.5-7.0; vitamins carotene and pec-
 tin contg. fruit (I) 6.0-7.5; herbal plant tissue (II) 2.0-3.
 5; sugar 78.0-82.0; citric acid 1.4-1.45; carbon dioxide
 25.0-27.0 water the rest. In Russian, (I) is specified as
 'chilon' and (II) is specified as 'raikhon'.

The herbal and fruit components are introduced during
 the mfr. in a form of extracts or syrup, and citric acid
 is added as 50% aq. soln. The fruit extract is prepd. by
 mixing plant tissue with water (1:4) heating the mixt. to
 70-80°C and holding it for 24hrs. The herbal extract is
 obtd. by mixing plant tissue pulp and water (1:20) and
 holding the mixt. for 12 hrs. before sepn.

The drink contains vitamins B₁, B₂, C, K, P and bio-
 logically active materials (e.g. carotene, pectin etc.)
 introduced into the drink with plant tissue extract.

Bystrov, A.I., Ivanova, L.A., Kriventsova, L.G. Bul.
 10/15.3.79. 26.7.77. as 511435 (2pp938)

BEER= ★ D13 87234B/48 ★SU -651-780
 Aq. non-alcoholic herbal drink - contg. sugar, citric acid, banana
 essence, dye and herb extracts

BEER NON-ALCOHOL IN 16.09.77-SU-526724

(15.03.79) A23l-02

The drink contg. sugar, citric acid, banana essence, a
 dye and gasified water, is improved by addition of herb
 extracts enhancing the biological value of the drink.

The compsn. contains (in wt. %) sugar 8-9, citric acid
 0.2-0.25, banana essence 0.00195-0.0025, extract of
 over-ground parts of valerian 0.95-1.05, extract of wild
 marjoram 0.95-1.05, extract of peppermint 0.95-1.05,
 extract of sea kale 1.95-2.05, a dye 0.095-0.105; the
 balance is gasified water. The trade name of the drink is
 'Olimpia'.

Rudolf, V.V., Salmanova, L.S., Sokolov, S.Ya. et al.
 Bul. 10/15.3.79. 16.9.77. as 526724 (2pp70)

ABHE= ★ D13 87295B/48 ★SU-652-427
Dispersed material thermal treatment - includes additional supply of inert liquid heat carrier vapours to gas jet suspended particles collision zone, used in food drying etc.

AS BELO HEAT MASS 23.03.77-SU-465132

J09 Q76 Q78 (15.03.79) F26c-03/08 F28c-03/12

The material thermal treatment is used for food prods. drying and can also be employed in the chemical fuel etc. industries and utilises drying in opposing gas suspension jets.

To intensify the thermal treatment process, increase the economy and thermal treatment quality, inert heat carrier vapours are additionally supplied to jet collision zone. The heat carrier vapours condense on the material particle surface.

Vapours of a liquid which is technologically compatible with the material being treated and wetting its particles can be used as an inert heat carrier. Vapours of a liq. which does not wet the material particles can also be used as the inert heat carrier. The inert heat carrier and the material are separated after interaction.

Pikus, I. F., Elperin, I. T. Bul. 10/15.3.79 23.3.77. as 465132 (2pp110)

ALFA D13 10115W/06 =SU-652-864
Milk etc. with improved storage properties - by treatment with hydrogen peroxide produced by enzymatic action

ALFA-LAVAL AB 19.07.73-SW-010076

+P34 (20.03.79) *NL7405-993 A23c-03 A23I-03

Milk and other liquids which can serve as substrates for microorganisms, are given improved storage qualities by introducing hydrogen peroxide produced in situ by enzymatic action. The process maintains H_2O_2 level at antimicrobial concn. without the need to add excessive amounts of peroxide externally, which would have a deleterious effect on the prod. Typical systems are e.g. milk contg. 0.1-0.5 wt. % glucose with 0.1-2 E glucose oxidase per ml. milk; or milk contg. 0.5 wt. % glycine with 20 E L-aminoacid oxidase per ml. The amount of enzyme used may be reduced by lowering the storage temp. e.g. to 4°C. The enzymes used may be mounted on solid or semi-solid carriers over which the liquid flows. Rosen, E. A. K. G., Bierk, K. E. L. Bul. 10/15.3.79. 30.4.74. as 027616 (2pp)

PROC ★ D13 87498B/48 ★US 4175-075
Protein isolation from seeds - by density gradient sepn. using soln. contg. electrolyte and saccharide cpd.

PROCTER & GAMBLE CO 07.07.78-US-922919

(20.11.79) A23j-01/14

Protein is recovered from vegetable seeds by (1) suspending comminuted seed materials contg. 10-70% lipid in a soln. contg. $\geq 1\%$ of an alkali metal halide or phosphate, and $\geq 1\%$ of a carbohydrate, the soln. having a density of 1.1-1.5, and water activity < 0.9 , and (2) isolating the protein by density gradient sepn.

Lipid extn. is not necessary; toxic or flammable solvents are not required. The process does not involve extremes of pH, high temps or dissolution and reprecipitation, so protein denaturation is avoided. 7.7.78. as 922919 (8pp955)

AGRI- ★ D13 87518B/48 ★US 4175-121
Improving milk prodn. in dairy cows - by use of feed additive contg. methionine hydroxy analogue and Aspergillus fungal enzyme

AGRIMEL LTD 20.03.78-US-888191

C03 (D16) (20.11.79) A23k-01

Method comprises using a feed additive comprising a compsn. or complex of (a) 5-20 wt. % of 2-hydroxy-4-(methylthio)butyric acid (referred to as "methionine hydroxy analogue") in particle form, the particles being coated with a powder of synthetic flavouring agent which masks the taste of methionine; (b) 0.5-5 wt. % of a fungal enzyme derived from a microorganism of the genus *Aspergillus*; and pref. (c) 2-6 wt. % of a buffer.

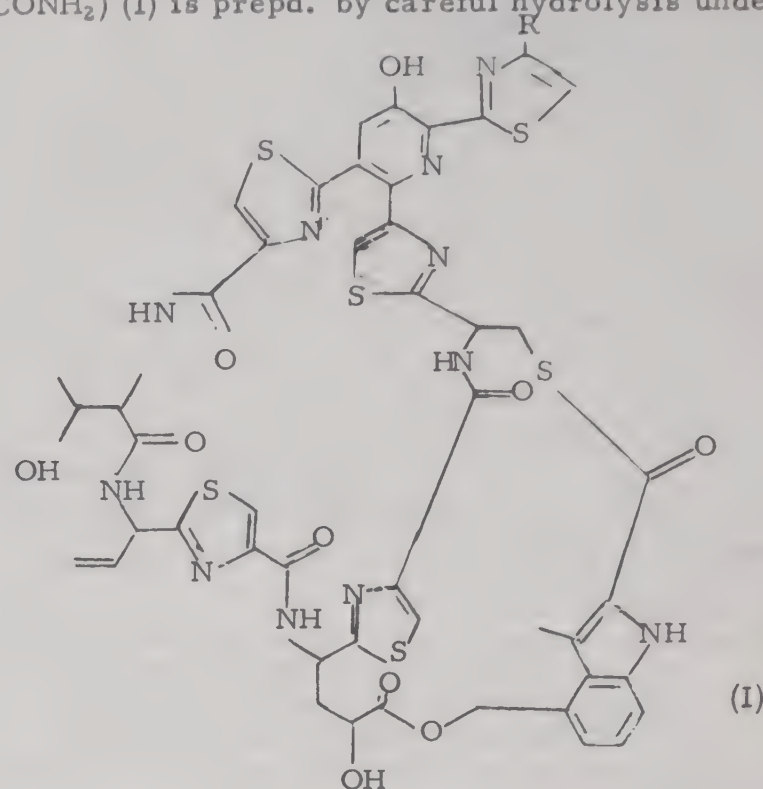
The amt. of additive used is sufficient to provide 20-40, pref. 20-30 g/day of the methionine hydroxy analogue to each cow. 20.3.78. as 888191 (7pp914)

RHON D13 09974B/06 =US 4175-12
Antibiotic 35665 RP useful as animal growth promoter - prepd. b acid hydrolysis of nosiheptide

RHONE-POULENC INDUSTRIES 04.08.77-FR-024011

B02 C02 (20.11.79) *BE-869-492 A61k-31/44 C07d-515/22

New antibiotic 35665 RP is of formula (I) (where R is $CONH_2$) (I) is prepd. by careful hydrolysis under acidic



(I) is prepd. by careful hydrolysis under acidic conditions of nosiheptide (I: where R is gp. $-CONH-C(=CH_2)CONH_2$) to convert R to $-CONH_2$ without affecting the rest of the molecule.

Pref. the hydrolysis is carried out by heating the nosiheptide in a soln. of an inorganic acid in a neutral organic solvent or in an aq. soln. of a $\leq 3C$ organic acid, at 40-120°C. (I) has characteristic physio-chemical properties and possess growth-promoting properties when added to animal feed. 2.8.78. as 930148 (8pp924)

RETR- ★ D13 87528B/48 ★US 4175-14
Heat resistant protease destruction in sterile milk - by holding c specified temp. immediately before or after sterilisation

RES TRIANGLE INST 25.02.77-US-772226

(20.11.79) A23c-03/02

In the ultra-high temp. sterilisation of milk in which the milk is heated to $\geq 120^\circ C$, the improvement comprises holding the milk at a temp. above 50°C and up to 60°C for 5-60 mins. immediately before or after the heating step, to destroy a substantial proportion of heat resistant proteases.

The heat resistant proteases cause gelation and development of a bitter flavour in UHT milk during storage. The removal prolongs the shelf life of the prod. The taste is not affected, and there is no gross casein degradation. The process is applicable to other milk prods., e.g. bitterness in cheese after long storage may be prevented if the milk employed is treated as above. 25.2.77. as 772226 (9pp955)

SCKH D13 75944Y/43 =US 4175-14
Mayonnaise and/or derived prods. continuous mfr. - by mixing coagulated egg yolk, milk albumin, skimmed milk powder, protein starch, stabiliser, salt, oil, and colourant

SCHRODER CO 09.07.76-DT-630872

P28 (20.11.79) *BE-855-806 +A23d-05/02

A pasteurised or sterilised mayonnaise (-contg. prod.) is prepd. by mixing coagulated egg yolk, milk protein, starch, a stabiliser and a minor amt. of oil and water to form a basic mixt.

The basic mixt. is heated in a first heater to 80-100°C for a time to effect pasteurisation, and then cooled to room temp. in a first cooler. The cooled mixt. is then emulsified with additional oil to form an emulsion. Vinegar and spices are added to the emulsion with stirring to form the prod., which is heated in a second heater to 80-100°C for a time to effect pasteurisation, or at 110-

°C for a time to effect sterilisation. The pasteurised sterilised prod. is then cooled in a second cooler to 5-°C.

The prod. prepd. is stable over a long period of time does not require storage under refrigeration. 8.7.77. 814026 (3pp931)

See Also

D15 DT 2919801 D16 J5 4135296 D16 J5 4135297
D16 J5 4135299 D16 SU 651025 D16 US 4175123
D22 DT 2820055

D14: FOODSTUFF MACHINERY

LM ★ D14 85965B/48 ★ BE -876-517
Continuous solid-liq. extrn., esp. of vegetable material - using series agitated reactors contg. mesh sepg. element
NAMPROGETTI SPA 24.05.78-IT-023720
P01 (D23) (23.11.79) B01d

The process consists in treating a solid substance with a solvent (mixt.) in a number of reactors in series, each provided with means of agitation. The substance is introduced into each reactor along with a current of solvent, after solid sepn., it is passed to the next reactor. After the last reactor, the entrained solids are sepd. from the solvent by filtration. The process is carried out in apparatuses having a sepn. element of variable geometric form in a mesh opening of 1-200 μ .

The process is esp. applied to vegetable materials, partic. to the de-fatting of oil contg. seeds. It is continuous and gives a very efficient extraction. 23.5.79 as 517 (24pp597).

VT ★ D14 86021B/48 ★ BE -877-998
Fryer for cooking in oil - has cover with fume and oil filter capable of holding all oil
POWENTA-WERKE GMBH 28.08.78-DT-U25499
P01 P28 (16.11.79) A47j B01d

The top of the domed cover of a vessel for cooking and frying with oil has a seat provided with means of introducing a fume filter and/or a decantation filter for fat, which can be detached from their fastenings.

The capacity of the conical cover is at least equal to the volume of oil used in the vessel. The seat is formed as a ring fixed to the cover, and inside the cover there is a collar on which the fume filter rests during cooking. The filter for the fat is a gauze fixed to the seat and during cooking it is below the fume filter.

To filter the oil after use it is only necessary to invert the cover above a suitable container and pour the oil into the cover. The operation is perfectly simple and there is no risk whatever to the user. 31.7.79 as 877998 (7pp1014)

D ★ D14 86247B/48 ★ EP ---5-445
Butter and cheese block mincing machine - steps horizontal block through vertical screw at right angles, travelling downwards
ROD FINDUS SA 08.05.78-CH-004990
P41 P62 (28.11.79) B02c-18/26 B02c-19/20 B26d-01/36
E: E(BE, DT, FR, GB, IT, NL).

The mincing machine has a frame with a horizontal part and horizontal guides (4) between which the block of food substance (3) is fed towards the cutter (9). This cutter is a horizontal screw at right angles to the direction of advance of the block.

This screw is positioned inside a vertical frame part with the control panel (18) on top with the drive motor (1) behind it. This drive motor is preferably pneumatic, but under suitable conditions could be electric or hydraulic. The screw is raised and lowered against the face of the block as it rotates to make its cut.

The machine may be used for mincing large blocks of compressed meat for mass production of food portions in a preparation plant, but more particularly for mincing blocks of cheese, for the manufacture of pizzas (21).

The design of the cutter ensures an even spread of minuted cheese over the surface of each pizza. The tendency of cheese to stick to the cutter is avoided, and the cutter suits a variety of meat products.

79. as 101074 (18pp349).
ISR: FR1402161; US3831866; US3811627; US4002298; 3980235.

KAIS/ ★ D14 86413B/48 ★ GB 2020-988
Mixing pourable powder or granules with liq. - by allowing it to fall freely as hollow cylindrical stream and spraying it from nozzles
KAISER-WIRZ M 20.05.78-CH-005427
A32 F09 L02 (A81) (28.11.79) B01f-03/12 B01f-05

Liq. components are added to pourable powdered or granular material by supplying the pourable material over a deflector from which it trickles down, falls freely as a hollow cylindrical stream and is sprayed with the liq. from ≥ 1 nozzle, aligned radially. When more than one nozzle is used they are spaced in sets of planes.

The process is used e.g. for adding molasses to animal feedstuff grains, or wood chips or sawdust to adhesive. The appts. is economical to operate as it has no moving parts and requires no motor. Continuous operation can be obtained. The walls of the mixer do not become clogged. 9.5.79 as 016196 (4pp976)

ATLA ★ D14 B/48 ★ IL --51-247
Fruit handling appts. - in which orienting arms are contacted with fruit carried by belts
ATLAS AS 11.01.77-IL-051247
Q31 Q35 (31.10.79) B65b-25/04 B65b-35/24 B65g-07/24 B65g-15/09

ASAG ★ D14 86852B/48 ★ J5 4135-847
Food processing appts. - includes fluorine-rubber based sealing material which is repeatedly exposed to hot water, steam, acid etc.
ASAHI GLASS KK 14.04.78-JA-043257
A88 (A18) (22.10.79) A231-03 B29h-07 C08j-03/24 C09k-03/10

The appts. comprises as a sealing material a fluorine rubber produced by blending 100 pts. wt. fluorine contg. elastomer, an organic peroxide as a vulcaniser, ≤ 10 pts. wt. organic allyl cpd. and 0-5 pts. wt. basic metal oxide or hydroxide, vulcanising conventionally in the first stage (pref. at 100-230°C) and then vulcanising at $\geq 150^\circ\text{C}$ for ≥ 30 min. in the second stage to give the prod. cross-linked to have a number average degree of vulcanisation of ≥ 1.86 .

Specifically the elastomer is a propylene/tetrafluoroethylene or vinylidene fluoride/hexafluoropropylene based copolymer. The content of the organic peroxide is 0.5-10 wt.pts. The organic peroxide is e.g. a, a-bis-(t-butylperoxy)-p-diisopropylbenzene.

The organic allyl cpd. is pref. triallyl (iso)cyanurate.

The material has excellent resistances to hot water, steam, acids, chemicals, foods etc., non-toxicity, no smell, no taste, good sealing properties, mechanical properties etc. 14.4.78 as 043257(9pp119)

BAUC/ ★ D14 87289B/48 ★ SU -652-421
Fruit and vegetable vibration dryer - is made as hollow alloy spiral from alloy contg. magnesium and copper
BAUCHIDZE S I 17.08.77-SU-517921
Q76 (15.03.79) F26b-15/26

The vibration dryer can be used for drying fruit and vegetable, tea and tobacco. The dryer contains a body, loading bunker and mechanical oscillations exciter. In order to simplify the construction and intensify the technological process, the body is made as a hollow spiral from an alloy with a trace of manganese-copper. The mechanical oscillations exciter is made as an alternating current source and is connected to the body through semi-conducting gates.

Buachidze, S.I., Berozashvili, G.V., Buachidze, M.S.
Bul. 10/15.3.79. 17.8.77. as 517921 (2pp110)

BIOT= ★ D14 87311B/48 ★ SU-652-950
Solid-liquid system extractor - comprising two vertical columns divided into mixing and settling chambers linked by pipes for counterflow extn.

BIOTECH RES INST 18.05.76-SU-363412

B07 (D17) (28.03.79) B01d-11/02

The extractor, is for use in the microbiological industry for the extractive purificn. of protein-vitamins concentrates in the pharmaceutical and food industries for the recovery of oils, in the prodn. of medicinal preps. from vegetable materials, etc.

The extractor has mixer and settler, made as two parallel columns, horizontal screens located in the mixer to divide it into mixing chambers, plus a shaft passing down the centre of the mixer. Turbine mixers are mounted on the shaft in the mixing chambers, and overflow pipes connect the mixing chambers to the settler. There are loading and unloading devices for the solid material and pipes to admit the solvent and remove the soln.

The mixing and sepn. of the phases, are accelerated by fitting horizontal screens with openings in the settler, so that it is divided into a number of chambers connected to the overflow pipes. A shaft carrying scrapers passes through the settler so that the scrapers keep the screens clean, and between the columns are pressing-out devices to link the settling chambers with following mixing chambers.

Grinshpun, V. Ya., Zhuchkov, V. N., Stepanishchev, K. P. et al. Bul. 11/25.3.79. 18.5.76. as 363412 (3pp29)

MURP/ D14 66703B/37 = US 4174-742
Vending dispenser for snow cones - with flavouring deposited on shaped mass of flaked ice

MURPHEY J D 08.02.78-US-875982

+ Q31 R29 (20.11.79) *GB2015-715 + B65b-01/04 B65b-43/42

Snow cones are mfd. in a machine which has a cup holder

in a compartment located in a cabinet, a cup delivery device to deliver a cup to the holder, a collar for collecting and retaining ice reciprocally mounted in the cabinet to a position where it circumscribes the cup, an ice-making machine in the cabinet, an ice delivery mechanism to deliver ice to a cup and the collar when it circumscribes the cup, a capper which forms the delivered ice into a dome above the rim of the cup, a reservoir of flavoured syrup which is delivered onto the ice dome.

Snow cones can be dispersed from a coin operated machine. 8.2.78. as 875982 (16pp1376)

BROV D14 58740W/36 = US 4174-742
Ultra-violet sterilization of food packaging - for high speed filling milk cartons, yoghurt pots, cheese packs etc

BBC AG BROWN BOVERI CIE (ALUM- BROV) 10.04.74-005050

P34 Q31 + R45 (20.11.79) *BE-827-699 B65b-55/08

Previously disinfected or sterilised foodstuffs are automatically packaged under antiseptic low bacterial conditions, by providing a packaging material, and producing a predetermined u.v. radiation of such intensity to disinfect the material.

The radiation process comprises forming a mercury discharge with a current density of ≥ 1 ampere per cm^2 at a pressure of 0.005-0.5 Torr; generating the discharge radiation in which the spectral radiation intensity of the 253.7 nm line reaching the material is set to $> 0.05 \text{ W per cm}^2$; and destroying harmful bacterial on the material exclusively by exposure to the radiation for 1-60 secs.

Foodstuffs such as yoghurt, soured milk and cream can be packaged and disinfected on an industrial scale, such that the sterilisation process is both swift and complete. 26.7.77. as 819120 (4pp931)

D15: WATER TREATMENT

MECH- ★ D15 85955B/48 ★ BE-876-479
Scroll filter press for sepg. water from organic fibres - has roller rotating with scroll against cylindrical filter wall to achieve compression

STICHT INST MECHAN 24.05.78-NL-005630
(23.11.79) B01d C05f

Water is sepd. from a mixt. of a fibrous, organic solid material and water by means of an inclined screw conveyor into the lower end of which the mixt. is fed. The scroll is encased over a lower portion of its length in a filter material by means of which the free water is drained from the mix and is equipped at the upper end with a compression element which rotates with the scroll and subjects the mix to a pressure.

The rotating element interrupts the scroll and presses the mix against the outer filter whilst the scroll continues to convey the material through the conveyor. The pressure element is pref. in the form of a long roll rotating about a shaft parallel to the shaft of the scroll and linked to it by means of two pairs of hinged arms and a compression spring. If the scroll is mounted on a hinged lower foot, its angle of inclination can be adjusted.

The scroll/filter combination is simple and much less expensive than traditional filter press installations so that it can be used in small works or farms. 23.5.79 as 876479 (11pp1370) (F1)

CNSM ★ D15 85962B/48 ★ BE-876-511
Anaerobic effluent treatment tank with reaction and settlement zones - has easily removed dividing walls which prevent gas from entering the settlement zone

CENTRALE SUIKER MIJ NV 23.05.78-NL-005584
(23.11.79) C02c

Effluent is treated anaerobically in a biological treatment tank divided into a common reaction compartment and a

series of settlement compartments each of these having opening at their lowest points through which the sludge may sink back into the reaction compartment. The settlement compartments are divided from the reaction compartment by means of inclined walls which feed together to the lower opening. One of the walls in each compartment is a continuous wall whilst the other is in two parts. The upper part terminates at a point some distance between the top and bottom of the compartment and is continued the form of a second wall parallel to the first but set back from it. The lower edge of this continuation extends beyond the lower edge of the opposite wall to prevent the ingress of gas from the reaction compartment into the settlement compartment. The suspended sludge passes into the settlement compartment via the upper gap between the two parallel walls, the overlap again preventing the ingress of gas which continues to climb to the collection zone.

The construction is simple and economic whilst ensuring that no gas enters the settlement zone and that settled sludge passes rapidly through the reaction zone with a minimum of horizontal movement. 23.5.79 as 876511 (14pp1370) (F1).

CNSM ★ D15 85963B/48 ★ BE-876-511
Supply system for anaerobic biological treatment tank - ensures thorough mixing of inflow with active sludge particles with breakdown of the suspended particles

CENTRALE SUIKER MIJ NV 23.05.78-NL-005585
(23.11.79) C02c

The influent into an anaerobic biological treatment tank is introduced via a number of different inlets distributed across the horizontal cross-section of the tank. In order to create the greatest degree of mixing and eliminate possibility of short circuiting and dead zones, the indi-

l discharges supply intermittently so that, for a short time at each discharge, there is a high flow creating turbulent turbulence.

Pref. arrangement for achieving this mode of operation comprises a main supply system with a number of discharge openings into the tank, each opening having its own valve automatically operated by a time switch and sequencing control. The circulation is further improved by mounting the discharges on a rotating supply device. The supply arrangement ensures a thorough mixing of the influent with the active sludge without the risk, inherent in mechanical agitation, of breaking the suspended particles down so that they are then carried through the system with the cleared effluent. 23.5.79 as 876512 (10pp)

DR-★ D15 86022B/48 ★BE-878-003
Water carbonator for making sparkling drinks at home - using pressure of carbonating gas to hold bung in neck of drinks bottle
THORN SVENSKA AB 02.08.78-SW-008346
(16.11.79) C02d

The carbonator comprises a rigid casing which houses a cylinder containing CO₂ under pressure. A bottle holding water to be carbonated is also housed in the casing. A hand operated valve passes gas from the cylinder via a nozzle pipe passed through a bung in the neck of the bottle. A over-pressure relief valve communicates with the interior of the bottle during carbonation.

The novelty is that the top of the bung is connected to a flexible diaphragm which has a top surface of greater area than the projected area of the bung facing the interior of the bottle. The top of the diaphragm is in a sealed chamber which communicates with the interior of the bottle during carbonation. This means that closure force exerted by gas pressure on the diaphragm always exceeds the force of gas pressure tending to expell the bung from the bottle. The relief valve communicates with the chamber containing the top of the diaphragm.

Provides simplicity of operation and economy of mfr. The bung is always held safely in place by pressure of the carbonating gas, obviating the need for elaborate clamping devices. 31.7.79 as 878003 (16pp448).

BA/ D15 15852V/09 =DS 2340-119
A water desalination plant - with three-stage evaporation and calcium removal tanks

TABATA H 10.08.72-JA-080165
(22.11.79) *DT2340-119 C02b-01/06

Rawwater is treated to produce brine and fresh water by reheating it to 40-55°C in the heat recovery section of the final stage in a multistage impulse evaporator. After heating to 50-65°C in heat exchange with the steam condensate, 99% of the calcium is pptd. as calcium carbonate by adding a magnesium hydroxide suspension which has been set for flue gas absorption to a given CO₂/MgO ratio. The seawater is adjusted to a pH-value of 5.0-5.5, degassed, and passed to the first stage of the impulse evaporator.

This produces optimum conditions for the pptn. of calcium and an excellent thermal efficiency. 8.8.73 as 340119 (pp39)

OS D15 57417W/35 =DS 2458-577
Removing oil, esp. oil emulsions from factory effluents - water flows through mass of ferrous particles positioned electromagnetically

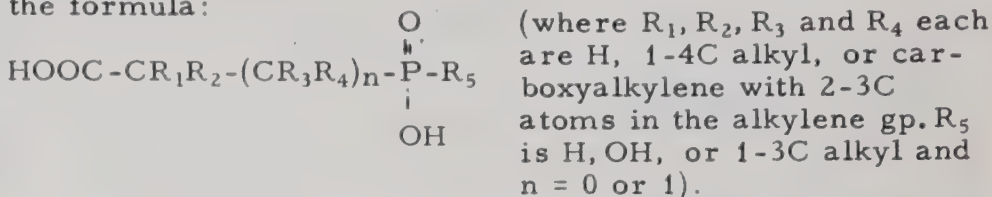
VER OSTERR EISEN & STAHL 08.02.74-OE-001005
J01 (22.11.79) *DT2458-577 C02c-05/12

Effluents with an oil content, e.g. oil/water emulsions, are purified by passing them through sections, filled with ferromagnetic particles which are kept in position by magnetic fields. The pref. arrangement is to pass the emulsion through one section, while a second section, parallel to the first, is being cleaned out. The degree of purity of the emerging liquid is measured by a photocell and the change-over is effected when a given threshold has been reached.

This requires no chemical agents and achieves a high degree of purity by a simple method. 11.12.74 as 458577 (pp39)

FARH D15 65195X/35 =DS 2505-435
Inhibiting corrosion of water-bearing systems - with carboxy-alkane derivs of phosphonic or phosphinic acids (BE060876)
HOECHST AG 08.02.75-DT-505435
E11 M14 + Q67 Q75 (22.11.79) *DT2505-435 C23f-11/16 C23f-14/02

Carboxyalkene phosphorus cpd.(I), useful as corrosion inhibitors in aq. systems, esp. water coolant systems, have the formula:



Specifically claimed are carboxy methane phosphonic acid, 1,3-dicarboxypropane-1-phosphonic acid, 1,3,5-tricarboxypentane-3-phosphonic acid, 1-carboxyethane 1 (or 2) phosphoric acid 2-carboxypropane-3-phosphonic acid, 1-carboxypropane-2-phosphonic acid and methyl(carboxyethyl)-phosphinic acid. 8.2.75 as 505435 (4pp068)

MEHN/ D15 11431Y/07 =DS 2535-668
System for recovering water from the atmosphere - using heat pump - to sublime or condense ice from ambient air

MEHNERT W 09.08.75-DT-535668

J07 Q75 + Q42 (22.11.79) *DT2535-668 E03b-03/28

Water is produced from the atmosphere by a heat pump with two low-pressure chambers, one used as condenser and the other as heater. The air intake in the ambient air channels is electronically controlled by butterfly valves to produce a pressure relief effect. The electronic controller also operates a 3-way valve to switch the heat pump at given intervals so that the first chamber changes from the condensing to the heating mode, and the second chamber vice versa.

The result is a good water extraction efficiency and a continuous operation. 9.8.75 as 535668 (4pp39)

LEIS/ D15 55966Y/32 =DS 2603-842
Polluted water aeration - through submersed mixing chamber for compressed air and water, with expansion nozzle

LEISTNER K 02.02.76-DT-603842

(22.11.79) *DT2603-842 C02b-01 C02c-01/12

In a system for the gassing or aeration of polluted water in clarification ponds, aeration tanks or surface waters, the water and the gas or air are introduced under pressure in a long mixing chamber with a nozzle for the mixture. The amount of gas is adjusted to retain bubbles in the chamber of greater pressure than the head of the outside water. The ratio of internal bubble pressure to outside water head is small enough to cause the bubbles to burst into smaller bubbles in the nozzle itself. The volumetric ratio of gas to water is kept to 0.5-1.5.

This minimises the energy consumption for the pumps and maximises the absorption capacity of the water. The jet emerging from the nozzle creates a strong current. 2.2.76 as 603842 (6pp39)

KNVS D15 17984A/10 =DS 2639-034
Adjustable check valve used in e.g. desalination plant - has stepped plunger with blind axial drilling working with stationary valve needle

KERNENERGIE VERWERTUNG 30.08.76-DT-639034

Q66 + R26 (22.11.79) *DT2639-034 + G05d-16/10

An adjustable pressure holding valve for the discharge of fluid systems in a constant flow, e.g. water desalination plant, has in the moving spool a coaxial bore on the end to -wards the system pressure. The inside of this bore communicates constantly with the valve outlet. A conical needle valve is fitted in the valve housing, coaxial to the spool bore so that it forms with it an annular throttle gap which corresponds to the spool movement.

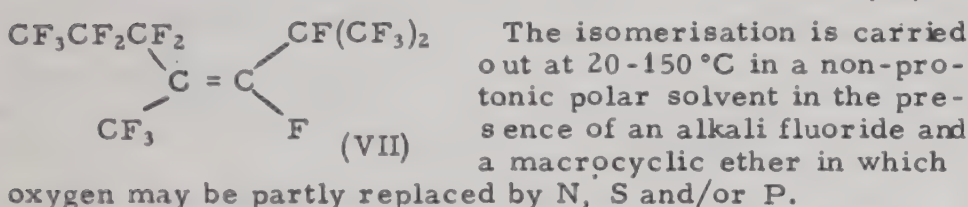
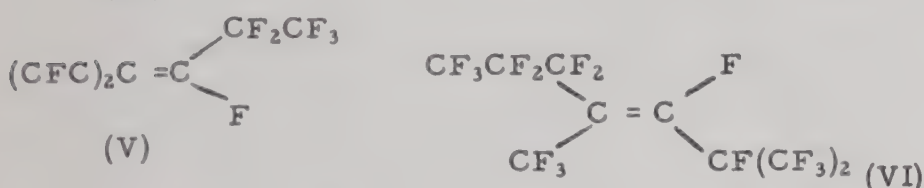
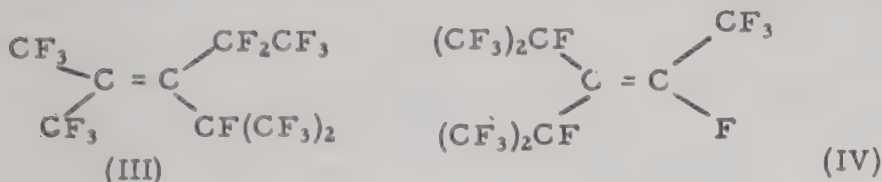
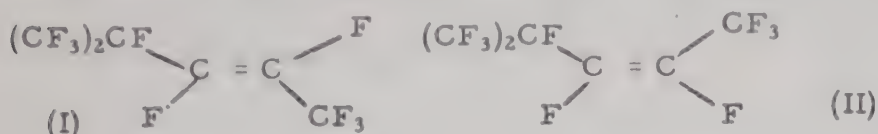
This produces a very sensitive control, it throttles the outflow in such a way that the system pressure is automatically held at a constant level. 30.8.76 as 639034 (4pp39)

CENG D15 65264Y/37 =DS 2706-603
Isomerisation of hexafluoro-propene oligomers - to thermodynamically stable isomers

CENTRAL GLASS KK 05.03.76-JA-023142

E16 (22.11.79) *DT2706-603 C07c-17/24 C07c-21/18

Dimers and trimers of hexafluoropropene of formulae (I)-(IV) are isomerised into the corresponding thermodynamically stable isomers of formulae (V)-(VII).



The isomerisation is carried out at 20-150 °C in a non-protic polar solvent in the presence of an alkali fluoride and a macrocyclic ether in which

oxygen may be partly replaced by N, S and/or P.

The ether enhances the catalytic activity of the alkali fluoride. The prods. are useful as solvents, intermediates for surfactants, etc. 16.2.77 as 706603 (5pp068)

KERN- ★ D15 86035B/48 ★ DS 2820-265
Semipermeable asymmetric membrane for sea-water desalination - is prepd. from cellulose acetate casting soln. contg. bentonite swelled in dioxan

GES KERNENERGIE SCH 10.05.78-DT-820265

A88 J01 (A11) (22.11.79) B01d-13/04

In semi-permeable asymmetric membrane prepn. from a cellulose acetate casting soln. admixed during prepn. with a swelling agent which is retained in membrane, the swelling agents are bentonites swelled in dioxan. The bentonites consist of extremely finely-divided, flaky montmorillonite-type clay minerals, the exchangeable cations of which are replaced by quat. ammonium cpds. having long-chained hydrocarbon gps. which form the organic parts of the bentonite.

The membranes are used in sea-water desalination by reverse osmosis. Bentonite addn. increases salt retention capacity and flow stability. 10.5.78 as 820265 (5pp200)

UNIC D15 58574A/32 = DS 2825-879
Sequestration of calcium and magnesium ions - by synergistic mixt. of zeolite(s), useful in detergent compns.

UNION CARBIDE CORP 27.06.77-US-810481

(22.11.79) *US4094-778 C02b-05/02

An aq. soln. of pH 7-10 and contg. 0.0005-0.005 gram ions Ca per litre and 0.000125-0.005 gram ions Mg per litre is treated with zeolite mixt. to remove Ca and Mg ions. The zeolite mixt. comprises a mixt. of Na zeolite A and Na zeolite X, one zeolite comprising 40-70 wt % of the mixt. and the other 30-60 wt %.

Treatment is effected at 4.44-93.33 °C The zeolites have pore sizes suitable for rapid removal of Ca and Mg ions. 13.6.78 as 825879 (5pp068)

ROTH- ★ D15 86069B/48 ★ DT 2821-097
Decontaminating radioactive liq. effluent - by evapn. and pptn. in electrofilters to remove solid and liq. aerosols

APPARATEBAU ROTHEMU 13.05.78-DT-821097

K07 (22.11.79) G21f-09/08

Decontamination of radioactive liquid effluent by evapn. and pptn. of the radio nuclides from the vapour, consists of passing this vapour through electrical fields, in which the solid and liq. components, present in the form of aerosols, are precipitated.

Prof. the vapour passes in succession through several, more specifically two electric fields. The vapour may enter the bottom of the lower electric field tangentially, then turn downwards and subsequently flow upwards axially through both the fields in succession.

Optimum precipitation is achieved without a progress-

ive reduction in the system decontamination factor (the specific activity of the effluent divided by the specific activity of the distillate). Experimental results demonstrate that this factor is increased by a factor of at least 100. 13.5.78 as 821097 (20pp236)

BIOM- ★ D15 86097B/48 ★ DT 2821-742
Infectious sewage sterilisation - by anodic oxidation following mechanical and biological treatment

INST BIOMED TECHNIK 18.05.78-DT-821742

(22.11.79) C02c-05/12

Infectious hospital and municipal sewage is disinfected and sterilized by passing through a mechanical and biological cleaning stage, followed by filtering. Any microorganism including any viroous infections are then inactivated by anodic oxidation in an electrochemical reactor, with a final reduction stage, if necessary.

This achieves a sterilisation rate of 99.9% in 5 secs., compared with a rate of 99.7% in 7 minutes for conventional systems. The result is a reduction in operating cost. 18.5.78 as 821742 (9pp39)

MOPO= ★ D15 86099B/48 ★ DT 2821-782
Thermal disposal of effluents - by adding surfactants and combustible gas and burning produced froth

MOSCOW POWER INST 18.05.78-DT-821782

J09 (22.11.79) C02c-05/04

A system for the thermal purification of effluents is based on the froth formation in the presence of surfactants, followed by the combustion of the froth. A combustible gas is injected into the effluent to produce combustible froth and surfactants are added to convert the entire fluid volume to froth.

Effluents treated are those obtd. during the mfr. of synthetic resin, dyes; those contg. mineral oil and organic synthesis waste or halogens, and pollutants from chlorination plants; food industry. The conversion into foam followed by incineration disposes of the entire waste without pollution of the drainage or surface water by noxious discharges. 18.5.78 as 821782 (11pp39)

LUMM ★ D15 86187B/48 ★ DT 2918-979
Treatment of aq. effluent from prodn. of nitrile(s) by ammoxidation - to dispose of water-soluble polymers

LUMMUS CO 15.05.78-US-905958

A41 E16 (A35) (22.11.79) B01j-23/92 C02c-05/02 C07c-120/14 C07c-121/54 C07d-213/85

In the prodn. of nitriles by ammoxidn. processes from an organic cpd., NH₃ and O₂, in which an effluent contg. NH₃, CO₂, HCN and water-sol. polymer is obtd., the effluent is treated by (a) removing volatiles with steam leaving the polymer in soln., (b) generating steam by heating (part of) the effluent, (c) heating the polymer solns. from (a) and (b) (part of) the heat being obtd. by indirect heat exchange with steam from (b), with formation of virtually polymer-free condensate, and (d) using the steam from (c) in (a).

The condensate obtd. in (c) is sufficiently pure to use as feed water in steam generation. The concn. polymer soln. remaining can be eliminated in the catalyst oxidn. plant used to oxidise the catalyst to a higher valency state and/or remove solid deposits. 11.5.79 as 918979 (14pp195)

ICIL ★ D15 86219B/48 ★ DT 2919-801
Nitrogen-rich solids recovery from dairy waste waters - by passing through filter medium under conditions for growing *Geotrichum candidum* and/or *Fusarium tabacinum*

IMPERIAL CHEM INDS LTD 19.05.78-GB-020724

C03 (C04 D13) (22.11.79) C12d-13/06

Parent patent discloses the recovery of N-rich solids by passing a protein-rich waste water, from milk or dairy prod. processing, through a synthetic filter medium. Waste water pH is set to 3-6, so that fungi having a high N-content are pref. grown on the wetted surfaces inside the filter medium. The N-rich solids leaving the filter medium are then sep'd., and recovered. In this addn., the fungus culture contains *Geotrichum Candidum*, (I) and/or *Fusarium tabacinum* (II).

The dried solids can be used as animal feedstuff additives, soil conditioners or fertilisers. The N-content of the dried solids is increased from e.g. 2 wt. % to < 55wt. % The dried wt. of the solids make up < 50wt. % of BOD rem-

ved through filter. 16.5.79 as 919801 Add to 2414555 (3pp200)

AFI ★ D15 86238B/48 ★DT 2920-253
Pyrogen removal from aq. solns. - by passing through package contg. polymeric anisotropic ultrafiltration membranes in skin-to-skin contact

MILLIPORE CORP 18.05.78-US-906922
A88 B06 J01 (22.11.79) B01d-13 B01d-31 C02b-03/02
Pyrogens including their aggregates or mycella, are removed from flowing aq. solns. by passing through a device contg. ≥ 2 consecutively arranged anisotropic ultrafiltration membranes having nominal mol. wt. limits below the mol. wt. of the pyrogens to be removed. Novelty consists in arranging ≥ 1 membrane next to ≥ 1 further membrane, so that the whole skin surface of one membrane is in close contact with the whole skin surface of the other membrane, and the edges of one membrane are sealed with the corresponding edges of the other membrane.

5 Orders of magnitude of pyrogen are retained, i.e. 99.999%, allowing for the prepn. of water for injection. The ultrafiltration membranes used may contain pin-holes, cracks, and other small defects. Any membranes consisting of film-forming polymer may be used. 18.5.79 as 920253 (52pp200)

PALL ★ D15 86275B/48 ★EP ---5-536
Skinless hydrophilic alcohol insoluble polyamide membrane - forming tubular filter element delivering bacterially sterile effluent
PALL CORP 15.05.78-US-905698

A23 J01 (A88) (28.11.79) B01d-13/04 C08j-05/18 C08l-77
D/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

(A) Prepn. of a skinless hydrophilic, alcohol-insoluble polyamide membrane comprises (a) forming a soln. of the polyamide in a solvent and inducing nucleation of the soln. by controlled addition to the soln. of a non-solvent for the polyamide under controlled conditions of concn., temp., addition rate and degree of agitation to ppte. the resin particles and form a casting soln., (b) spreading the soln. on a substrate to form a thin film, (c) contacting and diluting the film with a non-solvent to ppte. the resin as a thin skinless membrane and (d) washing the membrane to remove solvent and drying. Prepn. of multilayer skinless membranes is also claimed.

(B) A filter element comprises the polyamide membrane, pref. corrugated in a tubular configuration, with the tube ends sealed to end caps having a central aperture. The seals are fluid tight and the membrane sides are lapped and sealed together.

(C) Process for rating the effectiveness of a resin membrane as a filter in terms of removal of a contaminant correlates such removal with air flow measurements through the wetted membrane and the membrane thickness as a function of pore size. Pref. contaminant is a suspension of *Pseudomonas diminutiae*, the ability of the membrane to deliver bacterially sterile effluent being determined.

The membranes have high flexibility and can be folded back and forth without damage and without addition of plasticiser. They also have useful pressure drop characteristics. The membranes are wetted through by water in > 1 s. and have absolute particle removal ratings of 0.10-5 μ M.

15.5.79. as 101487 (108pp966).

(E) ISR:-

STAHL/ ★ D15 86284B/48 ★EP ---5-553
Aerobic sewage treatment - in tank with revolving emerging hollow elements of specified shape

STAHLER T 22.05.78-DT-822347
(28.11.79) C02c-01/10

D/S: E(BE, CH, DT, FR, GB, LU, NL, OE, SW).

A device for the biological decomposition and aeration of sewage and sludge, esp. with a faecal content, is a horizontal semicylindrical tank with several sets of hollow elements attached to a revolving shaft by arms. When the arms are in the horizontal position, the hollow elements (pref. round or rectangular shape) have side walls but are open on top and bottom, with a partition in the

middle. Within the top 90° of one complete revolution, the hollow elements emerge from the fluid into the open air.

This design ensures that sludge cannot remain lodged in the hollow elements and undergo an anaerobic fermentation. There is a constant renewal of the air in the hollow elements to contact the mat of biogenic matter in them.

21.5.79 as 101536 (14pp39).

(G) ISR: DT2615465; DS1184286; DS1815001;

DS-159044; US3837492; FR1320157; DT2544177.

ALKU ★ D15 86295B/48 ★EP ---5-580
Electrolytic removal of metal ions using fluidised bed - of cathode particles and partial recirculation of soln. contg. ions

AKZO NV 24.05.78-NL-005607

M28 (28.11.79) C02c-05/12 C25c-07

D/S: E(BE, DT, FR, GB, NL, SW).

An electrochemical cell is used to electrolytically remove metal ions from a soln. which is passed upwards through a bed of particles acting as cathodes in the cathode compartment of the cell. The soln. leaving the compartment is partially recirculated through the bed and partially discharged. A diaphragm separates anode and cathode compartments. The soln. in the cathode compartment and the recirculating soln. are screened off from the air in order to prevent them from absorbing oxygen.

Used for recovery of metals from solns. and removal of undesirable metals from waste water.

The appts. is compact and of simple construction with the separator and cathode compartment assembled to form a single unit. Several cells may be connected in series.

23.5.79 as 200254 (17pp1044).

(E) ISR: GB1440072; FR2322216; DT2644199;

US3981787; 1 Journal Reference.

DORO ★ D15 86324B/48 ★EP ---5-650
Flow distributor for fluid bed reactor - with fluid passing along paths with diverging walls to slow down flow

DORR OLIVER INC 24.05.78-US-909076

J04 (28.11.79) B01j-04 B01j-08/20 C02c-01/06

D/S: E(BE, CH, IT, NL, OE, SW).

A liquid stream passes from an inlet into a treatment tank via a flow distributor. The stream is introduced through ports which communicate with walled divergent flow paths of increasing cross-sectional area with increasing distance from the ports. Thus the velocity of the liquid is uniformly diminished.

The divergent flow paths are oriented to direct the flow in the range from horizontal to vertically downwards in the tank. From the divergent path the liquid passes to a flow diffuser which is oriented to direct the fluid flow vertically upwards in the tank to fluidize contained particulate solids.

The appts. is used in a fluid bed reactor e.g. those used to replace traditional biological reactors used in activated sludge or trickling filter processes for BOD removal, nitrification or denitrification.

The appts. produces a flow with minimum agitation so that abrasion and biological growth removal is also minimized.

23.5.79 as 300915 (26pp295).

(E) ISR: FR2322647; FR2281321; US4032407; US4104167; DT2128162.

LERO/ ★ D15 86370B/48 ★FR 2417-475
Purificn. plant for waste water from small settlements - combines physical and biological treatment in reliable, inexpensive installation

LEROI G J 16.02.78-FR-004357

(19.10.79) C02c-01/02

A plant installation for the purificn. of waste water by a combination of physical and biological treatments.

The installation comprises three independent treatment chambers connected for series flow. The middle chamber is a biological reactor in which an electric motor is employed to transfer oxygen from the atmos. to the liq. The same motor is also used to circulate and to homogenise the liq.

The chamber upstream of the biological reactor is pref. adapted for flotation sepn. of incoming waste water. The final chamber downstream of the reactor is pref. a decanting digester.

The first of the chambers pref. takes the form of a septic tank which ensures liquefaction and homogenisation of the incoming waste prior to biological treatment. Overloading of the biological reactor is pref. prevented by inserting an orifice plate in the transfer pipe from the first chamber.

Used for the purificn. of waste water/sewage from single family dwellings, small settlements, housing estates, etc. 16.2.78 as 004357 (8pp448)

DELT ★ D15 86384B/48 ★FR 2417-774
Portable instrument to measure oxygen content of waste water - has removable electrode rigidly coupled to indicating meter
DELTA-SCIENTIFIC GM 17.02.78-FR-004625
J04 R16 (19.10.79) G01n-27/28 G01n-33/18

The instrument is of the type employing a measuring electrode which is dipped into a sample of the water. A signal derived from the electrode is related to the oxygen content of the water and produces a reading on an indicator to which the electrode is electrically connected.

Improvement is that the electrode and the indicator meter are mechanically coupled in a rigid fashion so that they can be manipulated as a single unit. The coupling is pref. such that the electrode and the meter can be readily detached from and reassembled with each other. The electrical connection can be a jack plug while the mechanical coupling comprises a bayonet fixing, screwed sleeve or similar device. Alternatively, the electrical connection can be via a multi-pin plug top and socket, the mechanical coupling being by bolts or other screwed fastening.

Used for measuring the oxygen content of a sample of water, partic. a sample of treated waste water, undergoing a controlled temp. test of several days duration in a laboratory incubator. 17.2.78 as 004625 (6pp448)

ANIS D15 02088A/02 =GB 1556-587
Agglomerating mercury particles esp. in aq. effluent - by subjecting the liquor to the action of a magnetic field
ANIC SPA 02.07.76-IT-024984
J01 P41 (28.11.79) *BE-856-388 C02c-05

Hg particles in a fluid are coalesced by subjecting them to a magnetic field, pref. of intensity ≥ 6000 Gauss. Pref. the Hg particles are derived from industrial waste water contg. Hg in the form of (in)organic cpds., and which have been reduced to elemental Hg before the particles are subjected to the magnetic field.

The Hg can also be obtd. from the roasting of Hg-contg. materials or the distn. of Hg. 16.6.77 as 025327 (2pp976).

ERAP D15 33422A/19 =GB 1556-598
Cyanide separation from effluent - by anodic oxidation in electrodialysis using a cation-permeable membrane
SOC NAT ELF AQUITA 03.11.76-FR-033076
H09 M14 (28.11.79) *BE-860-398 C02c-05/12 + B01d-13/02
Cyanide (CN⁻) ions are eliminated from an aq. liq. by anodic oxidation by passing the liq. into an anode compartment of an electrodialyser and oxidising.

The electrodialyser comprises a semi-permeable diaphragm which is permeable to cations, and which separates the anode compartment from a cathode compartment. Aq. salt and/or basic soln. is passed into and through the cathode compartment; cyanide ions being oxidised in the anodic region, the cations travelling through the diaphragm to be discharged in the cathodic region.

The process is esp. used to treat waste liq. discharged from industrial plants in the iron industry and in coke plants. 19.10.77 as 043546 (4pp931).

ICIL D15 25570Y/15 =GB 1556-656
Solids removal from effluent channel screen - by scraper blades on roller frame moved along inclined screen
IMPERIAL CHEM INDS LTD 25.09.75-GB-039357
Q42 (28.11.79) *DT2643-178 C02c-01/22

Solids are removed from an effluent stream in a channel using appts. which includes a perforate screen placed across the channel such that the screen base is flush with channel bottom and the screen top is above the max. fluid

level, the screen being inclined with the base upstream at the top, and a scraper for moving solids up the screen in a trough formed in the screen.

Opt. a device moves the solids from the trough to a storage zone. Pref. the screen is an assembly of wires supported on cross members. Air or water jets are pref. located below the screen.

Large articles can be removed from effluent. 13.9.76 (8pp1376)

EDWA- D15 02567A/02 =GB 1556-656
Fluid additive metering system - using auxiliary metering pump controlled in synchronism by main pump
EDWARDS & JONES LTD 25.06.76-GB-026440
R26 (28.11.79) *DT2728-224 +B01f-03/08 B01f-05/04 B01f-15/04

An additive is added to a pumped fluid using appts. which has an additive store, a meter to deliver specific quantities of additive to the fluid at or near a reciprocating pump for the fluid. The meter is controlled by and in synchronism with the pump.

Pref. the meter supplies additive to the fluid when the pump is an intake stroke and draws additive from the store on delivery strokes of the pump. The meter pref. includes an auxiliary pump.

The appts. can be used to add flocculants to sewage sludge, without the flocculant breaking down. 10.6.77 (5pp448)

ANIS D15 18181Y/11 =GB 1556-700
Occlusion of substance into microfibrinous structures - by admixture adsorption; for use in controlled liberation of occluded material
ANIC SPA 13.08.76-IT-026263 (12.09.75-IT-027206)
A97 B07 C03 (D16 D22) (28.11.79) *BE-846-089 A61k-09/01 D01d-05/26

A body contg. an amt. of active material (I) which is to be completely released at a controlled rate when the body is contacted with a solvent is produced by producing microfilaments then adsorbing (I) thereon or by mixing (I) with a filament forming material and forming the mixt. into microfilaments. The microfilaments obtd. are then combined into a coherent body.

The microfilament forming material may be a polymer soln. or a thermoplastic material e.g. low or high density polyethylene, EVA, PVA, PET, polyamide PVAc or polypyrrolene. (I) may be a medicament, antiseptic pesticide or microorganism. The microfilaments are suitably up to 1 mm long. 9.9.76 as 037523 (7pp945)

DAVI- ★ D15 86407B/48 ★GB 1556-800
Condensing steam turbogenerator - using condenser to heat potable water and pref. driving flash evaporator from shaft
DAVIDSON EVAPORATOR 20.08.76-GB-034833
Q51 Q72 (28.11.79) F01k-17/02 F22b-33/18

In a turbo-generator stream from a steam cylinder is condensed in an external condenser. This condenser is cooled by potable water whose temp. is raised to a few degrees below atmospheric boiling point by the condensing steam. The hot, potable water is preferably piped to consumers for space heating, sewage flushing and drinking.

Pref. the shaft of the turbo-generator drives a compressor powering a multistage flash evaporator which accepts sewage. Water vapour from the sewage is condensed and used as potable water for municipal purposes.

The appts. recovers heat from a turbo-generator and transfers this to potable water which is supplied for domestic use. If cold water is required the hot water is cooled at an installation at the consumer's house. 9.8.77 (7pp945)

KURK ★ D15 86494B/48 ★J5 4134-040
Removing scale formed in heat exchangers used for treating waste water - comprises contacting with acidic soln. and then with alkaline soln. contg. a chelate
KURITA WATER IND KK 10.04.78-JA-041977
J08 M12 (18.10.79) C23f-15

In an example, urine contg. soln. was treated in a heat exchanger made from stainless steel at 90-98°C for 100 hrs. and yellow brown scale contg. CaO 34.7%, MgO 0.1%, P₂O₅ 33.7% and organic material (ignition loss) 14.7% was formed.

A 2% HNO₃ aq. soln. was circulated through the heat exchanger at a flow rate of 1.5 m³/hr at 88°C for 2.5 hrs.

After rinsing with water, the heat exchanger was washed with alkaline soln. contg. NaOH 2% and gluconic acid 2% at a flow rate of 1.5 m³/hr at 88°C for 3 hrs.

The scale was completely removed and the lustre of the stainless surface restored. 10.4.78 as 041977(4pp8)

HIM/★ D15 86510B/48 ★J5 4134-076
Prodn. of fresh water from sea water using solar heat - where collector is used having hydrophilic cotton and corrugated metal plate with light adsorbing film

SHIMODA H 10.04.78-JA-041965
(18.10.79) C02b-01/06

The solar heat collector comprises a heat retaining part, a hydrophilic cotton, and a corrugated metal plate having holes in the top of the wave. A desired amt. of sea water is intermittently or continuously supplied to the hydrophilic cotton to provide a wet cotton. The corrugated metal plate is provided with a sunlight adsorbing film on the front surface and a black-coloured plastic plate on the back surface.

When the sunlight is illuminated to this collector, the solar heat is conducted and radiated from the waved plate to the hydrophilic cotton and the wave spaces to generate a high temp. and much moisture air. The air is passed through the holes into the upper air chamber and cooled to adhere water drops to a glass surface because the heat escapes through the glass.

Soft water may be easily produced from the sea water or hard water in the solar heat collector. The sunlight adsorbing surface and the black-coloured surface are not contacted directly with the sea water and the collector is of a panel construction to be used as roof members. 10.4.78 as 041965(2pp35)

HITG★ D15 86511B/48 ★J5 4134-077
Multiple flash evaporator for producing fresh water from sea water - where sea water passes through heating pipes into two evaporating chambers in series

BABCOCK-HITACHI KK 11.04.78-JA-042402
J01 (18.10.79) B01d-03/06 C02b-01/04

An intermediate connecting line is provided between a heat exhaust part cooling line and a brine circulating line to connect them. Sea water is supplied as a cooling medium by a pump into a heating pipe of a heat exhaust part and into a cooling medium outlet pipe.

The sea water is supplied from the pipe through an intermediate connecting pipe into a piping of a brine circulating line and introduced through a heat recovery heating pipe to a brine heater pipe and into an evaporating chamber of a heat recovery part. At the same time, the sea water is introduced from a brine supply pipe into a final evaporator of the heat exhaust part.

The driving time of this evaporator may be shortened and this evaporator may be stably driven. 11.4.78 as 042402(5pp35)

MITR★ D15 86659B/48 ★J5 4134-873
Material for removing oil from waste water - comprises carbon material which has been surface treated with a surfactant

MITSUBISHI RAYON KK 11.04.78-JA-041739
J01 (19.10.79) B01d-17/02 C02c-05/02

The carbon material is pref. active carbon, coal, charcoal, grass peat, palm shell charcoal, coke or carbonised synthetic resin or rubber. The surfactant is pref. octadecylamine acetate, tetradecylamine acetate, dodecyltrimethylammonium chloride or hexadecyltrimethylammonium chloride. The material acts as adsorbent and granulating agent.

Typically, 1 kg of palm shell active carbon powder having a grain size of 10-32 mesh is immersed, for 2 hrs., in 3 litres of an aq. soln. contg. 1% of dodecyltrimethylammonium chloride. The palm shell active carbon powder thus treated is dried by centrifugal dehydration. 11.4.78 as 041739(4pp86)

SUMO★ D15 86724B/48 ★J5 4135-448
Biological digestion and denitrification of waste water - using activated sludge treatment, under aerobic conditions, with controlled dissolved oxygen concn.

SUMITOMO CHEMICAL KK 11.04.78-JA-042809
(20.10.79) C02c-01/02

Biological digestion and denitrification of waste water contg. ≤ 2000 mg/l of BOD and ≤ 500 mg/l of ammoniacal nitrogen, e.g. general factory effluents, sewage, night soil waste water, etc., using an activated sludge treatment method, is claimed. The oxidn. of BOD, the digestion of ammoniacal nitrogen, and the denitrification of nitrate and/or nitrate are concurrently performed in the same tank under aerobic conditions by controlling the concn. of dissolved oxygen in the range of 0.05-2.0 mg/l, most pref. 0.1-0.2 mg/l.

This method is capable of very effectively performing all functions involving the oxidn. of BOD, the digestion of ammoniacal nitrogen, etc. at the same time in the same tank in a very short time at lower cost. 11.4.78 as 042809(3pp117)

HITG★ D15 86726B/48 ★J5 4135-464
Burning black liquor from kraft pulp mfr. - by concentrating, spraying onto surface wall and vaporising sodium cpds. from obtd. char bed for contact with sulphur oxide(s)

BABCOCK-HITACHI KK 12.04.78-JA-042198
F09 J09 Q73 (20.10.79) D21c-11/12 F23g-07/04

The concn. of the black liquor is first conc. to $\geq 60\%$, and then sprayed into a furnace in a grain size of 1-5 mm so it adheres onto the furnace wall surface. The dried black liquor cake on the furnace wall falls down by gravity to form a char bed, the temp. of which is kept at $\geq 900^\circ\text{C}$ to vaporise sodium cpds. The vaporised sodium cpds. and SO_x present in the waste water are reacted to reduce the SO_x in the waste gas to be discharged to the outside.

Method provides better conditions for the drying of the black liquor to form a good char bed and at the same time to greatly reduce the concn. of SO_x in the combustion waste gas from the black liquor recovery boiler. 12.4.78 as 042198(3pp117)

MITR★ D15 86762B/48 ★J5 4135-667
Appts. for producing fresh water from sea water - comprises floating solar heating chamber covered with transparent film and linked to floating storage chamber by flexible tube dipped in sea

MITSUBISHI RAYON KK 13.04.78-JA-043580
(22.10.79) C02b-01/06

The appts. comprises a vaporising unit, including a solar heating chamber floating on the sea and carrying intake tubes extending through the bottom and into the water, for introducing water into the heating chamber, and a transparent film covering the top of the chamber; a storage tank floating on the sea; and a conduit connected at one end to the vapour chamber of the heater and at the other end to the storage tank, and including a flexible tube dipped into the cool water to cause the water vapour generated from the heater to condense as it passes through the tube to the tank. 13.4.78 as 043580(3pp47)

TAKE★ D15 86780B/48 ★J5 4135-694
Regeneration of activated carbon from water- or gas treatment - by heating in presence of ammonia in contact method using e.g. fixed bed, and contacting with water vapour or carbon dioxide

TAKEDA CHEMICAL IND KK 13.04.78-JA-043947
E36 J01 (22.10.79) B01d-15/06 B01d-53/14 C01b-31/10

Regeneration of activated carbon used in the treatment of contaminated water and air contg. harmful substances, e.g. SO_x , comprises first heating activated C which gives off H_2S at $\geq 750^\circ\text{C}$, at 250-650 (450-600) $^\circ\text{C}$, in the presence of ammonia in a proportion of ≥ 0.1 m mole/l g of used activated carbon, pref. together with a carrier gas, e.g. N_2 , CO_2 , water vapour, combustion exhaust gas, etc., by a contact method using fixed bed, fluidised bed, moving bed, or rotary kiln. The activated C is then contacted with water vapour at 750-950 $^\circ\text{C}$ for 5-100 min. or with CO_2 at 750-1000 $^\circ\text{C}$.

Damaging of the regenerating appts. due to the generation of H_2S at high temp. is avoided. 13.4.78 as 043947 (3pp117)

ISHI★ D15 86784B/48 ★J5 4135-700
Caustic soda recovery from pulp mill waste water - by adding metal oxide, spraying into hot air, burning and hydrolysing

ISHIKAWAJIMA-HARIMA HEAV 13.04.78-JA-043509
E34 F09 (22.10.79) C01d-01/04

Alkali carbonate, e.g. sodium carbonate, present in pulp

mill waste water contg. no sulphurous cpds. is converted into caustic soda by adding a metal oxide, e.g. iron oxide, to pulp mill waste water and spraying the mixt. into hot air for drying; burning the mixt. in a fluidised incinerator; and passing the burnt prod. (Na_2O) to an extraction tank for hydrolysis to obtain caustic soda.

The pulp mill waste water and the metal oxide can be uniformly mixed so that the reaction rate in the incinerator can be increased. The dried mixt. obtd. by burning comprises large hollow particles so that the efficiency of the dried mixt. in the hydrolysis is higher. 13.4.78 as 043509 (4pp117)

TOYJ ★ D15 86941B/48 ★ J5 4136-585
Adsorption of metals dissolved in alkaline soln. - by contacting with magnesium oxide or hydroxide

TOYO SODA MFG KK 14.04.78-JA-043282

J01 M25 (23.10.79) B01d-15 C02b-01/14 C02c-05/02

The method comprises contacting an alkaline soln. (e.g. waste soln.) contg. dissolved metals with MgO or $\text{Mg}(\text{OH})_2$ to absorb the metal. The MgO oxide is produced by calcinating $\text{Mg}(\text{OH})_2$ at 300-950°C to obtain MgO of contg. rate 3-20% of water contg. rate. The metal is Zn, Cr, Al, Pd, Fe, Be, Cu, Pt, or Sn.

In an example, a soln. of NaOH was added to a soln. of ZnSO_4 to adjust pH of the soln. to 13.2. The resulting adjusted soln. was filtered to obtain a filtrate contg. 90 ppm of Zn. 2w/v% of MgO was added to the filtrate, and stirred at 20°C for 30 minutes at 100rpm. The resulting stirred soln. was filtered to obtain a filtrate contg. no Zn. 14.4.78 as 043282 (3pp51)

HIEJ ★ D15 86961B/48 ★ J5 4136-747
Organic waste treatment, e.g. for sewage sludge, night soil etc. - comprises treatment with microorganisms to decompose the cpds., then decomposition to methane using anaerobic fungus

HITACHI PLANT ENG CONST 13.04.78-JA-043957

(24.10.79) C02c-01/02 C02c-03

Organic wastes e.g. sludges from sewage treatment plants, night soil, domestic animal droppings, urban refuse etc., are treated by using microorganisms such as facultative anaerobe, fungi, etc. The organics such as celluloses, proteins, etc., are initially decomposed by the addition of a high molecular cpd. -decomposing enzyme, e.g., cellulase, proteinase, e.g., at pH 4.5 to 6.5 and at 30 to 60°C to form low molecular cpds., e.g. organic acids, alcohols, etc. The slurry from the first process is then treated by means of an obligatory anaerobic fungus at pH 6.5 to 8.5 and at 30 to 60°C in order to decompose the low molecular cpds. into methane gas, etc.

The efficiency of the acid formation reaction and the decomposition reaction is increased. The amount of methane gas generated is increased and excess energy is produced, other than energy required with a compact appts. at lower cost. 13.4.78 as 043957 (3pp117)

KURK ★ D15 86962B/48 ★ J5 4136-749
Decolouration of and organics removal from waste water - by denitrification, and contact with catalyst comprising e.g. alumina support contacted with cobalt and/or nickel ions, and a chlorine cpd.

KURITA WATER IND KK 17.04.78-JA-044292

(24.10.79) C02c-05/04

The process for treating e.g., sewage, night soil treated waste water, etc. comprises initially subjecting the waste to a denitrification treatment, and then contacting the waste water with a catalyst. The catalyst prepared by contacting a support, e.g. zeolite or alumina, with cobalt and/or nickel ions, washing it with water, and then contacting it with a chlorine cpd. e.g., sodium hypochlorite, etc., including chlorine gas, in the presence of a chlorine cpd., e.g. sodium hypochlorite, etc. including chlorine gas.

The process consists of a simplified chlorine cpd. charging device and a catalytic reaction tank, and organics present in waste water can be removed and the organic waste water is effectively decolourised. The operation is simple and the time required is short. Valuable materials such as nickel and/or cobalt are not released. 17.4.78 as 044292 (5pp117)

EBAI ★ D15 86963B/48 ★ J5 4136-750
Treating night-soil polluted water - by biological digestion and denitrification, in presence of lime to maintain neutral to alkaline pH

EBARA INFILCO KK 15.04.78-JA-044661

(24.10.79) C02c-01/02

An appropriate amt. of lime, e.g., quick lime, slaked lime, etc., is added to waste water in the digestion process so that the pH of waste water in the digestion process can be kept at pH 6.0 to 9.5, pref. 7.5 to 8.8. The lime used also includes blast furnace slag, ashes discharged from the incineration of excess activated sludge.

Troubles with the use of $\text{Ca}(\text{OH})_2$, CaO , etc., as neutralisers can be eliminated by removing alkaline components originated from NH_3 and also digestion can be performed rapidly and economically by a synergistic effect of lime added and microorganisms taking part in the biological treatment. In addition, colouring matters and other organics can be removed in a wide range with simplified operation in the activated sludge treatment system without the installation of specific colouring matters-removing appts. 15.4.78 as 044661 (5pp117)

KUBI ★ D15 87064B/48 ★ J7 9035-412
Treatment of sludge from night soil purificn. vessel - by dewatering after pH adjustment, discharging solids, coagulation sedimentation of liq. and supplying to aeration vessel

KUBOTA KK 22.06.74-JA-071570

(02.11.79) C02c-03

A sludge from night soil purifying vessel is treated by dewatering it after pH adjustment, discharging solid component to the outside of the system; subjecting only liq. component to coagulation sedimentation, and supplying the semi-treated water obtd. to aeration vessel of subsequent night soil treating system. 22.6.74 as 071570 C02c-3/00 (2.11.79) KUBOTA KK (2pp34)(J5 1067669)

SANN D15 13654X/08 = J7 9035-413
Waste water treatment - using alkylamine gp. contg. amphoteric compd

SANYO CHEM IND KK 24.06.74-JA-072491

E19 (02.11.79) *J51000-763 B01d-21/* C02c-05/02

Waste water from dyeing industries is treated with compsn. contg. an amphoteric cpd. of formula (I) (where

$$\left[\text{R}_1 - \left(-\text{N} - \text{A} - \right)_n - \text{N} - \text{R}_2 \right] \begin{matrix} \text{(H)}_a \\ \text{(X)}_b \end{matrix} \quad \text{(I)}$$

R_1 is $>6\text{C}$ hydrocarbon; R_2 is H or hydroxy lower alkyl; A is lower alkylene; X is - RCOOM or - RSO_3M ; R is lower alkylene; M is H or alkali metal; n is 1-6; a >1 ; b is 1-2 and $a+b=n+1$). The usual dosage is 1-10,000 ppm. of the amphoteric cpd. 24.6.74 as 072491 C02c-5/02, B01d-21/01 (2.11.79) SANYO CHEM IND KK (5pp) (J5 1000763)

HIEJ D15 42203Y/24 = J7 9035-416
Purification of waste water contg. high concn. organic substances - by mixing with copper or cobalt salts and aerating

HITACHI PLANT ENG CONST (HITJ) 31.01.74-JA-013030

E19 (02.11.79) *J50106-456 + C02c-01/40 C02c-05/04

The waste waters are mixed with Cu or Co salts, after adjusting the pH to ~ 3 , and aerated. Opt. the waste waters are further treated with H_2O_2 and alkalies followed by removing pptd. materials. In the process, the Cu or Co salts act as catalysts for oxidn. of organic substances.

In an example, 1 l of a waste water, from descaling in a steam power plant, having pH 3.28 and COD 10,300 ppm was mixed with $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ 50 ppm, aerated with 0.1-2.1 air/min. for 5-10 days, mixed with 2g $\text{Ca}(\text{OH})_2$ to adjust the pH to 12, again aerated for 2 hrs., and flocculated with 0.1% anionic polymer flocculant soln. to decrease the COD to 5020 ppm.

The waste water was further mixed with conc. H_2SO_4 for pH adjustment to 2.5. and agitated with 30% H_2O_2 (10-ml) and $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ (50 ppm) at 140 rpm. for 30 mins. followed by the pH adjustment with 30% NaOH to 10 and flocculation treatment with 0.1% anionic polymer flocculant soln. The supernatant liq. had 86 ppm COD. 31.1.74 as 013030 C02c-5/04, 1/40 (2.11.79) HITACHI PLANT ENG (3pp) (J5 0106456)

OSH/ D15 14495A/08 = J7 9035-417
 ve separation from waste water - by treating water with metallic
 occulants and amine or di:amine
 KOSHIKAWA J 16.05.74-JA-053820
 E16 (02.11.79) *J50146-158 + B01d-21/* C02c-05/02
 waste water contg. dyes is treated with metallic floccu-
 nts and ≤ 1 of RNH_2 and $RNHR_1NH_2$ (where R and R_1 are
 rwer alkyl), and the pH adjusted to flocculate pollutants.
 In an example, to a waste water from a dyeing plant
 ere added $FeCl_3$ 10, $AlCl_3$ 1, and dodecylethylenediamine-
 Cl 1 pts. The treated water was adjusted to pH 7.5-8 with
 $a(OH)_2$ and filtered to yield clear water. 16.5.74 as
 53820 C02c-5/02, B01d-21/01 (2.11.79) KOSHIKAWA
 pp38) (J5 0146158)

WTK D15 84267W/51 = J7 9035-418
 removing finely divided oil from effluent water - by adding an
 org (hydr) oxide absorbing agent, then an acid or alkali to
 dissolve the absorbent and to liberate the oil in large particles
 MITSUI TOATSU CHEM INC 27.05.74-JA-058747
 A97 J01 (02.11.79) *NL7505-945 C02c-05/02 + B01d-17/04
 finely divided oil is removed from effluent water by (a)
 adding ≥ 1 oxide or hydroxide of Ca, Mg, Al, Zn, Fe or Ti
 to absorb and/or to coagulate the oil, (b) adding ≥ 1 acid
 or alkali as solvent to dissolve the adsorbent cpd. and to
 liberate the oil in the form of large particles and (c) remo-
 ving the liberated oil from the effluent water. Can be used
 to treat effluent waters contg. oil in emulsion from stabili-
 sed with an anionic surface active agent. 27.5.74 as
 58747 B01d-17/04, C02c-5/02 (2.11.79) MITSUI TOATSU
 CHEM INC (3pp) (J5 0152550)

UMO ★ D15 87065B/48 ★ J7 9035-419
 Oil sepn. from oil-water emulsions - by mixing emulsions with
 aluminium tri:chloride and adding oleophilic cpd.
 SUMITOMO CHEMICAL KK 27.05.74-JA-059964
 A97 J01 (02.11.79) B01d-17/04 C02c-05/02
 suspended solid-contg. oil-water emulsions are mixed
 with $AlCl_3$, and an oleophilic cpd. is added to the mixt. to
 separate the oils. The resulting oil content is ≤ 1 ppm.
 In an example, $AlCl_3$ (14ppm as Al_2O_3) was added to a
 team-driven compressor drain water contg. 450 ppm oil,
 silicone water-repellant-coated polyurethane was added,
 and the mixt. filtered. The oil concn. in the treated water
 was 0.9ppm. 27.5.74 as 059964 C02c-5/02, B01d-17/04
 (2.11.79) SUMITOMO CHEMICAL CO LTD (3pp)
 (J5 0152554)

MITU ★ D15 87066B/48 ★ J7 9035-420
 treating coloured waste water - by treating with poly:amine
 sulphone-type cationic polymer coagulant and treating liquor with
 activated charcoal
 MITSUBISHI CHEM IND KK (NREN) 14.06.74-JA-067777
 A97 (02.11.79) C02c-05/02
 A coloured waste water is decolourised and lowered in
 COD value by initially treating it with polyamine sulphone-
 type organic cationic polymer cogulant contg. a piperidine
 ring to coagulate colouring matters, followed by sepn.
 and subsequently treating the obtd. liquor wity activated
 charcoal in the presence of (in)organic salt to remove by
 adsorption the organic cationic polymer coagulant remain-
 ing in the liquor. 14.6.74 as 067777 C02c-5/02 (2.11.73)
 NIPPON RENSUI KK; MITSUBISHI CHEM IND KK (3pp34)
 (J5 0159151)

TOKA- D15 13656X/08 = J7 9035-421
 Waste water treatmn. - using lime and blowing with carbon dioxide
 TOKAI PULP KK 25.06.74-JA-072661
 E33 F09 (02.11.79) *J51000-765 C02c-05/02
 In treating pulp process waste water calcium contg.
 compsns. are used. Typically adding 5000 ppm of lime to
 the waste water in a mixing tank while agitating, then blow-
 ing in CO_2 gas in a first carbonating tank, adjusting pH
 value to >12.2 , in a first precipitation tank, blowing- in
 further amts. of CO_2 gas at inlet of a second precipitation
 tank to remove $CaCO_3$ at pH 10.
 The treated water has low COD. 25.6.74 as 072661
 C02c-5/02 (2.11.79) TOKAI PULP COLTD (3pp)
 (J5 1000765)

DAEN D15 85701X/46 = J7 9035-422
 Ammoniacal nitrogen sepn. from waste water - by regenerating the
 ion exchanger with sodium or potassium chloride
 DAIKIN ENGG KK 06.03.75-JA-026505
 E37 J01 (J03) (02.11.79) *J51109-148 C02c-05/08
 In the treatment of waste water contg. NH_4-N using a selec-
 tive ion exchanger to remove the NH_4-N , the improvement
 comprises reproducing the ion-exchanger with a soln.
 contg. NaCl and/or KCl to give a heated liquor contg. the
 NH_4-N , subjecting the liquor to an electrolytic treatment
 by means of an insol. electrode; by contacting with activa-
 ted charcoal to remove the NH_4-N ; and at the same time re-
 cycling the soln. as a reproducing liquor. The process is
 used in the denitrification of waste water contg. P and N,
 etc., esp. industrial waste waters and sewage, etc., prior
 to putting it into rivers and the sea. The process is further
 used for the reprodn. of a zeolite-reproduced in the high
 grade treatment of sewage. 6.3.75 as 026505 C02c-5/08
 5/12 (2.11.79) DAIKIN ENGG KK (12pp) (J5 1109148)

NITA D15 48528X/26 = J7 9035-428
 Disposal of organic waste contg ammonium and sulphate ions - by
 adding calcium hydroxide, passing through ammonia sepn tower
 then incinerating
 NITTETSU CHEM ENG (NITY) 11.10.74-JA-116211
 Q73 (02.11.79) *J51052-660 C02c-05/02 F23g-07/04
 An organic aq. waste liquor contg. NH_4^+ and SO_4^{2-} ions is
 treated by (1) adding thereto $Ca(OH)_2$ in such an amt. that
 pH conditions in step (2) is satisfied so that the greater
 part of the SO_4^{2-} is pptd. as $CaSO_4$ and the NH_4^+ is isolated
 as free NH_3 ; (2) introducing the liquor thus obtd. into an
 ammonia-sepn. tower where ammonia is distilled-off from
 the top by treating it with steam or air while maintaining
 pH of the residual liquor at $>9\%$.
 Then (3) introducing in the third step the liquor into an
 incinerator and combusted together with a supplemental
 fuel in the presence of >0.5 vol.% of remaining O_2 at a
 temp. of 800-1,100°C. 11.10.74 as 116211 F23g-7/04,
 C02c-5/02 (2.11.79) NITTETSU CHEM ENG (4pp)
 (J5 1052660)

HITA D15 81606Y/46 = J7 9035-599
 Metal-chelating resins contg. imino-diacetate gps. - are
 regenerated by washing resin with acid, water, alkali and water
 respectively
 HITACHI KK 01.04.74-JA-035675
 A91 (02.11.79) *J50129-489 + B01j-01/09 C09k-03
 Metal-chelating resins having iminodiacetate gps. are re-
 generated after treatment of metal-contg. industrial waste
 waters by washing the spent resins with acid, water, alkali
 and water in that order until the vol. of the resin after
 each wash was 50-5, 40-5, 70-5, and 95-100% respectively
 of the vol. of resin prior to metal adsorption. The resins
 are effectively regenerated by the swelling and shrinking of
 the resins during the acid, alkali, or water washings.
 In an example, a iminodiacetate-contg. resin after
 treatment of waste water contg. Cu was regenerated accor-
 ding to the above processes using 1N HCl and NaOH solns.
 and water. The Cu-chelating capacity of the regenerated
 resin was similar to that of new resin. The Cu-chelating
 capacity was markedly decreased if the water washing
 steps were omitted. The regeneration efficiency was not
 affected by the concn. of acid or alkali used, but was affec-
 ted by changes in vol. of the resins during washing. 1.4.74
 as 035675 B01j-1/09, C09k-3/00 (2.11.79) HITACHI KK
 (5pp38) (J5 0129489)

UNVO D15 68885W/41 #J7 9035-995
 Laminated semi-permeable membrane stack - for establishing
 serpentine flow path in reverse osmosis or liq sepn
 UOP INC 15.01.73-US-323614 (25.09.75-JA-114929)
 J01 (06.11.79) *US3909-418 B01d-13
 Appts. for sepg. liqs. or reverse osmosis comprises a
 stack of laminated sepg. elements whose central regions
 are spaced from one another by edge spacers or enlarge-
 ments. Each element comprises a porous plate sandwiched
 between semi-permeable membranes. Opposite ends of the
 plates are impregnated with a sealant whilst the sides are
 left free to act as sepd. liq. outlets. At least one of the
 sealed ends has an aperture which is arranged with the

other apertures to produce serpentine flow.

Device is used for liq. sepn. reverse osmosis and ultra-filtration and has high porosity and strength. 25.9.75 as 114929 B01d-13/00 (6.11.79) UNIVERSAL OIL PROD CO (7pp) (J5 2040482)

IIDA/ D15 43027A/24 = J7 9036-150
Pure water prodn. using solar energy - using distillation appts. operated under reduced pressure caused by ejector driven by steam turbine using steam superheated by solar energy
IIDA T 19.10.76-JA-124393
(07.11.79) *J53050-061 B01d-03 C02b-01/04

Appts. is claimed for producing pure water from the sea and dirty waters, utilising solar energy collected by heat collectors, each connected to a distillation cpd., thus forming distillation stages, which are connected in series. Steam generated in the distillation is heat-exchanged with sea water in heat exchangers. Ejectors are provided to reduce the pressures in the distillation appts. to drain the pure water.

Arrangement is designed to evaporate the sea water at higher temps. of 55-75°C repeatedly and to maintain the evapn. rates in the individual stages, independently of the concn. of the sea water content. Novelty is that each distillation appts. operates under a reduced pressure by the ejector driven by power generated by a steam turbine driven by a steam superheated by the solar energy. 19.10.76 as 124393 C02b-1/04, B01d-3/00 (7.11.79) IIDA, T (7pp) (J5 3050061)

COAF D15 56242T/35 = J7 9036-156
Fixation of hydrocarbons - by amine or protein, on a solid support
CREUSOT-LOIRE 01.03.71-FR-007851
E16 H04 J01 + R16 (07.11.79) *BE-779-668 + B01d-15 G01n-31/08

Solid complexes, for the fixation of hydrocarbons or other organic products, consist of a solid mineral or organic support, such as clays, ground glass, sawdust or organic polymers contg. free OH gps. activated by a halogenating agent, partic. cyanuryl halide, cyanogen halide, thionyl halide or sulphuryl halide, pref. chlorides, on which is fixed a satd. or unsatd. aliphatic or aromatic amine or protein.

The aliphatic amine pref. contain 6-20C, pref. 10-20C. The complex is made by putting the support in suspension in organic solvent contg. halogenating agent, sepg. the activated support, washing with organic solvent, and putting into aq. or organic soln. of amine or protein, and sepg. the solid obtd. The complexes are used for sepg. water and hydrocarbons; the reaction is rapid and recovery is easy. 29.2.72 as 020292 (clg. 1.3.71-FR-007851) B01d-15/00; G01n-31/08 (7.11.79) CREUSOT-LOIRE (6pp) (J4 7030584)

AGEN D15 14638B/08 = J7 9036-161
Cellulosic oil recovery from condensed water - formed by thermal decomposition of human waste, by neutralising with alkali and filtering

AGENCY OF IND SCI TECH 14.06.77-JA-069459
A35 J09 (07.11.79) *J54004-903 C10g-19/02 + C10g-01
Cellulosic oil, which is dissolved in acidic condensed water formed by the thermal decompn. of urban waste, is recovered by neutralisation of the condensed water with alkali and filtration of pptd. cellulosic oil.

The process is economic. The solubility of the cellulosic oil in water varies with the pH value of the water and is smallest when neutral. 14.6.77 as 069459 C10g-19/02, 1/00 (7.11.79) AGENCY OF IND SCI TECH (6pp) (J5 4004903)

RHON D15 11323V/07 = NL-161-989
Tubular semi-permeable membrane support - comprising a compressed woven fabric tube suitable for use in reverse osmosis water purification appts
RHONE-POULENC INDUSTRIES 01.08.72-FR-027743
A88 F07 J01 + P64 (15.11.79) *BE-803-077 B01d-13/04 B01d-31 + B01d-53/22

A tube for reverse osmosis, ultrafiltration etc. is fabricated from a tube of textile material, natural or synthetic fibres or threads, with a semi-permeable membrane applied to the outer surface of the tube. In order for the textile tube to adequately meet the requirements of accurate dia.

and surface smoothness, the tube is drawn through a tuar device pref. heated to a temp. at which the textile material becomes pliable, with a decreasing cross-section area in which the dia. of the tube is reduced by 5 to 50%

This measure enables the above requirements to be filled in a relatively simple and economic manner without having to treat the fibres themselves. 24.7.73 as 010293 (6pp1370)

PASE D15 66666Z/00 = NL-162
Liquid sewage aerating rotor - with vertical axis and combined guide plate effecting horizontal circulation
PASSAVANTW MICHELbacher (WEIN/) 09.02.73-NL-00 (07.08.62-DT-W32758)
(15.11.79) *DT1230-399 C02c-01/10 + B01f-03/04 B01f-07/16

An aeration basin for effluent is equipped with a rotor mounted in the centre of the basin on a vertical rotating shaft to which a number of paddles are attached which are immersed in the basin.

This conventional arrangement is modified and incorporates a sepg. wall which has the effect of making the rotor also serve as a conveyor. This enables a horizontal circulation to be induced in a suitably shaped basin, thus improving the distribution of the air or oxygen in the effluent. 9.2.73 as 001853 Div. ex. 6.8.63-296294 (4pp1370)

RUTT- D15 46342Y/26 = NL-162
Dewatering of settled effluent sludge - by spraying it into the air to produce extended surface area for drying
RUTTE JB BV 10.12.75-NL-014425
(15.11.79) *NL7514-425 C02c-03

Effluent sludge is dried by spraying a thin layer of it on to the surface of the terrain, waiting until this layer has reached the required degree and then spraying another thin layer on top of the first. This process is repeated until the depth of the dried material is sufficient for it to be transported to the next treating stage.

The spraying brings the material into intimate contact with the air and the thin layer also has a high surface area to vol. ratio, further helping the drying process. The tendency to build a shallow crust of dried material over the top of the still damp material is also avoided by this means. The net result is a faster drying rate than is achieved for a given mass of material over the same area by the traditional method. 10.12.75 as 014425 (4pp1370)

ROHM D15 11906S/06 = NL-162
Reticulated resins contg tert amine oxide - gps
ROHM & HAAS CO 19.08.69-US-851456
A18 J01 (A91) (15.11.79) *BE-754-452 B01d-15/08 C08f-08/06

Reticulated resins with a cross linked polymeric matrix with bound tert. amine oxide gps. are made by oxidn. of a cross linked polymeric matrix contg. tert. amino gps. such that if the substituents attached to the N atom form a ring, it is a satd. heterocyclic ring. Oxidn. is continued until $\geq 5\%$ of the tert. amino gps. have been converted into amino oxide gps. The matrix is e.g. a cross-linked acrylic resin or (esp.) a styrene-divinylbenzene copolymer. The tert. amine gps. are e.g. of formula matrix N(R))(R') where R and R' (same or different) are alkyl, aryl, alkaryl or aralkyl or R and R' together form a satd. heterocyclic ring. On oxidn., the amino gps. are oxidised to amino oxide gps. -N(R)(R')

O

The prods. are useful adsorbents and ion exchange materials, e.g. for sepn. of polar from non-polar cpds. Typical applications are deacidification of glyoxal and formaldehyde; adsorption of phenol from hexane; adsorption of anol from benzene; and ion exchange treatment of water. 6.8.70 as 011675 (14pp513)

TEGE/★ D15 87113B/48 ★ NL 7804-
Prodn. of drinking water from sea water using circulated air stream with compressor circulating gas having evaporator on the suction and condensn. discharge
TEGELAAR P F 09.05.78-NL-004946
(13.11.79) C02b-01/06

Drinking water is produced from sea water by circulation

stream of air across the surface of warm sea water. This absorbs moisture from the sea water and is then passed across a cooling coil where the moisture is recondensed and collected in the fresh water tank. The cooling and heating is achieved by means of a compressor which circulates propane or another gas and is arranged so that the cooling effect is produced on the suction side of the compressor and the warming effect on the discharge side. The process produces the same quantity of drinking water per unit of energy consumed or more than the traditional process but the equipment is less complex, cheaper to produce and takes up less space. 9.5.78 as 004946 (pp1370)

MC- ★ D15 B/48 ★ OE 7803-929
Distillation method and appts. for raw water esp. sea-water
FOLIENWALZ BRUDER T. 30.05.78-OE-003929
(15.11.79) C02b-01/06

EEF- ★ D15 B/48 ★ OE 7806-659
Barium ore ion exchange column soln. ppte. purificn.
INST JOZEF STEFAN 14.09.78-OE-006659
J01 K05 M25 (15.11.79) C02c-05

FUCH/ ★ D15 B/48 ★ OE 7808-083
Processing impure liq. esp. water in long container system
FUCHS H 25.09.78-DT-841700
(15.11.79) C02c-01/06 10.11.78 as 008083

MAHA/ ★ D15 B/48 ★ OE 7900-051
Recovering methane gas from organic waste
MANAHL R 03.01.79-OE-000051
E17 H09 (15.11.79) C12d-03/10

HLP ★ D15 87267B/48 ★ SU -652-123
Removal of heavy metal ions from acidic waste streams - includes treatment with iron oxide dust from cast iron or steel mfr. to by/pass neutralisation stage
CHELYABINSK POLY 11.05.77-SU-483315
J01 M14 (18.03.79) C02c-05/02

Heavy metal ions are removed from acid waste streams from e.g., etching processes, electroplating processes, acidic mine-working effluents, open cast copper mine-working etc., by treating with Fe oxide dust obtd. from dedusting systems in cast iron and steel mfr.

A typical dosage is 1-1.5g of Fe oxide powder per mg. of metal ion. The purified water may then be recovered by settling etc.

Velichkin, V.P. Bul. 10/15.3.79. 11.5.77. as 483315 (2pp314)

LIL ★ D15 87413B/48 ★ US 4174-772
Dividing stream of eluate from chromatographic column - and applying to absorbent material on drum for UV VIS coordination
ELI LILLY & CO 28.12.77-US-865278
(20.11.79) C12k-01/04

The eluate from a chromatographic column is divided into two streams each regulated by metering valves. One stream passes to waste while the other is split into typically four substreams. The substreams are discharged onto absorbent material carried by a rotating drum to form parallel strips on the drum.

The solvent is then evaporated from the absorbent material which is subsequently divided into strips. Each strip is contacted with a bioautograph medium contg. one desired test organism. After the strips have been incubated the test results are correlated with the UV/VIS absorbency values.

The appts. tests antimicrobial activity of an eluate with test organisms. The appts. forms simultaneously four strips of eluate in absorbent material and coordinates UV/VIS absorbency values. 28.12.77. as 865278 (9pp295)

OLIN ★ D15 87475B/48 ★ US 4175-038
Redn. of available chlorine content of waste streams - from hypochlorite prodn., by treatment with chlorine under controlled conditions
OLIN CORP 21.07.78-US-926771
E34 (E33) (20.11.79) C02b-01/36
The available chlorine content of effluent from a plant

producing alkali(ne earth) hypochlorite is reduced by chlorinating the soln. at 80-100°C and pH 5.5-8.5 so that a major portion of the available chlorine is converted to chlorate.

The effluent can then be fed to a water purification process using a carbon bed. The process is economical and can treat streams with a high available chlorine content.

The waste stream is esp. that produced in $\text{Ca}(\text{OCl})_2$ mfr. Pref. the temp. is 90-95°C, and pH 6.5-7.0. 21.7.78. as 926771 (4pp955)

CONO ★ D15 87477B/48 ★ US 4175-040
Centrifugal water oil separator - has coaxial nested bowls, where the inner bowl is rotatable and outer bowl is fixed
CONTINENTAL OIL CO 28.08.78-US-937391
J01 P41 (20.11.79) B04b-01/12

Oil is recovered from an oil/water mixt. using an appts. which includes two nested bowls, the outer one being stationary and the inner one rotatable. The inner bowl has a flange around its upper periphery covering a portion of the bowl interior. Each bowl is penetrated by a shaft which is rigidly affixed to the inner bowl but slidably passes through the outer bowl via a seal to prevent liquid passage.

The lower end of the shaft is connected to a motor and its upper end is rigidly secured to a perforated basket. The inner bowl has apertures near its lower end and near its periphery. A channel is fixed to the outer bowl within the annulus between the two bowls. The bottom of this channel has a connection to outside the outer bowl. An aperture at the bottom of the outer bowl is connected to a fluid levelling device which balances inflow and outflow.

The appts. is used to separate and recover spilt oil from the surface of a water body. The apparatus can handle water with an oil content of 25 ppm to 50% by weight. 28.8.78. as 937391 (6pp295)

UNIC ★ D15 87478B/48 ★ US 4175-041
Trough for degassing floating sludge - with rotating shaft providing gentle agitation for gas release
UNION CARBIDE CORP 05.10.77-US-839559
(20.11.79) B01d-19/02

An appts. for degassing floating solids in a liq-solid settling chamber includes an open-topped trough positioned so that it is partially submerged in the liq. in the chamber. The top of a first side wall of the trough terminates below the liq. surface while the top of a second parallel wall is above the liquid level.

Liq. contg. the floating solids is flowed into the trough over the first wall. A rotatable shaft is mounted in the trough with its axis horizontal and parallel to the first and second walls. Radially extending non-helical blades are joined to the shaft along its length so that as the shaft rotates the blades gently agitate the liquid and solids in the enclosure for degassing it. Liq. contg. degassed solids is discharged from the trough back to the settling chamber.

The appts. is partic. used in the settling tank of a sewage plant. Degassing of the floating solids and then returning the solids to the settling chamber encourages them to settle to the bottom from where they are removed as a sludge. 5.10.77. as 839559 (11pp295)

AMCY ★ D15 87506B/48 ★ US 4175-100
Scale inhibiting and anti-precipitant compsn. - comprising blend of acrylic acid-acrylamide copolymers with skewed mol. wt. distribution
AMERICAN CYANAMID CO 22.12.77-US-863565 (26.10.76-US-735310)

A14 (A97) (20.11.79) C08f-220/06 C08l-33/02
Compsn. consists of a blend of copolymers of 95-50 mole % acrylic acid and 5-50 mole % acrylamide, the copolymers consisting of a skewed mol. wt. distribution such that on a gel permeation chromatograph $\geq 60\%$ of the copolymers have a mol.wt. of 500-2,000, $\geq 10\%$ have a mol.wt. of 4,000-12,000 and any balance have a mol.wt. of 500-12,000. Pref. the blend is composed of copolymers of acrylic acid and acrylamide linkages in the mole ratios of 20-1:1.

The compsn. is useful as a scale inhibitor to control

deposition of adherent scales on vessel or pipe walls and as an anti-precipitant for keeping alkaline earth cations in soln. It may be used in recirculating water systems, boilers, and in evaporative and reverse osmosis desalination systems. The combination of high and low mol. wt. copolymers provides a synergistic effect.

US4072607 described scale inhibition using an anionic copolymer contg. acrylate and acrylamide linkages in a mole ratio of 20-1:1. 22.12.77. as 863565 Div. ex. 4072607 (8pp990)

See Also

D16 FR 2417326 D22 J5 4135222

D16: FERMENTATION INDUSTRY

SNAM ★ D16 85938B/48 ★BE-876-408
Prepn. of D-aminoacids - from racemic mixts. of hydantoin(s) or carbamoyl derivs., using enzymic complex produced by *Agrobacterium microorganisms*

SNAMPROGETTI SPA 23.05.78-IT-023679

B05 E19 (21.11.79) C07d C12d

D-aminoacids are prepared from racemic mixtures of their N-carbamoyl derivatives, or from the corresponding hydantoins, by treatment with an enzymic complex produced by *Agrobacterium microorganisms*, esp. NRRL B 11291. The process may be carried out in a culture of *Agrobacterium* or in the presence of extracts from the culture broth. The organism NRRL B 11291 is also claimed.

The aminoacids are intermediates for pharmaceutical agents, and are produced in a very pure form. 21.5.79 as 876408 (15pp520).

BREW ★ D16 85956B/48 ★BE-876-489
Iso alpha-acids for brewing prepd. by alkaline isomerisation - with addn. of salts to mixt. to produce conc. oily phase

BREWING PATENTS LTD 26.05.78-GB-023220

E17 (23.11.79) C07b C12c

Prepn. of an aq. compsn. contg. iso α -acids comprises dissolving ≥ 1 salts in the isomerised reaction mixt. at an equiv. molar concn. higher than that of the iso α -acids to form an aq. phase and an oily phase which is more conc. in iso α -acids than the aq. phase. The phases are then sepd.

Prods. are used in brewing. C.f. prior processes, the above enables a higher isomerisation concn. (10-20%) a conc. prod. (20-50%) and it also avoids the use of solvents. It further results in a partial purificn. since humulinic acid and other cpds. remain in the aq. phase. Contamination by waxes is avoided since these will form a 3rd layer above the aq. phase; this aspect enables extracts to be isomerised which contain more waxes. 23.5.79 as 876489 (32pp597).

BESL/ ★ D16 86100B/48 ★DT 2821-790
Organic waste digestion - in heated fermenting tank with sludge circulation and gas extraction producing fertiliser

BESLER H 18.05.78-DT-821790

H09 (22.11.79) C05f-09/02

Organic waste substances from animal farms, agriculture and food industry, are turned into methane gas and a deodorised high-nitrogen fertiliser in a fermenting vat. Its shape is open cylinder with a floating gas bell or a spherical container, made of suitable material, pref. plastic. Its walls contain all pipes for the inlet and outlet and for a circulation of the contents of a pump jet.

This system combines a high gas yield and low operating costs with low capital costs and a long service life of the vat. 18.5.78 as 821790 (21pp39)

SUMO ★ D16 86170B/48 ★DT 2917-899
Fibrinolytic enzyme urokinase lyophilisate stabilisation - with human serum albumin and a polar aminoacid esp. glutamic acid

SUMITOMO CHEMICAL KK 12.05.78-JA-056826

B04 (22.11.79) A61k-37/54

New lyophilised urokinase preparations contain (a) urokinase, (b) human serum albumin, and (c) at least one polar amino acid or salt thereof. Urokinase is used as a fibrinolytic agent in the treatment of thrombotic diseases.

A combination of human serum albumin (HSA) and a polar amino acid exerts a synergistic stabilising effect on urokinase. Formations in which the polar amino acid is glutamic acid show higher in vitro and in vivo thrombolytic activity than usual urokinase preparations.

Pref. polar amino acids or amino acid salts are glutamic acid and its sodium salt, threonine, arginine, arginine hydrochloride, histidine and histidine hydrochloride, glutamic acid being partic. pref. In pref. lyophilizates, the ratio of HSA to amino acid is 1:0.5 to 1:10, esp. 1:0.1 to 1:4 w/w, and the combination of HSA and polar amino acid pref. present in all amt. of 10-50 mg per 6000-60000 IU urokinase.

The lyophilizate is produced by lyophilization of an aq. soln. of urokinase, HSA and at least one polar amino acid or salt thereof. A soln. of urokinase 6000 IU/ml and HSA 10 mg/ml in 0.025 N phosphate buffer pH 7.0 was divided into 1 ml portions, and each portion was treated with an additive, then lyophilized in a vial. After storage for 1 month at 50°C, the residual urokinase activity of the lyophilizate was determined as a percentage of the original activity. 3.5.79 as 917899 (15pp280)

KIKK ★ D16 86211B/48 ★DT 2919-578
Enzyme for decomposing methyl-guanidine - e.g. in foods and uraemic blood, also useful in clinical analysis

KIKKOMAN SHOYU KK 19.03.79-JA-031171 (16.05.78-JA-057217)

B04 R16 (22.11.79) C07g-07/02 C12d-13/10 C12k-03 G01n-31/14 G01n-33/16

A methylguanidine decomposing enzyme (I) is new. It converts methylguanidine (II) into methylamine and urea and has optimum pH range 10.9-12.3, and stable range pH 5-10.6. It is made by cultivating an appropriate strain of *Alcaligenes* (esp. N-81 (ATCC 31369; FERM-P 4368) or N-243 (ATCC 31370; FERM-P 4369)) esp. in presence of ≥ 0.01 w/v% (on total medium) of the sulphate or hydrochloride of (II) under liq. culture conditions.

Used for removing (II), a potential precursor of mutagens, from e.g. fish or meat extracts, smoked fish or from the blood of uraemic patients. (I) can also be used to analyse (II) in such materials (and in serum or urine) e.g. for diagnosis of chronic kidney malfunction. 15.5.79 as 919578 (+26.12.78, 28.2.79-JA-159296, 021967) (52pp1251)

SQUI ★ D16 86241B/48 ★DT 2920-293
Beta-lactamase inhibitor EM4615 - prepd. by aerobic submersed cultivation of *Micromonospora*, esp. *Micromonospora chalybeata* ATCC31395

SQUIBB & SONS INC 18.05.78-US-906906

B04 (22.11.79) A61k-35/70 A61k-37/64 C07g-17 C12d-09/14 C12d-13 C12k-03

β -Lactamase inhibitor EM 4615 (I) and its salts with bases are new. (I) is characterised by (a) an IR spectrum of the Na salt as shown in the specification; (b) m. pt. of the Ba salt of 144-146°C; (c) the Na salt is sol. in water and MeOH but insol. in acetone and CHCl_3 ; (d) the Ba salt is sol. in DMSO and DMF but insol. in water, MeOH, acetone and CHCl_3 . *Micromonospora chalybeata* ATCC No. 31395 is new.

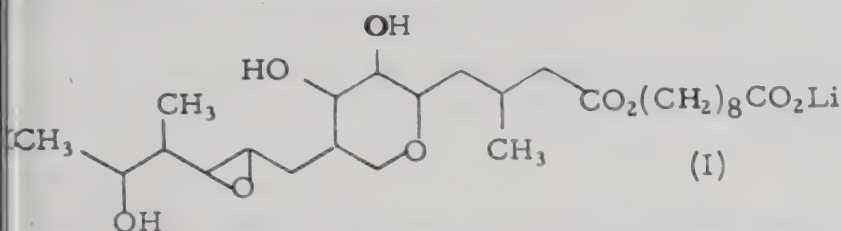
(I) is an inhibitor for the enzyme β -lactamase but does not inhibit related enzymes, such as alcohol dehydrogenase carboxypeptidase or the enzyme for the conversion of ang-

ensin, at concns. of 100 µg/ml or below. (I) can be used to protect cpds. inactivated by β-lactamases and can therefore strengthen the antibacterial activity of antibiotics affected by β-lactamases. (I) is esp. useful in increasing antibacterial properties of penicillins and cephalosporins against resistant microorganisms. Daily doses of (I), when used in combination with an antibiotic are 5-150 (preferably 100 mg/kg). (I) can be used in the treatment of infections caused by gram-positive and gram-negative bacteria e.g. infections of the respiratory and urinary tracts, and various bacterial infections in domestic animals e.g. mastitis in cattle. 18.5.79 as 920293 (pp1401)

EC ★ D16 86306B/48 ★EP---5-614
Soluble crystalline lithium pseudomonic acid - useful for the isolation or purification of pseudomonic acid

BEECHAM GROUP LTD 20.05.78-GB-020958
B03 (28.11.79) C07d-407/06 C12d-09/20
/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

Lithium pseudomonic acid of formula (I) is new:



(I) is a stable, crystalline and non-hygroscopic salt, in contrast to the known Na salt, and it is much less soluble than the Na salt; (I) is esp. useful for the economic isolation or purification of pseudomonic acid (II) from crude preps. (II) is an antibacterial described in GB1395907.

15.79 as 300811 (9pp1248).
E) ISR: J52070083; US4071536; GB1395907; BE-716547
Journal Reference.

AST ★ D16 86317B/48 ★EP---5-637
Fungal enzyme from *Agaricus bisporus* - useful for detern. or degradation of bilirubin in aq. medium

EASTMAN KODAK CO 19.05.78-US-907640
B04 R16 (28.11.79) C07g-07/02 C12d-13/10 G01n-33/16
/S: E(DT, FR, GB).

Bilirubin-specific enzyme compsn. comprises a fungal enzyme having a protein content that, in presence of aq. bilirubin at pH 7.4 and 37°C., degrades ≥ 0.02 micromole bilirubin per min. per 1 mg. protein.

Compsn. is useful in the detern. of bilirubin in an aq. liquid or to degrade bilirubin in the detern. of e.g. bilirubin or haemoglobin in aq. liquids also contg. bilirubin. 18.5.79 as 300881 (31pp1248).

E) ISR: —

MONS ★ D16 86321B/48 ★EP---5-644
Urokinase prodn. in increased yields - by cultivation of live kidney cells in nutrient medium contg. phenylalanine

MONSANTO CO 24.05.78-US-909137
B04 (28.11.79) C07g-07/02 C12d-13/10
/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

Urokinase (I) is obtd. by culture of live kidney cells in an aq. medium contg. nutrients together with phenylalanine (II).

Yields of (I) are increased when (II) is added to the medium; the increase is greater than when glycine is added in equiv. amount.

2.5.79 as 300902 (9pp1248).
E) ISR: US3904480; US3930944.

ANTE- ★ D16 86352B/48 ★FR 2417-326
Continuous decanter for sepg. solids from liquids - comprises conical shell contg. concentric conical baffles with openings creating labyrinthine path, minimising space occupied

TEPRAL GRP INTERET 15.02.78-FR-004811
J01 (D15) (19.10.79) B01d-21/02 C02c-01/26

A plant for sepg. solids and liquids by decantation comprises a closed conical shell in which are a number of baffles in the form of successive cones open at the top and placed concentrically at regular intervals. The baffles

have a smooth wall and are provided with lateral openings and a bottom outlet. The whole is intended to create a horizontal labyrinthine path for creating sedimentation by crossed currents.

The main application of the plant is in difficult industrial sepn. of two phases of densities near to one another, partic. in the field of brewing. It allows continuous sepn. of suspensions of fine particles in the must, gently and without expenditure of energy. Other examples are applications in the mfr. of paper, starch, sugar, chemicals and pharmaceuticals, and in effluent treatment. It provides a long path for the liq. without taking up a large space, and efficient discharge of sediments and clarified liq. without devices disturbing the flow. 15.2.78 as 004811 (17pp1192)

AJIN ★ D16 86373B/48 ★FR 2417-548
Beta hydroxy beta-carboxy iso-caproic acid prepn. - by aerobic fermentation of *Brevibacterium* or *Corynebacterium* species

AJINOMOTO KK 16.02.78-JA-016740
B05 E17 (19.10.79) C07c-59/12 C12d-01/02

Prepn. of β-hydroxy-β-carboxyisocaproic acid (I) by aerobic fermentation of *Brevibacterium* or *Corynebacterium* in a culture medium. The process gives higher yields of (I) which is a precursor of L-leucine.

Suitable organisms are *B. flavum* AJ 11229 and AJ 112230, *C. acetoacidophilum* AJ 11231 and AJ 11232, and *B. flavum* ATCC 14067. Others of these genera are less preferred. The strains used are mutants requiring leucine or mutants resistant to leucine analogues. Pref. conditions of fermentation are 1-7 days at 25-38°C at pH 4 to 8. 16.2.79 as 004068 (7pp288)

AJIN D16 75925Y/43 =GB 1556-584
Prepn. of gels for immobilising microbial cells - from water-soluble polymers and tetraalkoxy-silanes

SANRAKU-OCEAN CO LT 10.02.77-JA-013650 (14.05.76-JA-055925)

A97 B04 (A11 A14) (28.11.79) *BE-854-625 C08j-03 C12k-01/08
Hydrophilic complex gels are produced by (i) mixing an aq. soln. of a water-soluble polymer with a tetraalkoxysilane (I); (ii) hydrolysing at pH < 3 with an acidic cpd. to form a homogeneous complex sol., and (iii) gelling.

(I) is of formula Si(OR)₄ where R is 12C alkyl. The aq. soln. contains an amt. of polymer giving a viscosity < 100000 cPs. at 40°C. (I) is at 5-300 wt. % (as SiO₂, w.r.t. dry polymer). Pref. the polymer is PVA, gelatin or CMC.

Prods. may have microbial cells, e.g. those having enzymatic activity, immobilised therein. 10.5.77 as 019645 (+ 27.5.76 - JA - 062041) (14pp974).

MERI D16 87850A/49 =GB 1556-651
Automatic appts. for virus growth - and storage at temp. of liq. nitrogen

MERCK & CO INC 02.06.77-US-802846
B04 (28.11.79) *BE-867-759 C12k-07

An automatic virus harvesting and medium storage appts. comprises a viral growth media reservoir; a means for automatically removing viral harvest fluid from the growth tank at a predetermined time and passing the fluid to a storage vessel maintained at the temp. of liq. N₂; and a means for automatically passing fresh growth media from the reservoir to the growth tank.

Pref. the apparatus includes an automatic means to control the passage of fresh media by the use of a level sensor disposed in the growth tank. Freezing of the harvest fluid is prevented by using a heating coil.

The apparatus is esp. used to grow viruses in a propagator until the cycle is completed and discharging the growth medium automatically when the viral titre is at a max. 30.5.78 as 024329 (2pp931)

SUMI D16 00262B/01 =GB 1556-652
Fibrinolytic and anticancer potentiator enzyme urokinase purificn. - by ion exchange chromatography on sulphonated cation exchanger in presence of urea

SUMITOMO SHOJI KK (SUMO) 03.06.77-JA-065975
A91 B04 (28.11.79) *DT2823-353 C07g-07/02

Urokinase is purified by contacting an impure soln. contg. 3-8M of urea with a cation exchange resin having sulphonated acid gps. in the NH₄⁺ form so that urokinase is adsorb-

ed, which may then be eluted

Pref. the pH of the impure urokinase soln. is 4-9. The exchange resin used is a polystyrene resin or phenol-formaldehyde resin, each having sulphonic acid gps. or cellulose or crosslinked dextran each having $-(CH_2)_2SO_3H$ or $-(CH_2)_3SO_3H$ gps. each converted to the NH_4^+ form.

Purified urokinase is used for producing plasmin from plasminogen in the treatment of thromboses and enhancing the potency of carcinostatic agents, without adverse antigen-antibody reactions. 31.5.70 as 024852 (3pp931)

DYNA- D16 07997Y/05 =GB 1556-673
Sample transfer appts. - for automatic transfer of identical quantities of liq. from a container to a receiver, e.g. in a microtitration unit

DYNATECH LAB INC 11.07.75-US-595005

J04 Q39 R16 + Q31 R13 (28.11.79) *DT2630-543 G01n-01/10

Predetermined amts. of liq. are transferred from containers to corresp. number of receptacles by forming separate fluid connections between the containers and their resp. receptacles, and simultaneously applying pressure to the containers to force the liq. through to the receptacles. Valves, adjacent the discharge end of the flow passage, can open or close all the liq. passages at the same time.

The process is used e.g. in antibiotic susceptibility testing and gives accurate metering of similar amts. of the liquids to a microtitration test tray, etc. 10.6.76 as 024154 (14pp976)

DYNA- D16 07997Y/05 =GB 1556-674
Sample transfer appts. - for automatic transfer of identical quantities of liq. from a container to a receiver, e.g. in a microtitration unit

DYNATECH LAB INC 11.07.75-US-595005

J04 Q39 R16 + Q31 R13 (28.11.79) *DT2630-543 G01n-01/10

A valve, for simultaneously controlling dispensation of separate liq. charges comprises a fixed member having holes through which pass resilient tubes whose tips end adjacent pinch surfaces in the member, and a movable member which moves transverse to the holes and also has pinch surfaces which engage the tube at the other side to the first pinch surfaces, and pinch the tips to close the tubes.

The device is used e.g. in antibiotic susceptibility testing, and gives accurate metering of similar amts. of different liquids at the same time to individual wells or cells of a microtitration test tray, etc. 10.6.76 as 2258/79, Div. ex. 1556673 (6pp976)

MERE D16 27983B/15 =GB 1556-853
Oxygen-absorbing compsn. for anaerobic bacteria culture medium - contains metal powder, activator, adsorbent and opt. soda

MERCK PATENT GMBH 23.09.77-DT-742874

G04 (28.11.79) *DT2742-874 B01d-53/14 C12b-01

An oxygen-absorbing agent is prepd. comprising an adsorption agent, metal powder or turnings and an activator. The agent also contains additional sodium carbonate.

Pref. the adsorption agent is kieselguhr, the metal powder is iron and the activator is citric acid. The agent is used in the prodn. of an oxygen-poor or oxygen-free atmos. for culturing anaerobic bacteria by bringing the agent into contact with a reaction mediator such as water as solvent.

The oxygen-absorbing agent prepd. has an optimum absorption ability, is simple to handle and can be used immediately. 16.5.78 as 019981 (2pp931)

RENT D16 66981Y/38 =GB 1556-905
Mass culture of diploid cells for vaccine prodn. etc. - in controlled conditions in single batch multidish vessel

ARZNEIMITTEL GMBH (RENT-) 28.05.76-DT-624047

A97 (28.11.79) *BE-854-898 C12k-01/10 C12k-09

The mass growth of diploid cells is achieved by (i) introducing a diploid cell suspension and nutrient medium into a system of communicating chambers formed by flat troughs sealingly stacked with their bases parallel, while the bases are vertical, arrangements being provided to allow distribution of liq. through the system and to equalise air pressure in the system, (ii) orientating the system with the bases horizontal and effecting distribution of liq. and cells over the troughs and growth of the cells, and (iii) orientating the system with the bases vertical and recovering cells

and/or cell products.

The theoretical probability of cell transformation of mutation at places of different conditions is reduced, and the risk of biohazards is minimised. Increased sterility is made possible, and cell-receptive plastic material, e.g. polystyrene, on which the cells grow best may be used. 26.5.77 as 022288 (8pp990)

NOVO ★ D16 86435B/48 ★GB 2021-11
Penicillin V-acylase obtd. by bacterial cultivation - of e.g. strain NRRL 11240, useful in prodn. of e.g. 6-amino:penicillanic acid from penicillin V

NOVO INDUSTRIAS 18.04.79-GB-013384 (19.04.78-GB-015522)

B04 (28.11.78) C07d-499/10 C07d-501/04 C07g-07/02

A penicillin-V-acylase is produced by cultivation of the bacterial strain NRRL 11240 or of a strain having the general characteristics thereof, or variants or mutants of these which retain the ability to produce penicillin V-acylase. Also claimed is the use of the acylase to produce 6-APA from penicillin V, 7-ACA from V-ACA, or homologues of 6-APA or 7-ACA from homologues of penicillin V or V-ACA.

The acylase has a broad pH-activity range and can be produced in industrially viable yields. 18.4.79 as 013384 (6pp949)

TANA ★ D16 86702B/48 ★J5 4135-29
Fixed microorganisms prodn. - by forming a gel contg. platinum loops of microbes and incubating in culture medium

TANABE SEIYAKU KK 07.04.78-JA-041471

A96 B04 (20.10.79) C07g-07/02 C12c-11 C12d-03/02 C12d-13 C12k-01

Method comprises forming a gel e.g. PVA, carrageenan which contains 0.01-10 platinum loop-ful of microbial body on 100g (wet wt.) of the gel, in the granules or the film having the dia. or the thickness 2mm-5cm pref. 2-5mm and incubating thus formed gel in a suitable culture medium at 25-40°C to form the living microbial body layer in the neighbourhood of the surface of the gel.

Very small amt. of the microbial body is used and the culturing process to obtain large amts. can be omitted. As the microbial body, a culture medium contg. the microbial body can be used as it is without sepg. the microbial body. The dense living microbial body layer is formed in the neighbourhood of the surface of the gel and the fixed microbe shows high catalytic activity. The living microbial body layer can be renewed by continuing the incubation of the gel in proper nutritive medium and the enzymic process can be practiced for long time stably while maintaining high catalytic activity. 7.4.78 as 041471 (9pp5)

SHOW ★ D16 86703B/48 ★J5 4135-29
Prodn. of clear bacterial body with high vitamin protein content - by culturing *Pseudomonas* SD-21 bacterium in medium contg. methanol as carbon source

SHOWA DENKO KK 10.04.78-JA-041305

B04 C03 (D13) (20.10.79) A23k-01 C12k-03

Process comprises culturing a bacterium *Pseudomonas* SD-21 in a culture medium contg. methanol as the major C source and sepg. the multiplied bacterial body. Pref. the culture is practiced at 15-40 (esp. 30-37)°C at pH 5.5-8. esp. 6.5-8.0. Pref. the methanol concn. in the culture medium is $\leq 3\%$ and during the culture methanol is added intermittently.

Clear bacterial body having high protein and vitamin content is prepd. using inexpensive and easily obtainable methanol as the major C source. Prod. can be used as nutritive feed, but also as material for extracting proteins, nucleic acids, vitamins, etc. 10.4.78 as 041305 (3pp)

SHOW ★ D16 86704B/48 ★J5 4135-29
Prepn. of bacterial body having high protein and vitamin contents by culturing bacterium *Methylomonas* SD-12 using methanol as major carbon source

SHOWA DENKO KK 10.04.78-JA-041306

B04 C03 (D13) (20.10.79) A23k-01 C12k-03

The method is characterised by culturing a bacterium *Methylomonas* SD-12 (FERM P-4440) which can utilise methanol, in a culture medium contg. methanol as the major ca

on source and sepg. the multiplied bacterial body.

A clear bacterial body having high protein content and high vitamin content can be prepd. fermentatively by using expensive and easily obtainable methanol as the major carbon source. The bacterial body can be used not only as an excellent nutritive feed, but also as the material for extracting protein, nucleic acid, vitamin, etc.

The culture is practiced at 15-40°C (30-37°C) at pH 5-9.0 (6.5-8.5). The desirable methanol concn. in the culture medium is $\leq 3\%$ and, during the culture further methanol is added. 10.4.78 as 041306(4pp5)

OF ★ D16 86705B/48 ★ J5 4135-298
Additive for fermentative prodn. of glutamic acid - which both suppresses action of excess biotin, and acts as antifoaming agent
NIPPON OILS & FATS KK 07.04.78-JA-040184
A97 B05 E16 (A25 E17) (20.10.79) C09k-03 C12b-01/18 C12d-13/06

Antifoaming and productivity-improving agent for glutamic acid fermentation use contains a cpd. $\text{RO}(\text{C}_3\text{H}_6\text{O})_m(\text{C}_2\text{H}_4\text{O})_n$ (I) or (II) as the major ingredient.

$\text{O}(\text{C}_3\text{H}_6\text{O})_m(\text{C}_2\text{H}_4\text{O})_n\text{X}$ (II)
 $\text{O}(\text{C}_3\text{H}_6\text{O})_m(\text{C}_2\text{H}_4\text{O})_n\text{X}$
R is 1-24C alkyl or alkenyl or alkenyl. R' is 1-24C alkylene. X is H or 14-18 C satd. fatty acid. The esterification degree of the (I) and (II) is $\geq 60\%$, $m = n$

n is 10-80; n is 0-15. The mol. wt. of the ethyleneoxide chain is ≤ 20 w/w% of the whole cpd.

The agent is effective both for suppressing the action of excessive biotin and for defoaming. The agent is effective when using as little as 50-1000 ppm. and the amt. of the additives can be decreased. Further by adding the agent once at the beginning of the fermentation its productivity-improving activity and defoaming activity endure for whole fermentation period. 7.4.78 as 040184(5pp5)

AJIN ★ D16 86706B/48 ★ J5 4135-299
D-Arabitol prepn. - by culturing *Pichia* yeast strain modified to utilise hydrocarbon cpds.

AJINOMOTO KK 12.04.78-JA-042779
B05 E17 H04 (D13) (20.10.79) C12d-13

The method comprises culturing the yeast strain which belongs to *Pichia* and can utilise hydrocarbon, in a culture medium contg. hydrocarbon as the major carbon source and recovering D-arabinitol - accumulated in the culture medium.

The variety *Pichia oomeri* M₃-2 AJ 14589(FERM-p4463) has strong hydrocarbon, utilising activity without less of the producibility for D-arabinitol. It is obtd. by treating the parent strain which produces D-arabinitol but has little ability to utilise hydrocarbons, with N-methyl-N'-nitro-N-nitrosoguanidine. The parent strain is *Pichia oomeri* No. 230(FERM-P 158). D-arabinitol is a sweet sugar alcohol and can be used as sweetner, etc.

The culture is practiced aerobically at 20-40°C, pref. at 26-35°C at pH 3-7 for 1-10 days. After the culture yeast body is sepd. and the filtrate is demineralised with ion exchange resin. Then it is concn. at $\leq 50^\circ\text{C}$ to dryness and the residue is heat-dissolved in ethanol. The ethanol soln. is stood at ca. 5°C and crystalline D-arabinitol can be obtd. 12.4.78 as 042779(3pp5)

NISS ★ D16 86707B/48 ★ J5 4135-300
Geldanamycin and related antibiotics prodn. - by cultivating *Streptomyces hygroscopicus* B-434 under aerobic conditions
NISSHIN FLOUR MILL KK (TOBI-CHUG-) 07.04.78-JA-040229
B04 (20.10.79) C12d-09/14

Prodn. of geldanamycin and related antibiotics comprises cultivating *Streptomyces hygroscopicus* B-434 at 35-45°C in a nutrient medium under aerobic conditions and recovering from the cultured broth geldanamycin, 17-O-demethylgeldanamycin, 6-(3-methyl-2-butenyl)indole and enterocin. The antibiotics obtd. are active against gram-positive bacteria and mycobacteria. They are active also against tumour cells (antitumour). Thus, they are useful as antibiotics.

Streptomyces hygroscopicus B-434 (Ferm-P 3645) is used. It is cultivated in a nutrient medium contg. carbon sources (e.g. D-glucose, D-fructose, D-mannitol, D-

rhamnose, solubilised starch), nitrogen sources (e.g. soybean meal, meat extract, peptone, corn steep liquor, dried yeast) and minerals. The fermentation is performed at 35-45°C for 30-35 hrs. under aerobic conditions.

7.4.78 as 040229(7pp16)

DAIN ★ D16 86786B/48 ★ J5 4135-703
Antibiotic AB-102 effective against gram positive bacteria - is obtd. by culturing *Actinoplanes* microorganism

DAINIPPON PHARM KK 11.04.78-JA-043018

B04 (22.10.79) A61k-35/74 C07g-11 C12d-09/14

Antibiotic substance AB-102 is produced by microorganisms of the genus *Actinoplanes*, whose specific rotary power is $[\alpha]_D^{26.5} \text{O} (\text{C} = 0.5, \text{ in DMSO})$. The antibiotic comprises at least carbon atoms, hydrogen atoms, nitrogen atoms and sulphur atoms.

As the antibiotic AB-102 - producing strain, *Actinoplanes japonensis* (Ferm Receipt No. 4464, 4465). Cultivation of AB-102 - producing strain can be carried out using a synthetic culture medium having suitable nutrient sources or a natural culture medium having suitable nutrient sources, under aerobic conditions.

Novel antibiotic AB-102 strongly inhibits the growth of Gram-positive strains such as *Staphylococcus aureus*, esp. its resistant bacteria, and acid-fast bacteria such as *tubercle bacillus*. 11.4.78 as 043018(6pp75)

KYOW ★ D16 86787B/48 ★ J5 4135-704
Antibacterial SUM-4 and its salts - produced by culturing a strain of *Micromonospora* genus

KYOWA HAKKO KOGYO KK 14.04.78-JA-043284

B04 (22.10.79) A61k-35/74 C07g-11 C12d-09/14

SUM-4 and its acid-addition salts are new, and have physico-chemical properties as follows: (1) basic white powder (2) Elemental Analysis (%) - C 46.98, H 8.41, N 11.49; (3) Molecular Weight - 466; (4) Molecular formula - $\text{C}_{19}\text{H}_{38}\text{N}_4\text{O}_9$; (5) UV Absorption Spectrum; no specific absorption maximum is observed at 220-360 nm, only terminal absorption. (6) Colour reaction: Ninhydrin - positive; Potassium permanganate - positive; Elson-Morgan's Reaction - negative; Biuret Reaction - negative; and (7) Mass Spectrum affords the following M+1 ion and fragment ion. m/e 467 M+1 ($\text{C}_{19}\text{H}_{39}\text{N}_4\text{O}_9$), 351 ($\text{C}_{14}\text{H}_{27}\text{N}_2\text{O}_8$), 333 ($\text{C}_{14}\text{H}_{25}\text{N}_2\text{O}_7$), 323 ($\text{C}_{13}\text{H}_{27}\text{N}_2\text{O}_7$), 305 ($\text{C}_{13}\text{H}_{25}\text{N}_2\text{O}_6$), 192 ($\text{C}_7\text{H}_{14}\text{NO}_5$), 164 ($\text{C}_6\text{H}_{14}\text{NO}_4$), 160 ($\text{C}_7\text{H}_{14}\text{NO}_3$), 145 ($\text{C}_6\text{H}_{13}\text{N}_2\text{O}_2$).

SUM-4 is prepd. by culturing an SUM-4 producing strain belonging to the genus *Micromonospora* to cause the SUM-4 to be produced in the culture broth, then recovering the prod. from the culture broth.

SUM-4 is useful as an antibacterial agent. 14.4.78 as 043284(8pp75)

KYOW ★ D16 86788B/48 ★ J5 4135-705
Antibacterial substance SU-1 - prepd. by culturing strain of genus *Micromonospora*

KYOWA HAKKO KOGYO KK 14.04.78-JA-043285

B04 (22.10.79) A61k-35/74 C07g-11 C12d-09/14

SU-1 and its acid-addn. salts have the following physico-chemical properties. (1) basic white powder; (2) elemental analysis (%) C 49.60, H 8.79, N 11.52; (3) mol. wt. 464; (4) mol. formula $\text{C}_{20}\text{H}_{40}\text{N}_4\text{O}_8$; (5) UV Absorption Spectrum 220-360 nm, no characteristic maximum absorption, only showing terminal absorption; (6) colour reaction Ninhydrin reaction positive, Potassium permanganate reaction positive, Elson-Morgan's Reaction negative, Biuret Reaction negative; (7) NMR spectrum NMR spectrum of a soln. of this substance in heavy water (hydrochloric acid acid pD 0.8) affords the following chemical shifts values (ppm): 1.33 (3H, d J=8 Hz), 1.34 (3H, s), 1.35-1.50 (6H), 2.92 (3H, s), 3.00-4.20 (12H), 5.45 (1H, d, J=3.9 Hz), (8) Mass Spectrum M+H ion and fragment ion as shown below: m/e 465 M+1 ($\text{C}_{20}\text{H}_{41}\text{N}_4\text{O}_8$), 447 ($\text{C}_{20}\text{H}_{39}\text{N}_3\text{O}_8$), 351 ($\text{C}_{14}\text{H}_{27}\text{N}_2\text{O}_8$), 323 ($\text{C}_{13}\text{H}_{27}\text{N}_2\text{O}_7$), 305 ($\text{C}_{13}\text{H}_{25}\text{N}_2\text{O}_6$), 290 ($\text{C}_{13}\text{H}_{24}\text{NO}_6$), 192 ($\text{C}_7\text{H}_{14}\text{NO}_5$), 164 ($\text{C}_6\text{H}_{14}\text{NO}_4$), 160 ($\text{C}_7\text{H}_{14}\text{NO}_3$), 143 ($\text{C}_7\text{H}_{15}\text{N}_2\text{O}$); (9) characteristic Rf values in paper-chromatography and thin-layer chromatography. 14.4.78 as 043285(8pp75)

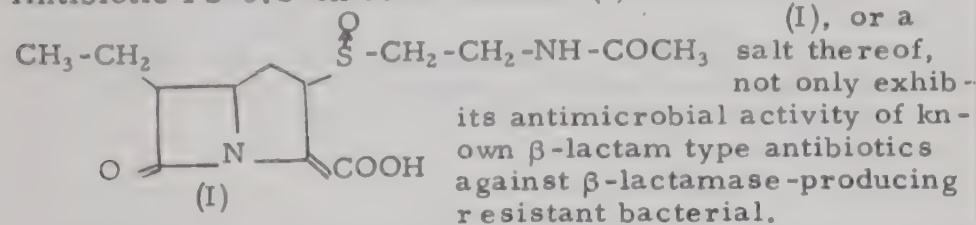
SAOC ★ D16 86820B/48 ★ J5 4135-790

Antibiotic PS-5 S/oxide and salts - having antimicrobial activity and used to increase antimicrobial activity of known beta-lactam cpds.

SANRAKU OCEAN 11.04.78-JA-041794

B02 (22.10.79) A61k-31/40 C07d-205 C07d-209 C07d-487/04

Antibiotic PS-5, S-oxide of formula (I) and salts, are new.



The MIC values (μg/ml) for *Staphylococcus aureus* FDA 209P; *Bacillus subtilis* ATCC 6633 and *Sarcina lutea* S-19 are 25, 6.25 and 0.78 respectively. 11.4.78 as 041794 (10pp140)

MEIJ D16 38214F/00 =NL-162-135
Antibiotic S.F.

MEIJI SEIKA KK 15.10.68-JA-074634 (18.12.67-JA-080601)

B04 (15.11.79) *NL6818-105 C12d-09/14 +A61k-35/74

Basic, water-soluble antibiotic SF-733 (I) is prepd. by culturing *Streptomyces ribosidificus* and isolating (I) from the culture. The free base of (I) is opt. reacted to form acid-addition salts.

(I) has a high growth-inhibitory activity against a large number of G(-) and G(+) bacteria as well as against acid-resistant bacteria. (I) has very low toxicity. *S. ribosidificus* ATCC 21294 is cultured in a medium using customary C- and N-sources, inorganic salts and opt. other organic or inorganic agents which promote the growth. Culture is submerged with aeration at pref. 35°C. After isolation of (I) the amorphous free base is dissolved in water and evaporated to dry while ethanol is added to give an ethanol-solvate. Dissolving this in methanol gives a crystalline ppte. 17.12.68 as 018105 (14pp279)

HAYB D16 15492U/11 =NL-162-137
Pullulan prodn by fermentation - using a saccharide as main carbon source

HAYASHIBARA BIOCHEM 11.10.71-JA-079413

B04 (D17) (15.11.79) *BE-789-940 C12d-13/04

Pullulan is produced by culturing a pullulan-forming organism in a culture medium contg. as C-source a starch hydrolysate with a glucose equiv. of 20-70. Pref. the starch hydrolysate has a glucose equiv. of 35-60, and is contained in the culture medium as 5-15 wt. % (dry basis).

Improved yields (> 75%) and shorter reaction times are achieved with cheap starting material. Pullulan readily forms viscous solns., and can be used for mfr. of water-soluble packaging films. Suitable organisms are *Pullulara fermentans* var *fermentans* IFO6401 and var *fusca* IFO 642, *P. pullulans* AHU 9553 and IFO 6533, and *Dematium pullulans* IFO 4464. 11.10.72 as 013743 (5pp)

STAL D16 12832R/08 =NL-162-140
Storage stable starch conversion syrup with high - maltose content
STALEY A E MFG CO 12.05.69-US-823937
(15.11.79) *BE-737-938 +C13k-07

Conc. starch syrup is made by saccharification of stiffened starch liquefied to a D.E. (glucose-equiv-) of > 35 and contg. 5-55 wt. % solids, with a maltogenic enzyme and an α-1,6-glucosidase to give a starch syrup with a F.E. (fermentable extract) content of > 85 wt. %, a maltose content of 60-80 wt. %, a D.E. of > 50 and a maltotriose content of 15-35 wt. %. The syrup is then concentrated to a solids content of > 75 wt. %.

The maltogenic enzyme used is e.g. a β-amylase prepn. which is virtually free from α-amylase. The resulting conc. syrups are stable to storage for long periods without crystallisation. 25.8.69 as 012963 (4pp513)

KSPO= ★ D16 87169B/48 ★ SU-644-809
Alcoholic beverage of low fusel oil content - involves seed rupture and screening prior to pulp extraction

KISH POLY 27.08.74-SU-054982

(30.01.79) C10g-03/12

Alcoholic beverage is made from fruit, e.g. apples by pressing, juice separation and distilling alcohol from the

juice to C₂H₅OH-content 65-70% vol. The residue is then extracted with this alcohol. The process becomes more efficient and the residue yields trace bodies more readily by operating as follows: pressing must rupture the seed pods and not less than 80% of the seeds are then screened off.

Gorya, G.Ya., Maltabar, V.M., Tsaranu, I.N. Bul. 4/30.1.79. 27.8.74. as 054982 (3pp835)

GIDR= ★ D16 87200B/48 ★ SU-651-026
Feed yeast biomass culture medium prepn. - includes two-stage oxidn. using alkali and sulphuric acid hydrolysis of vegetable raw material

GIDROLIZPROM PROD 03.05.77-SU-481197

C03 (D13) (07.03.79) C12c-11/16

Nutrient substrate for the prodn. of feedstuffs yeast biomass is prepd. by treating the vegetable raw material in two stages: (1) with an O₂-contg. gas in the presence of a base at a temp. of 100°-150°C, an O₂ pp. of 2-15 atmos base concn. 0.5-5% and water ratio 10-20; and (2) hydrolysing the solid sediment from the first stage with H₂SO₄ soln. at a concn. of 0.5-1% at 140°-150°C and water ratio 10-12. The resulting hydrolysate and oxidate prods. are mixed together.

The method makes more efficient use of the raw material, improves the quality of the substrate and increases the yield of biomass.

Tokarev, B.I., Raskin, M.N., Kraev, L.N. et al. Bul. 9/5.3.79. 3.5.77. as 481197 (2pp314)

VETI= ★ D16 87201B/48 ★ SU-651-026
Antigen activity and specificity evaluation - using freeze-dried polyglobulin as standard antibody for accuracy, useful in veterinary laboratory practice

VET PREP SCI TEST 05.01.77-SU-442956

B04 (07.03.79) C12k-01

The use of lyophilised polyglobulin as standard antibody improves the specificity, sensitivity and speed of the veterinary laboratory determination of activity and specificity of antigens.

The method is carried out by diluting and inactivating serum; diluting the antigens; titrating the complement; ageing the bacteriological and haemolytic systems at 0°-4°C for 16-18hrs. adding a back-titrated dose of the haemolytic system; ageing on a water-bath at 37°C for 20 mins. and measuring the complement-fixation after 3-4 hrs. and 24hrs.

Niyazov, U.E., Trusova, L.I., Prostnyakov, A.P. Bul. 9/5.3.79. 5.1.77. as 442956 (2pp314)

BIOT= ★ D16 87202B/48 ★ SU-651-027
Bacterial strain *Actinomyces aureovercillatus* 129 - as high activity extracellular producer of food grade guanylyl-ribonuclease

BIOTECH RES INST 12.08.76-SU-399771

B04 (07.03.79) C12d-13/10 C12k-01/02

The mycelia on a solid nutrient medium consisting of saccharified α-amylase, wheat flour, starch and salts take the form of thin separate filaments; the cell walls are straight and are 0.71-0.93 μ thick.

The spore carriers are helical with 0.5-1 spirals or short and monopodial; the spores are oval and elongate with a smooth envelope.

Shakhova, T.V., Khomyakova, G.I., Konovalov, S.A. et al. Bul. 9/5.3.79. 12.8.76. as 399771 (3pp314)

BELY/ ★ D16 87203B/48 ★ SU-651-028
Identification of intestinal infections in man - by breeding five different colonies of infected sample and setting-up agglutination reactions for each auto-strain

BELYAKOV V D 06.06.77-SU-492357

B04 (07.03.79) C12k-01/04

Quasi-pathogenic inducers of intestinal infections are identified by sowing a faecal sample into a dense nutrient medium; breeding and re-seeding to produce five different types of colonies; and setting up agglutination reaction between each autostrain and the diseased serum, in a ratio of 1:50. Identification is then obtd. by inspection of the agglutinated strains, e.g., by observing their fermentative activity in an antigenic structure.

The method is quick and has high sensitivity. Belyakov, V.D., Zhavoronkov, V.A. Bul. 9/5.3.79.

5.77. as 492357 (2pp314)

PI= ★ D16 87242B/48 ★SU-651-813
 Antigen-antibody reaction medium - contg. gel between parallel glass plates with aperture, used in viral hepatitis diagnosis, etc.
KAZA EPIDEM MICROBI 08.08.77-SU-515648
B04 (15.03.79) A61k-39 C12k-01

The antigen-antibody reaction for medical diagnosis of viral hepatitis and other diseases, is conducted in gel medium on a transparent plate. The pptn. reaction can be easily observed and the component can be easily reproduced layer of gel between two parallel transparent plates with 0.1 mm. wide aperture in one of the plates for the introduction of gel, antibodies and antigens. The aperture is sealed with 0.3% agar gel at 50°C, and the container is incubated in a moist atmos. for 14-18hrs. before examination.

alkosh, L.P. Bul. 10/15.3.79. 8.8.77. as 515648 (2pp 58)

GT= ★ D16 87258B/48 ★SU-651-956
 Lubricant covering for mould used in reinforced concrete mfr. - contains wood hydrolysis prod. made feed yeasts prodn., polyacrylamide, ground lime or chalk or fine sand and bone glue
ORGTEKHSTROI TECH 26.04.77-SU-480847
A82 G02 L02 P64 (20.03.79) B28b-07/38

Lubricant covering for a mould used in reinforced concrete prodn. contains (in wt. %): wood hydrolysis prod. from feed yeasts prodn. 33-42, polyacrylamide 1-5, ground lime or chalk or fine sand 45-55 and bone glue 8-10.

The covering layer is of high quality, easy to apply and cheap. It has a strength of 197 kg/cm². when sealed with water.

artetskias, A.A., Milaknite, I.I., Garalyavichusia, A. Bul. 10/15.3.79. 26.4.77. as 480847 (3pp1047)

ALFA ★ D16 87378B/48 ★SW 7801-134
 Aq. organic cpd. prodn. by fermentation of carbohydrate material - followed by vacuum evaporation of cpd. from fermented liq.
ALFA-LAVAL AB 31.01.78-SW-001134
E19 (03.09.79) C12b-01

PJO ★ D16 87455B/48 ★US 4175-006
 Alpha-hydroxy testosterone prepn. - by cultivation of Mycobacterium mutant in presence of steroid having 8-10C in 17-alkyl side chain

UPJOHN CO 21.10.77-US-844366
B01 (20.11.79) C07b-29/02

Prepn. of 9α-OH testosterone (I) in its pure form comprises cultivating a suitable Mycobacterium mutant under aerobic conditions in an aq. nutrient culture medium contg. > 1 steroid having 8-10C in the 27-alkyl side chain.

Pref. the microorganism is Mycobacterium fortuitum NRRL B-8119 (disclosed and characterised in US4029549) and the steroid is sitosterol, cholesterol, stigmasterol or campesterol (I) is a useful steroid intermediate.
11.10.77. as 844366 (5pp914)

MAERI ★ D16 87456B/48 ★US 4175-007
 Antibiotic A21a, prodn. antibacterial and animal growth promoter - by cultivating Streptomyces philipinensis strain under aerobic conditions

MERCK & CO INC 21.11.77-US-853078 (29.10.76-US-736794)
B03 C02 (20.11.79) C12d-09/14

Antibiotic A21A is produced by cultivating a strain of Streptomyces filipinensis, pref. NRRL 11,044, in a fermentation broth contg. assimilable sources of carbon (carbohydrates), nitrogen and inorganic salts under aerobic conditions. The antibiotics is pref. extracted from the broth using a water-immiscible polar or hydroxylic solvent, resp. chloroform, MEK or ethyl acetate.

A21A is a broad-spectrum antibacterial and is effective against e.g. Proteus mirabilis, Escherichia coli, Klebsiella pneumoniae, Pseudomonas aeruginosa, Serratia marcescens and mycoplasma gallisepticum. It is also useful as a growth-improvement agent for animals, being administered as a feed component or being dissolved or suspended in the drinking water. US4071631 claimed A21A and its salts and esters. 21.11.77. as 853078 Div. ex4071631 (9pp990)

BIOP- ★ D16 87457B/48 ★US 4175-008
 Culture specimen collection and transport package - has cap slidable on stem with swab at one end and culture tube at other
BIO-PHARM PACKAGING 26.06.78-US-919212
(20.11.79) C12b-01

Package comprises an elongate stem with a collecting member at one end, and a tube to hold the sterile member before use. A second tube holds culture medium for insertion of the member after collecting a specimen for transport to a test facility.

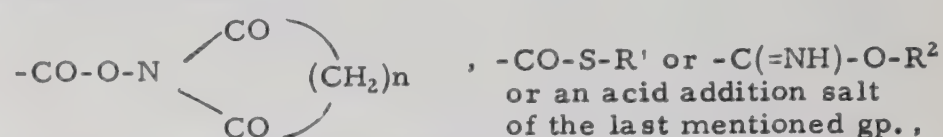
A cap is slidable on the stem between the ends for sealing the first tube initially and then closing the second tube after inserting the member. There is a second cap for fixing the second tube to the stem before a specimen is collected. The member is pref. a swab wrapped around the stem end. 26.6.78. as 919212 (6pp1358)

PHAA D16 65621A/37 = US 4175-073
 Reactive derivs. of sulphydryl contg. polymers - having e.g. carboxy: succinimido-alkylene di: sulphide gps. and useful as thiolating agents and enzyme supports

PHARMACIA FINE CHEM 04.03.77-SW-002463

A11 B04 (A97) (20.11.79) *DT2808-539 +C07g-07

In new reactive derivs. of HS-gp. -contg. polymers, a number of HS-gps. are converted to a disulphide gp. of formula -S-S-A-Z, where A is a 1-10C hydrocarbon residue and Z is a gp.

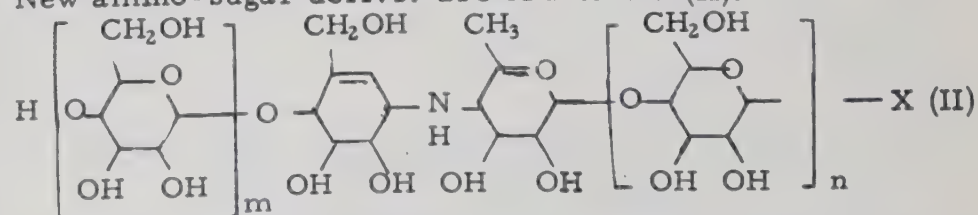


R¹ being 2- or 4-pyridyl or 5-nitro-2-pyridyl, R² being (m)ethyl, and n being 2 or 3.

The new derivs. are useful e.g. as thiolating agents or as carriers for e.g. enzymes or other proteins. Products are more uniform w.r.t. the degree of thiolation, and a bound enzyme can be removed after it has lost its activity and the carrier material reused after being subjected to regeneration. 2.3.78. as 882547 (6pp990)

FARB D16 51041A/28 = US 4175-123
 Amino sugar derivs. - useful as glycoside hydrolase inhibitors
BAYER AG 10.06.77-DT-726207 (23.12.76-DT-658562)
B03 C02 (B04 C03 D13) (20.11.79) *NL7714-142 A61k-31/73
C07h-05/06

New amino-sugar derivs. are of formula (II):



In the formulae m and n are each integers of 0-8 and m+n = an integer of 0-8; X is a gp. -OR, -SH, -SR, -NH₂, -NHR or -NRR₁ (where R is 1-30C alkyl, 2-6C alkenyl, 3-7C cycloalkyl, 6-10C aralkyl, 6-10C cyclic aryl or 5- or 6-membered heterocyclic, opt. substd. by OH, 1-4C alkoxy, 1-4C alkylamino, 1-4C alkylcarbonyl etc.; R₁ is 1-6C alkyl, 3-7C cycloalkyl, 6-10C aralkyl or 6-10C cyclic aryl, opt. substd. by 1-4C alkoxy, 1-4C thioalkyl, CN, SH, NO₂, halo etc.; or R and R₁ together with the N atom form a 5-7 membered heterocyclic ring opt. contg. further hetero atoms and being opt. satd.

The cpds. are useful as medicaments esp. for diabetes adiposity and hyperlipaemia. They can be prepd. by culturing microorganisms of strains of Actinomycetales order. 15.12.77. as 861043 (29pp924)

See Also

D13 DS 2405589
 D13 US 4175121

D13 J7 9036113
 D15 GB 1556710

D13 J7 9036120
 D25 GB 2021142

D17: SUGAR; STARCH

WESS- ★ D17 86325B/48 ★EP ---5-651
Washing particulate feedstock esp. starch in hydrocyclones - arranged as multistage enclosed system with partial final stage recycling

WESSANEN (UK) LTD 24.05.78-GB-022187

P41 (28.11.79) B03b-05/34 C08b-31 C131-01

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

In a multistage enclosed system for upgrading particulate feedstock, contaminating material is removed by wash liquid fed countercurrent to the feedstock. Pumps are positioned between stages and in the final stage a controlled portion of the underflow stream is returned to the inlet side of the pump which feeds this final stage.

The regulation of the amount of recycled liquid round the final stage is controlled by a calibrated orifice disc or a metering pump. Pref. all stages are operated under identical conditions and pref. include identical multi-hydrocyclones. Pref. the recycled portion is 15 to 40% of the vol. of the final stage underflow.

The appts. washes contaminating material from corn starch or potato starch. The recycling of the final stage creates in it working conditions similar to the other stages. This increases the removal of contaminants; reduces the amt. of wash water consumed; reduces the number of hydrocyclones needed in a stage, typically to 74; and reduces power consumption.

23.5.79 as 300922 (30pp295).

(E) ISR: FR1120588; 1 Journal Reference.

ITOC- ★ D17 86935B/48 ★J5 4136-576
Refining coloured sugar soln. - by contacting with anion exchange resin, where resin is regenerated with alkaline soln.

ITOCHUSEITO KK 14.04.78-JA-044528

J01 (23.10.79) B01j-01/09 C13d-03/14

Method comprises effecting decolourising, desalting, and silica removal of soln. by contacting the soln. with anion exchange resin. The anion exchange resin is regenerated by passing alkaline soln. after ≥ 1 of treating soln. selected from acid, acid contg. alkali metal, alkali containing alkali metal, and alkali metal salt soln. are passed.

The method may be used for the refining of sugar soln. having high colour value, and also for treating waste soln. from dyeing, pulp, and food plants. 14.4.78 as 044528 (14pp96)

HULE- D17 28380R/17 =NL-162-139
Extraction of soluble substances from finely divided - solid materials
HULETTS SUGAR CORP (HUL-) 21.10.68-ZA-006802
(15.11.79) *NL6915-875 B01d-11/02 + C13d-01/10

Soluble components are extracted from a solid material in a counterflow process in which the solid material is fed through a series of conveying devices, the zone in which each conveyor is placed being equipped with a liq. collection bath and a circulation pump for delivering the liq. to distribution pipework over the conveyors. Each collection bath has an overflow into the bath in the preceding zone and receives the overflow from the following zone.

Conveyors consist of inclined continuous belts arranged so that the solid material is carried to the head of each conveyor and falls onto the lower end of the following conveyor. Arrangement ensures a more thorough mixing of the extn. liq. with the solid material than the traditional single conveyor arrangement. 21.10.69 as 015875 (9pp)

VOTE= ★ D17 87170B/48 ★SU-644-837
Beet sugar crystallisation from massecuite - using addition of sulphamic acid and opt. urea to reduce viscosity of supersaturated soln. and its discolouration

VORON TECHN INST 19.07.76-SU-385736

(28.04.79) C13f-01/02

This method is improved by using as the viscose-lowering agent sulphamic acid introduced in an amt. of 0.2-2.0 wt. % (pref. 1.5%) w.r.t. the soln. Optionally sulphamic acid (0.25-1.5%, pref. 0.5%) is introduced in mixt. with urea (0.5-2.0% pref. 1.5%).

By this method, the discolouration of the intercrystall-

ine soln. is diminished and sugar yield is increased. The productivity of the appts. is improved.

Remizov, G.P., Pereygin, V.M., Yakimova, N.A. et al. Bul. 4/30.1.79. 19.7.76. as 385736 (6pp70)

VOTE= ★ D17 87204B/48 ★SU-651-0
Purification of spent, sugar-contg. solns. - includes treatment with milk of lime and with filtration residues from saturation, used beet sugar mfr.

VORON TECHN INST 11.07.75-SU-156887

(07.03.79) C13d-03/02

Mixts of 0.5-5.0% saccharose solns. in sugar-producing plants are purified by introducing into the soln. mixt. lime milk and the filtration residues from the I and II saturations; the resulting ppte. is then sepd. and the purified soln. is further processed.

This method is improved by subjecting the above mentioned soln. before further processing, to cooling (to 5-10°C) resulting in pptn. of tricalcium saccharate; this cpd. is subsequently pptd. at elevated temp. as well (90°C). Both the precipitates are jointly passed to the defecation station. The soln. is saturated to pH 6.0-6.5 and filtered. The CaCO₃ ppte. is introduced into the starting soln. mixt.

Ivanov, S.Z., Drobinskii, I.P., Goncharuk, M.V. et al. Bul. 9/5.3.79. 11.7.75. as 156887 (4pp70)

KHER= ★ D17 87274B/48 ★SU-652-1
Frost-resistant structural concrete mixt. - contg. cement urea molasses, small and large size filler and water

KHERSON AGRIC INST 12.05.77-SU-484446

E16 L02 (15.03.79) C04b-13/24

The compsn. contains (in wt. %); large size filler 45.0-50.0; small size filler 25.0-32.5; cement 12.0-17.0, water 8.0-9.0; urea 0.1-0.75; molasses (I) calculated on dry sugar) 0.005-0.015. Molasses is waste product from sugar prepn. (from beet) and contains 10% amides, 50% sugar, 12% silicate and 28% water.

The addn. of I lowers heat output during first 3 days of setting by 50-70% and increases strength and frost resistance of concrete.

Melamed, E.E., Salnikova, L.I. Bul. 10/15.3.79. 12.5.77. as 484446 (2pp114)

CUZA/ ★ D17 87404B/48 ★US 4174-6
Appts. for sepg. liq.-solid mixt. - with rotating perforated drum and driving belt

CUZA CR 31.07.78-US-929514

(20.11.79) A23n-01

An appts. separates solids from a mixt. of juice and solids. The appts. includes a frame in which is journaled an annular centrifugal drum whose peripheral surface is perforated. One of the end walls of the drum has a charge opening.

The drum is rotated by a drive belt which also is perforated so that as the drum is rotated separated juice flows through the apertures in both the drum and belt. A shield guides the flow of juice to a storage tank. A trough has one end within the drum and a second end outside the drum, the trough passing through the charge opening. This is used to discharge solids from the apparatus.

The apparatus is designed for extracting juice from an extract of sugarcane which has been pulverised. 31.7.78. as 929514 (5 pp295)

PURD D17 68608B/38 =US 4174-97
Glucose prodn. by cellulose acid hydrolysis - in which cellulose dissolved and pptd. before hydrolysis

PURDUE RESEARCH FOUNDATI 08.03.78-US-884478

E13 (20.11.79) *GB2016-014 C13k-01/02

Hydrolysis of cellulose in a cellulosic material to obtain glucose comprises (a) contacting the material with either solvent comprising ethylenediamine, Cd hydroxide and water or a chelating metal caustic swelling agent so that the solvent dissolves the cellulose, and (b) pptg. the cellulose from the obtd. soln. and hydrolysing the pptd.

cellulose with acid.

Pref. the acid is an organic acid or mineral acid, esp. H_2SO_4 , HCl or H_3PO_4 . Hydrolysis is pref. carried out in closed vessel at 100-200°C. Lignin is pref. sepd. by filtration or centrifugation from the pptd. cellulose before hydrolysis.

Formation of undesirable by-prods. is minimised.

3.78. as 884478 (3pp393)

See Also

D14 SU 652950

D16 NL 162137

D18: SKINS; HIDES; LEATHER; TOBACCO

CELANESE CORP D18 062755/03 = DS 2034-798

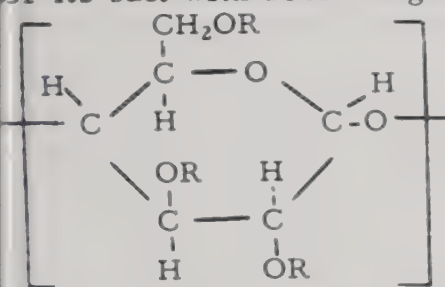
tobacco substitute

CELANESE CORP 15.07.69-US-842032

A11 P15 (A97) (22.11.79) *BE-753-481 + A24b-15/05

A tobacco substitute material contains a burnable cellulose material, a nonburnable filler (wt. ratio cellulose to filler 25:75-75:25) and up to 5 wt %, based on the substitute material of an alkali or alkaline earth metal salt of acetic, formic, propionic, oxalic, malonic, lactic, malic, citric or tartaric acid. The ratio of cellulose to filler must give a useful rate of combustion.

The cellulose material is obtd. from a cellulose deriv. or its salt with recurring anhydroglucose units of formula



(where at least one of the gps. R is lower alkyl, lower hydroxyalkyl, lower carboxy alkyl or a mixt. of these gps. and the remaining R gps. are H and the average degree of substitution is 0.2 to 3.0). The cellulose material may be carboxymethyl cellulose. The filler may be

diatomaceous earth. The salt improves the aroma and taste. 14.7.70 as 034798, Add to 1900491 (4pp068)

HENK ★ D18 86132B/48 ★ DT 2822-073

Water-insoluble partly acid-soluble aluminium silicate - used in leather mfr., contains alkali metal and di- and/or tri-valent cation

HENKEL KG AUF AKTIEN 20.05.78-DT-822073

E36 (22.11.79) C14c-01 C14c-03/04

Water-insol., esp. water-contg. Al silicates, have formula $(\text{Cat}_2/\text{nO})_x \cdot \text{Al}_2\text{O}_3 \cdot (\text{SiO}_2)_y$ (I) where Cat is an alkali metal ion and/or a di- and/or tri-valent cation; n is 1-3; x is 0.5-1.8; y is 0.8-6 esp. 1.3-4, particle size 0.1 μ to 5 mm and Ca bonding capacity ≤ 20 mg CaO/g anhydrous active substance.

(I) replace water-polluting auxiliaries, e.g. phosphates and solvents, used in degreasing and pre-tanning pickled hides, tanning and after tanning pelts and in neutralising leather. 20.5.78 as 822073 (30pp200)

HENK ★ D18 86133B/48 ★ DT 2822-074

Water-insoluble alkali aluminium silicate having coarse particle size - is used in degreasing and pre-tanning hides, neutralising leather and tanning pelts

HENKEL KG AUF AKTIEN 20.05.78-DT-822074 (00.00.77-DT-732217)

E36 (22.11.79) C14c-01 C14c-03/04

Parent patent discloses the use of water-insol., esp. water-contg. alkali Al silicates having formula $(\text{Cat}_2/\text{nO})_x \cdot \text{Al}_2\text{O}_3 \cdot (\text{SiO}_2)_y$, (I) (where Cat is alkali metal-, esp. Na ion; x is 0.7-1.5; y is 0.8-6 esp. 1.3-4) and Ca bonding capacity 20-200 mg CaO/g anhydrous active substance, in leather mfr. According to present modification, (I) used have particle size $> 25 \mu$ to 5 mm, pref. 25-100 μ , and esp. for tanning 0.1-5 mm.

(I) can replace water-polluting auxiliaries used in degreasing and pre-tanning unhaird pickle hides and in tanning and neutralising pelts and leather, esp. in Cr tanning. Coarser particles are more easily removed from waste water by sedimentation or filtration. Slower acid bonding with coarser particles is advantageous in Cr tanning. 20.5.78 as 822074 Add to 2732217 (27pp200)

HENK ★ D18 86134B/48 ★ DT 2822-075

Water-insoluble aluminium silicate used in leather mfr. - contain alkali-, di- and tri-valent ions and have coarser particle size

HENKEL KG AUF AKTIEN 20.05.78-DT-822075 (00.00.77-DT-732217)

E36 (22.11.79) C14c-01 C14c-03/04

Parent patent discloses the use of a water-insol., esp. water-contg. Al silicate, having formula $(\text{Cat}_2/\text{nO})_x \cdot \text{Al}_2\text{O}_3 \cdot (\text{SiO}_2)_y$ (I) (where Cat is an alkali metal ion, esp. Na; x is 0.7-1.5; y is 0.8-6 esp. 1.3-4), particle size 0.1-25 μ and Ca bonding capacity 20-200 mg CaO/g anhydrous active substance, in leather mfr.

According to present modification, the alkali metal ion in Cat is partly replaced by di- and/or tri-valent cations; n is 1-3 and particle size is 0.1 to 5 mm, esp. 25-100 μ or 0.1-5 mm for tanning.

(I) can replace water-polluting chemicals in degreasing and pre-tanning unhaird pickle hides, tanning and neutralising pelts and leather. Coarser particles are removed more easily from waste waters, by sedimentation or filtration. Slower acid bonding with coarse particles is advantageous in Cr tanning. 20.5.78 as 822075 Add to 2732217 (27pp200)

HENK ★ D18 86279B/48 ★ EP ---5-546

Replacing waste water polluting auxiliaries in leather mfr. - with combination of water insoluble aluminium silicate and poly:carboxylic acid or ester

HENKEL KG AUF AKTIEN 20.05.78-DT-822072

E17 (E33) (28.11.79) C01b-33/26 C14c-03/04

D/S: E(BE, DT, FR, GB, IT).

The use of water-insoluble, pref. hydrated Al silicates of formula (I)

$(\text{Cat}_2/\text{nO})_x \cdot \text{Al}_2\text{O}_3 \cdot (\text{SiO}_2)_y$ (I) (where Cat is an alkali metal ion and/or a di-valent and/or a trivalent cation; n is 1-3; x is 0.5-1.8; y is 0.8-50 esp. 1.3-20), having particle size 0.1 to 5 mm and Ca bonding capacity 0-200 mg CaO/g anhydrous active substance, in leather mfr. together with di- and/or tri-carboxylic acids (esp. adipic acid) and/or their water-soluble hydrolysable partial esters, is new.

The (I)-contg. mixt. partly or entirely replaces waste water polluting auxiliaries used in degreasing and pre-tanning pickled hides, tanning pelts and partic. in Cr tanning. E.g. residual Cr content of a pickling liquor can be reduced from 7-11 to 0.3-0.9 g/l Cr oxide. At pH 3-4.5, (I) dissolve to give Al salts and polymeric siliceous acids. Penetration and distribution in hides is increased.

17.5.79 as 101513 (50pp200)

(G) ISR: SU-215393; US2395472; FR2271290; 1 Journal Reference.

DUKO/ D18 16683Y/10 = GB 1556-725

Leather dewatering machine operating without kinking the surface - has water absorbent belts and forms differential pressure zones (NL020377)

DUKOUPIJ (DOKO/) 30.08.75-DT-538703

(28.11.79) *DT2538-703 + C14c-15 D06b-15/02

Leather is dewatered using appts. having a conveyor for absorbing water and conveying the leather to a pair of opposed dewatering rolls. At least one of the dewatering rolls is disposed in a hollow roll which is more flexible than the dewatering rolls. The hollow roll contacts the leather.

The conveyor is pref. a pair of bands, one of which being absorbent, between which the leather is held. Pref.

both the dewatering rolls are in a respective hollow roll. Pressure bellows are pref. used to give a variable dewatering pressure.

Pressure can be applied using small dewatering rolls without producing folds. 31.8.76 as 036055 (5pp1376)

SETO- D18 88066Y/49 =GB 1556-913
Pre-tanning hide treatment - using chromium free pre-tanning agent

SETON CO 09.09.76-US-721706

(28.11.79) *US4060-384 C14c-03/06

Mfr. of grain and split leather from a hide comprises (a) pretanning the hide with a Cr-free tan until its shrinkage temp. is 170-185°F and (b) splitting the pre-tanned hide to

give a pre-tanned split intermediate, ≥ 1 of which intermediates is chrome-tanned into leather.

Pref. ≥ 1 of the intermediates is shewed to give it a uniform caliper and the shewed intermediate is chrome tanned into leather. The hide is pref. unhaired and bated before pre-tanning, and it is also pickled.

Leather prods. produced from this leather have high s tear, better tensile strength, better break and fuller flanks compared with previous chrome-tanned leathers. 16.8.77 as 034333 (8pp393)

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

WELA ★ D21 85997B/48 ★ BE-877-920
 Hair treatment method, esp. permanent waving - using sulphite or sulphite soln. for pretreating the hair
 CURTIS HIND INC 31.07.78-US-929326
 E17 P24 (E34 E35) (16.11.79) A45d A61k
 Hair is put into rollers and an aq. mercaptan contg. soln. is applied to the hair on the rollers to split the disulphide bonds in the hair, and the hair is neutralised with an oxidising agent to reform the disulphide links. Before putting into rollers, the hair is wetted with a soln. contg. alkali metal or ammonium sulphites or bisulphites. The treatment used and the application time is such that $\leq 5\%$ of the hair disulphide bonds are split before applying the mercaptan soln.

Permanent waving comprises the above using an aq. trioglycollate soln. and a pretreatment soln. as above of pH 6.5-7.5 (6.9-7). The contact time of the mercaptan with the hands of the user is reduced using a pretreatment soln. which does not contain a mercaptan. A tighter curl can be obtained. 26.7.79 as 877920 (18pp597).

WELA ★ D21 31893F/00 = DS 1695-498
 Mixts of acylated aminoacids from proteins
 MORELLE J V (MORE) 13.10.66-FR-079767
 B05 E16 (22.11.79) ★BE-704-363 +C07c-103/48
 Prod. is described of mixts. of N-acyl aminocarboxylic acids, the aminoacid compsn. of which largely corresponds to the aminoacid sequence of the proteins collagen, keratin and casein. Process comprises acid hydrolysis of these proteins and acylation of the hydrolysis prods. with lauric, palmitic, stearic or oleic acids and a chloroformic ester, or with an excess of a mixed anhydride of lauric, palmitic, stearic or oleic acid and a chloroformic ester, or of lauric, palmitic, stearic or oleic acid chlorides in alkaline medium.

In the improvement, (a) the protein hydrolysis is effected with 6-8N HCl for 10-40 hrs. at 95-105°C. (b) the peptides are sepd. from the aminoacid mixts. after hydrolysis using ion exchangers in known manner, and (c) the aminoacid mixt. is acylated in known manner, acidified, the upper layer is decanted off, washed several times with water and fatty acids are extracted from it with a solvent.

The mixts. are useful in the therapeutic, dermatological and cosmetic fields, esp. as alternatives to cortisone treatments. 12.10.67 as 695498 (3pp997)

UNILEVER ★ D21 30122S/17 = DS 2051-523
 Hair cosmetic
 UNILEVER NV 24.10.69-GB-052301
 A15 E16 (A96) (22.11.79) ★BE-757-957 A61k-07/06
 Hair prepn. which reduces the time needed for drying contains a vinyl polymer made from a monomer of formula

$$\begin{array}{c} \text{Y} \\ \diagdown \\ \text{C} - \text{O} - \text{CO} - \text{R}_2\text{C} = \text{CH}_2 \\ \diagup \\ \text{Y}'' \end{array}$$

(where Y is a partly or completely fluorinated 1-11C alkyl Y' and Y'' each are H or have the same meaning as Y, R₂ is H or -CH₃), e.g. 1H, 1H-perfluorobutyl methacrylate.
 The hair prepn. is pref. part of a shampoo. 20.10.70 as 051523 (4pp068)

LOREAL ★ D21 13680S/07 = DS 2066-053
 Leuco derivs of indoanilines and indophenols - for dyeing keratinic fibres
 L'OREAL SA 11.08.69-LU-059265
 A14 E14 (A96 E24) (22.11.79) ★BE-754-649 A61k-07/13
 An aq. hair waving lotion comprises an aq. alcoholic soln. contg. ≥ 1 cosmetic resin, usual additives and ≥ 1 leuco compd. of formula (I):

$$\text{Y} - \text{C}_6\text{H}_3(\text{R}_5, \text{R}_6, \text{R}_7) - \text{NH} - \text{C}_6\text{H}_3(\text{R}_1, \text{R}_2, \text{R}_3) - \text{OH} \quad (\text{I})$$

(where Y = -OH or -NH₂, R₁ and R₃ each are H or 1-4C alkyl, R₃ is also halo, -NHCOR or -OR where R is 1-4C alkyl,

R₂ is H, halogen, 1-4C alkyl, a ureido gp. -NH₂, carbamyl -methyl, -NHCOR or -NHR, R₄, R₅, R₆ and R₇ each are H, halo, R, -OR₁) or an addn. salt of such a cpd. with an organic or mineral acid, e.g. N-[[4'-amino-3', 5'-dimethyl-2'-methoxy)phenyl]-2, 6-dimethyl-benzoquinone imine. The hair has improved smoothness and colour after treatment. 7.8.70 as 066053, Div.ex. 2039358 (18pp068)

WELA ★ D21 86138B/48 ★ DT 2822-125
 Liq. permanent hair waving compsn. - contains suspended water-insoluble cellulosic, starch or plastics particles acting as marking and cover agents

WELLA AG 20.05.78-DT-822125

A96 (22.11.79) A61k-07/09

Liq. compsn. for permanent hair-waving, based on mercapto- to cpds. or sulphites as active waving ingredients, also contains 2-40 (5-25) wt. % suspended water-insol. solids, (I) consisting of cellulose, cellulose-contg. substances, starch, starch-contg. substances and/or plastics having particle size 0.1-0.3 mm.

(I) act as marking- and cover agents. The cover layer adheres loosely on hair and retains a small proportion of waving liq., whereas most liq. penetrates into hair. Volatilisation of waving liq. and basifier and oxidn. of waving ingredient are prevented. Body-heat is retained. 20.5.78 as 822125 (12pp200)

WELA ★ D21 86151B/48 ★ DT 2822-198
 Evenly dyeing and colour-fixing of hair - with quick-breaking foam-forming soln. contg. oxyethylated castor oil, dye and polymer fixer
 WELLA AG 20.05.78-DT-822198
 A96 (22.11.79) A61k-07/13

Compsn. for simultaneously dyeing and fixing human hair consists of a soln. contg. pref. 0.01-2 (0.05-0.5)wt. % oxyethylated castor oil, (I), in addn. to direct dye and film-forming polymer.

(I) form a quick-breaking foam which bursts on touch and allows an even wetting of hair without the liq. running off. The properties of the film-forming polymers are unimpaired. Even and thorough dyeing is achieved. 20.5.78 as 822198 (7pp200)

MENN- ★ D21 86174B/48 ★ DT 2918-380
 Lubricating, quick-drying hair-rinsing and conditioning cream - contains aq. stearyl-colamino-formyl-methyl pyridinium chloride soln. as surfactant

MENNEN CO 17.05.78-US-906468

E13 (22.11.79) A61k-07/08

New hair rinsing and conditioning cream (A) having viscosity 200-2000 cps. at 25°C, consists of (a) a surfactant compsn. contg. mainly N-(stearyl-colaminoformyl-methyl)-pyridinium chloride (I), contaminated with no more than a small quantity of N-(palmitoyl-colaminoformyl-methyl)-pyridinium chloride (II), (b) small quantities of preservative and perfume, balance (c) water.

(A) improves hair quality and handling and acts as lubricant to reduce hair matting. Hair-drying time is reduced. Used for prod. contg. (I) with small quantities of (II) increases stability and viscosity of (A) without adding stabilisers and thickeners. 8.5.79 as 918380 (15pp200)

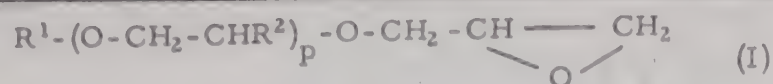
HENK ★ D21 86248B/48 ★ EP ---5-446
 Amphoteric surfactant amino-ether cpds. for shampoo use - prepd. by reacting glycidyl ether with excess hydroxy-di:amine deriv. and alkylating prod.

HENKEL KG AUF AKTIEN 14.04.78-US-896294

E16 (28.11.79) C07c-101/12 C07c-143/14 C11d-01/90

D/S: E(DT, FR, GB, NL).

A new mixt. of amphoteric, surfactant aminoether cpds. is prepd. by (a) reacting a glycidyl ether having formula (I)



(where R^1 is a prim. alkyl gp. of an 8-22C fatty alcohol, a prim. alkenyl gp. of an unsatd. 12-22C fatty alcohol or a 10-36C Guerbet alcohol-derived alkyl gp. branched in the 2-position; R^2 is H or Me; p is 0-3) with excess N-hydroxy-2-4C alkyl-2-6C alkylene diamine (II); (b) removing excess (II) and (c) N-alkylating the substd. amino-ether obtd. with (III) a 2-4C haloalkanecarboxylic or haloalkanesulphonic acid or a 3-4C halo-hydroxy-sulphonic acid, under alkaline conditions.

The prods. can be used directly in liq. hair shampoo compsns. The cpds. contain ≥ 3 OH and/or ether gps. and no amide grouping; they dissolve easily in water and resist hydrolysis in acid or alkaline media.

9.4.79 as 101077 (24pp200).

(G) ISR: DT2236273; DT2137051; DS1013289; FR--70139; US2673213; US3888797.

MINN ★ D21 86437B/48 ★GB 2021-123
Readily mixed surgical cement for dentistry - prepd. from an aq. metal oxide e.g. zinc oxide suspension and poly:carboxylic acid soln.

MINNESOTA MINING CO 22.05.78-US-908576

A96 G03 (A14) (28.11.79) A61k-05/06

A surgical cement is prepd. by mixing (A) an aq. suspension contg. 30-60 vol % a metal oxide powder and (B) an aq. soln. contg. 55-80 wt % a polycarboxylic acid in the wt. ratio 0.5-8:1.

The metal oxide is pref. ZnO or a polyvalent cation-contg. glass. The acid is pref. a polyacrylic or polymethacrylic acid, a polymer derived from an unsatd. α , β -dicarboxylic acid, or a copolymer of acrylic or methacrylic acid and an unsatd. α , β -dicarboxylic acid. Pref. (A) and (B) is in paste form and dispensed from a syringe.

The cement is useful in dentistry. The two components are readily and quickly mixed without using special equipment. The cement has a relatively long working time and does not show a reduction in compressive strength when cured. 21.5.79 as 017548 (7pp558)

LIOY ★ D21 86601B/48 ★J5 4134-711
Shampoo compsn. - contg. anionic surfactant, polymer contg. quat. nitrogen, and lactate ester and/or cane sugar ester

LION FAT & OIL KK 12.04.78-JA-043045

A96 E19 (19.10.79) A61k-07/06 C11d-03/60

Shampoo contains anionic surfactant, polymer contg. quat. nitrogen and lactate ester and/or cane sugar ester as main components.

Compsn. imparts wiriness (sic) to hair and causes little irritation to the skin, and has prominent foaming power.

Anionic surfactant is ≥ 1 alkali metal salts of fatty acid (e.g., tallow acid, palm oil acid, higher side chain fatty acid) or alkanolamine salts of 3-molethoxysulphate ester of lauryl alcohol, 3-mol-ethoxysulphate ester of aliphatic alcohol of 11-15C prepd. by oxosynthesis, 1-mol-ethoxysulphate ester of aliphatic alcohol of 12-13C prepd. by oxosynthesis, sulphate ester of aliphatic alcohol of 12-13C, etc. are employed in amt. of 3-30 wt.%. Polymer contg. quat. nitrogen is ≥ 1 deriv. of cellulose ether contg. quat-nitrogen, deriv. of polytrialkylaminoethylmethacrylate contg. quat. nitrogen, polyvinyl-pyrrolidone, polyethyleneimine, etc. and are used in amt. of 0-1-5 wt.%. Lactate ester and/or cane sugar ester are used in amt. of 1-20 wt.% on the compsn. 12.4.78 as 043045(4pp170)

LIOY ★ D21 86602B/48 ★J5 4134-712
Shampoo compsn. - contg. anionic surfactant, phosphate ester surfactant and polymer contg. quat. nitrogen

LION FAT & OIL KK 12.04.78-JA-043046

A96 E19 (19.10.79) A61k-07/06 C11d-10/02

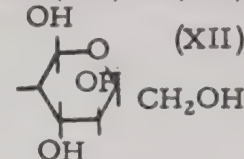
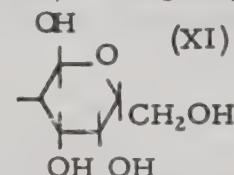
The shampoo contains an anionic surfactant, a phosphate ester surfactant and polymer contg. quat. nitrogen as the essential components. Compsn. stimulates the skin to a low degree and has prominent foaming power and high stability at low temp.

The anionic surfactant is pref. ≥ 1 of alkali metal salts of fatty acids (e.g., tallow fatty acid, palm oil fatty acid), alkanolamine salts of fatty acids, alkali metal-, al-

kaline earth metal- and alkanolamine salts of 3-mol-ethoxy-sulphate esters of 11-15C aliphatic alcohols and 1-mol-ethoxy-sulphate esters of 12-13C aliphatic alcohols and anionic surfactants obtd. by sulphonation and hydrolysis of a 12-14C alpha-olefin 12-16C vinylidene olefin and 12-16C inner olefin etc. Pref. content in the compsn. is 5-30 wt.%. The phosphate ester is pref. $R-O-(-C_2H_5O)_n-P(O)(OM)_2$ and/or $(R-O-(-C_2H_5O)_n)_2-P(O)(OM)$ (where R is unsatd. 10-20C hydrocarbon, M is alkali metal or alkanolamine, $n = 0-10$). Pref. content in the compsn. is 3-20 wt.%.
Polymer contg. quat. is pref. ≥ 1 of derivs. of cellulose ether contg. quat.-nitrogen (e.g., -JR-125, -JR-30M RTM, Union Carbide Co.), derivs. of poly(trialkylaminoethylmethacrylate) contg. quat.-nitrogen, polyvinylpyrrolidone, polyethyleneimine, etc. Pref. amt. in the compsn. is 0.1-5 wt.%. 12.4.78 as 043046(4pp170)

KANE ★ D21 86698B/48 ★J5 4135-1
Storage stable, non-toxic cosmetic compsn. - containing hydroxylamine cpd. having reduced stimulating effect on skin
KANEBO KK 08.04.78-JA-041428
E17 (E13) (20.10.79) A61k-07

The cosmetics contain 0.1-30 w/w % of ≥ 1 hydroxylamine cpd. of formula $R_1COOCH_2CH(OH)CH_2N(R_2)CH_3$ (I) or $R_1COOCH_2CH(OH)CH_2N(R_3)_2$ (II). In the formulae R_1 is 9-22C alkyl or alkenyl; R_2 is -CH₂CH₂OH (III) -CH₂CH₂CH₂OH (IV), -CH₂CH(OH)CH₃ (V), -CH₂CH(OH)CH₂OH (VI), -CH₂CH(OH)CH₂CH₂OH (VII), -C(CH₂OH)₂CH₃ (VIII), -C(CH₂OH)₃ (IX), -CH₂CH(OH)CH(OH)CH(OH)CH(OH)CH₂OH (X); R_3 is (III), (IV), (V), (VI) or (IX).



The cpds. are easily dissolved or dispersed in water and oil base such as f

paraffin, ester oil, wax, higher alcohol, etc. By adding (I) or (II) in an amt. of 0.1-30 w/w% creamy, emulsion-type, lotion-type or oil skin cosmetics, hair cosmetics and hair-dressing agent, which are non-stimulating, safe and of excellent storage stability, emulsion stability, affinity to skin, glossiness, tissue, touch, etc. can be obtd. 8.4.78 as 041428 (12pp5)

LIOY ★ D21 86699B/48 ★J5 4135-2
Hair rinsing compsn. - contains cationised cellulose and ammonium salt

LION FAT & OIL KK 12.04.78-JA-043047

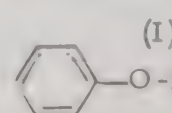
A96 E16 (A11) (20.10.79) A61k-07/08

Hair rinsing compsn. contains 0.01-5 wt.% cationised cellulose and 0.1-5 wt.% quat. ammonium salt. Cationised cellulose shows excellent rinsing effect, and shows excellent emollient effect, forming protective film on the surface of hair synergically with quat. ammonium salt.

The compsn. can be prepared by mixing cationised cellulose and quat. ammonium salt and dispersing or dissolving the mixt. in solvent e.g. water, glycerin, ethylene glycol, propyleneglycol, etc. Cationised cellulose can be prepd. by adding quat. ammonium salt to hydroxyalkyl cellulose with cationising agent such as glycidyltrimethylammonium-chloride. 12.4.78 as 043047(3pp5)

KANE ★ D21 86700B/48 ★J5 4135-3
Nail enamel-removing compsn. - comprises mixed soln. of phenoxy-alkanol, aliphatic lower alcohol and water
KANEBO KK 06.04.78-JA-041012
E14 (E17) (20.10.79) A61k-07/04

Compsn. comprises a mixed soln. of 30-65 (35-60) w/w% of a phenoxyalkanol (I) (R is 2-4C alkylene) (e.g. 2-phenoxyethanol, 2-phenoxypropanol, 3-phenoxypropanol and 1-phenoxybutanol), 15-40 (20-35) w/w% of an aliphatic lower alcohol (e.g. ethanol, n-propanol, i-propanol, n-butanol and i-butanol) and 10-40 (15-35) w/w% of water.



The compsn. is non-flammable and can remove nail enamel without damaging or whitening nails while giving a glassy appearance and a sterilising effect to the nails. The soln. is stable, homogeneous and transparent. 6.4.78 as 041012(4pp5)

★ D21 86825B/48 ★ J5 4135-805
 Shampoo compsn. contg. anionic surfactant and cellulose ether -
 surfactant being a condensed salt prepd. from higher fatty acid
 peptide
LION FAT & OIL KK 14.04.78-JA-043269
A96 E12 (E16) (22.10.79) A61k-07/06 C11d-01/10 C11d-03/37
C11d-10/02
 Shampoo compsn. contains 1-50 wt.% anionic surfactant
 formula (I) which is a condensed salt prepd. from high-
 fatty acid and peptide, and 0.05-5 wt.% cellulose ether
 wing a quat. N where 0.5-3.5 wt.% quat. N is contd.
 In (I) RCO is a higher fatty acid
 residue, R having 7-21 C atoms;
 R' is H, CH₃, or C₂H₅; and the
 part of the formula expressed by
 R'-(peptide)-COOM is an aminoacid, a mixt. of amin-
 acids, a peptide having ≤ 2000 molecular wt. or its sub-
 H. prod. with a N-lower alkyl gp.; M is alkali (earth)
 metal ion, ammonium ion, or ammonium ion substd. by
 3 organic gps.).
 Since a film forming cpd. salt is formed by the effect
 the anionic surfactant and cellulose ether contg. quat.
 which are essential components, uniform film is form-
 on the surface of hairs or skins of the head. Skin and
 hairs are prevented from chapping. Hairs feel soft and
 smooth after shampooing. Pref. surfactant is N-lauroyl
 sarcosinate. 14.4.78 as 043269(7pp126)

LOS D21 70987Y/40 = J7 9035-203
 Hair shampoo compsn. - contg. anionic surfactant, quaternised
 moxylated alkylamine cationic surfactant and glyceryl
 monooleate
KA O SOAP KK 22.03.76-JA-030996
A96 E16 (A25 E17) (01.11.79) *DT2709-400 A61k-07/06 C11d-
01/02 C11d-03/20 C11d-10/02
 Hair shampoo mixt. contains, by wt. 5-25 (10-20)%
 water-soluble, synthetic, organic, anionic surfactant, suit-
 able for washing hair, 0.1-5 (0.5-3)% cationic surfactant,
 1-3 (0.3-1)% oleic acid monoglyceride, balance water.
 Cationic surfactant has formula $\frac{R_1 R_2 N}{(CH_2 CH_2 O)_n H} X^+$ (I) (where R₁ is 16-22C alkyl, pref.
 hearyl; R₂ is Me, Et or 16-22C alkyl, pref. Me; X is H
 halogen, Me- or Et-sulphate; m and n are integers >1 pro-
 ded m+n is 5-30).
 Combination of anionic surfactant and (I) improved body
 soft hand, combing and brushing properties of hair, Sham-
 po is cheap to prepare. Anionic surfactant is an alkali-,
 ammonium- or alkylolamine salt of alkyl sulphates, poly-
 xyethylene-alkyl ether sulphates, alkyl-, alkylbenzene-
 -olefine-sulphonates. 22.3.76 as 030996 C11d-10/02,
 02,3/20, A61k-7/06 (1.11.79) KAO SOAP KK (5pp200)
 J5 2114604)

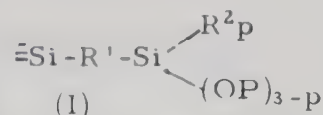
ASGA/ D21 22294W/13 = J7 9035-860
 Amalgamable silver-copper-tin alloy powder for dental amalgams -
 having composn gradient between core and surface
ASGAR K 18.03.74-US-451840
M26 + P32 P53 (06.11.79) *US3871-876 C22c-05/06 + A61c-13
 Amalgamable Ag alloy powder of Ag, Sn and Cu has an Ag;
 ratio of 1.8-3:1 and Sn:Cu ratio of 1-3:1 and on av. par-
 cle size of less than 100 microns and each particle has
 compsn. gradient moving from the core to the surface.
 Alloy is used for dental amalgams. Amalgams resistant to
 corrosion and discolouration, and having superior mechani-
 cal properties. 20.2.75 as 021427 (clg. 18.3.74-US-
 451840) C22c-5/06, A61c-13/00 (6.11.79) ASGAR, K (5pp)
 J5 1025922)

ASME = ★ D21 87187B/48 ★ SU -650-633
 Inflamed jaw bone radiation treatment - by covering metal dentures
 with plastic fabric during radiation
AM USSR MEDIC RADIO 01.03.77-SU-457555
B04 P34 (08.03.79) A61n-05
 The jaw radiation osteomyelitis treatment can be carried
 out by mouth cavity sanitation and subsequent denture
 positioning. To save healthy teeth and to prevent forma-
 tion of jaw bones radio-osteomyelitis, the metal dentures
 are covered with fabric-equivalent plastic during the ra-
 diation process. 24-30 days after the radiation therapy,
 the patients teeth are joined in a block using artificial
 dentures and calcitonine is then introduced. Nazarov, G.

I., Nikitenko, V.A. Bul. 9/5.3.79. 1.3.77. as 457555
 (2pp110)

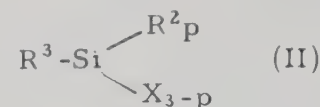
GOLD D21 46070X/25 = SU -651-707
 Polysiloxane-polyoxyalkylene block copolymers - useful as foam
 stabilisers for polyurethanes, textile auxiliaries, anti-foam cpds in
 cosmetics etc

GOLDSCHMIDT TH AG 06.02.75-GB-005160
A26 F06 (A87 A96) (09.03.79) *BE-837-635 C08g-77/14
 Polysiloxane-polyoxyalkylene block copolymers in which
 ≥ 2 polyoxyalkylene blocks are fixed laterally on the poly-
 siloxane block, and which contain ≥ 2 units of structural
 formula (I):-



(where R' is alkylene; R² is mono-
 functional hydrocarbon gp. and/or a
 trialkylsilyloxy gp; OP is a poly-
 oxyalkylene block derived from an
 alcohol POH; p is 1 or 2) are prepd.

by first fixing, in known manner, onto the polysiloxanes
 contg. SiH gps. silanes of formula (II):-



Rosmy, G. Bul. 9/5.3.79. 4.2.76. as 319156 (4pp)

STOM = ★ D21 87235B/48 ★ SU -651-803
 Dental rubber based moulding compsn. - contg. silicone rubber, tin
 octoate, crosslinker and filler for making impression under gums

STOMATOLOGY RES INS 11.08.77-SU-517155
A96 P32 (A26) (15.03.79) A61c-09
 Moulding material, useful in orthopaedic stomatology for
 taking impressions of teeth parts covered by gums con-
 tains (in wt. %): polydimethylsiloxane rubber 75-86; tin
 octoate 0.4-0.6; organo-silicon urethane 2-4 and fumed
 silica the rest. The addn. of tin octoate and cross-linking
 agent prevents the deformation of silicone rubber im-
 pression during its removal from oral cavity, so that
 accurate model can be obtd.

Kalamkarov, Kh.A., Poyurovskaya, I.Ya., Gamova, L.V.
 et al. Bul. 10/15.3.79. 11.8.77. as 517155 (2pp938)

ODST = ★ D21 87236B/48 ★ SU -651-807
 Paste for lining tooth cavity before filling - contg. calcium glyce-
 phosphate calcium hydroxide rubber, rosin, zinc oxide and
 chloroform

ODESS STOMATOLOGY 23.08.77-SU-520675
A96 (15.03.79) A61k-05/02
 Paste used in dental practice to protect tooth pulp against
 harmful effect of filling material comprises (in wt. %):
 calcium glyce-ro-phosphate 7.6-22.2; calcium hydroxide
 1.8-5.6; zinc oxide 1.8-5.6; non-vulcanised rubber 0.6-
 0.8; rosin 6.0-8.0 and chloroform the rest.

The paste has antimicrobial activity, good adhesion to
 tooth tissues and filling materials and high water and
 phosphoric acid resistance. Tooth cavity coated with it
 does not need additional cement before filling. This
 accelerates dental treatment.

Yakovleva, V.I., Dyachenko, Yu.V., Denisov, L.A. Bul
 10/15.3.79. 23.8.77. as 520675 (2pp938)

DENT- ★ D21 87395B/48 ★ US 4174-571
 Cleaning teeth with abrasive - in gas stream with concurrently
 directed water streams for dissolving particles for suction removal

DENTRON INC 28.07.78-US-928907
E34 P32 (20.11.79) A61c-03/06
 Teeth are cleaned by concurrently directing separate
 streams of water and an abrasive-laden gas against a
 tooth. The abrasive consists of water-soluble particles
 and the streams are directed in set relation and to imme-
 diately adjacent tooth areas.

The abrasive is pref. sodium bicarbonate and the water
 is directed in streams surrounding the gas stream and in
 sufficient quantity to dissolve the particles. The water
 captures the abrasive to prevent unpleasant dusting in the
 mouth so that the abrasive is withdrawn by normal suction
 equipment as a soln. 28.7.78. as 928907 (4pp1358)

SCHO/★ D21 87517B/48 ★US 4175-120
Water-contg. dentifrice for removing or preventing calculus - contains synergistic mixt. of strontium edatate and ricinoleate, and is free of other chelating metals
SCHOLE ML 30.10.78-US-956200
B05 (20.11.79) A61k-07/22
Water-contg. dentifrice consists of (A) Sr edatate in amt. sufficient to provide 2.5-25 wt. % of Sr ion, and (B) 0.1 - 10 wt. % of a ricinoleate cpd. The dentifrice is free from

Sr edatate-sequestering Ca, Mg, Al, Sn metal.

The Sr edatate and the ricinoleate provide a synergistic action in the removal of calculus from teeth and also in the prevention of its build up. 30.10.78. as 956200 (3pp914)

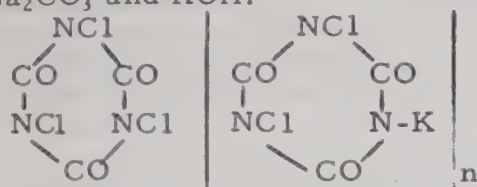
D22: BANDAGES; DRESSINGS

MONS D22 60569Z/00 =DS 1695-483
Sodium-potassium cyanurates and potassium-chloro cyanurates - useful as precursors for sterilising or bleaching

MONSANTO CO 21.09.66-US-580883

E13 F06 (D25) (22.11.79) *BE-703-977 +C07d-251/36

Prepn. of crystalline, K-contg. chloroisocyanurate complex -es of formula (I) (where n = 1-4), is described. Cyanuric acid at $\leq 100^\circ\text{C}$ is reacted with an aq. soln. of NaOH or Na_2CO_3 and KOH.



The molar ratio of Na to K to cyanuric acid is (1) 0.5:1:1 to 3:1:1 (2) 0.5:2:1 to 3:1:1 (3) 1.5:1.4:1 to 2.25:1:1, (4) 1:1.75:1 to 2.5:1:1 or

(5) 1:2:1. The soln. obtd. and chlorine are maintained in aq. suspension with preformed complex I at $0-50^\circ\text{C}$. The pH of the suspension is 2.1-3.4 for complex I (n = 1), 4.3-6 for complex I (n = 4) and between these values to obtain a mixt. of complexes I (n = 1-4).

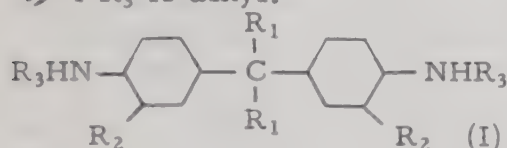
Complexes I contain available chlorine and are useful in oxidising, sterilising and bleaching compns. 19.9.67 as 695483 (5pp068)

GOLD D22 35974W/22 =DS 2401-014
N-Alkyl-4,4'-diamino-dicyclohexylmethanes - active as microbiocides

GOLDSCHMIDT TH AG 10.01.74-DT-401014

C03 P34 (22.11.79) *BE-824-181 A611-13

Microbial compsn. contains a di-aminocyclohexane cpd. of formula (I). In the formula, R_1 is H or methyl, R_2 is H or when R_1 is H, methyl, R_2 is H or 8-16C n-alkyl, provided $\geq 1 R_3$ is alkyl.



The active cpds. (I) are prepd. from corresp. unsubstd. diamino cpds. (I, both $R_3 = \text{H}$) by reaction with 8-16C n-alkyl halides

opt. in a solvent at $120-200^\circ\text{C}$ in the presence of ≥ 1 equiv. base per equiv. alkyl halide.

The compsn. is effective against bacteria, fungi and mould and is useful as a disinfectant. 10.1.74 as 401014 (12pp945)

RNTK D22 36409X/20 =DS 2548-953
Sterilising compsn with delayed sulphur dioxide generation - pref contg metalbisulphite or dithionite generator and thiosulphate and or buffer inhibitor BE300476)

RENTOKIL LTD 31.10.74-GB-047242

E36 P34 (22.11.79) *DT2548-953 A611-13

A germicidal compsn. comprises a cpd. evolving sulphur dioxide, esp. sodium metabisulphite or sodium dithionite and a thiosulphate, esp. sodium thiosulphate. The thiosulphate retards the evolution of SO_2 in the presence of moisture.

The compsn. pref. also contains a buffer such as potassium dihydrogen orthophosphate and may be used to prevent or hinder bacterial growth on soiled bandages.

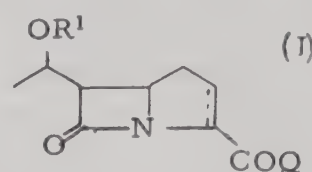
31.10.75 as 548953 (6pp068)

MERI★ D22 86053B/48 ★DT 2820-01
1-Aza-bi:cyclo(3,2,0)heptene carboxylic acid derivs. - useful antibacterials, feed additives and disinfectants

MERCK & CO INC 08.05.78-DT-820055

B02 C02 (D13) (22.11.79) A61k-31/41 C07d-487/04

Dethiapenicillin analogues of formula (I) are new.



In the formula (a): $R' = \text{H}$, and Q = OH or (b) $R' = \text{H}$; phenyl; 1-6C alkyl (opt. substd. by 1-6C alkoxy); 2-C alkenyl; aralkyl (1-3C alkyl, 6-10C aryl) opt. ring-substd. by Cl, F, Br, I, OH, NH_2 or 1-6C alkyl, 2-12C alkylthioalkyl; or gps. -C(

R'' or $\text{SO}_3^- \text{M}^+$. $\text{M}^+ = \text{H}$ or alkali metal cation. X and X' = O or S. $R'' = \text{H}$, phenyl, allyl, NH_2 (opt. substd. by 1-6C alkyl), 1-6C alkyl, phenylthio (opt. substd. by 1-6C alkyl, Cl, F, Br or I), 1-6C alkoxy, 6-10C aryloxy, aralkoxy (opt. ring substd. by NO_2 , Cl, Br, F, I or 1-6C alkyl), the alkoxy fragment has 1-3C), 6-10C aryl, 2-6C alkenyl or (per)halo 1-6C alkyl (halo = Cl, Br or F). R = H, benzhydryl, phthalidyl, 1-10C alkyl, phenacyl (opt. ring-substd. by Cl, Br, F or 1-6C alkyl), alkoxyalkyl (1-6C in each fragment), 2-12C alkanoyloxyalkyl, (per)haloalkyl (as R''), 2-6C alkenyl, aralkyl (as R'), heteroaralkyl (O, S and/or N heteroatoms) these last 2 opt. substd. by Cl, Br, F, I or 1-6C alkyl; 1-6C alkanoyloxy or alkoxy, heterocyclyl (4-10 ring members; O, S and/or N heteroatoms; 1-6C alkyl), 6-10C aryl (opt. substd. by OH, 1-6C alkyl, Cl, F or Br), 2-12C alkylthioalkyl, 4-12C cycloalkylthioalkyl or 2-10C acylthio-1-6C alkyl).

(I) are antibiotics useful in human and veterinary medicine and effective against Gram positive or negative species. They are also useful as animal feed additives, food preservatives, disinfectants and industrial bactericides. 8.5.78 as 820055 (27pp1251)

KOPP/★ D22 86059B/48 ★DT 2820-7
Disinfected paper sock or stocking for public bathing places - impregnated with fungi destroying and deodorant material

KOPPEN M 12.05.78-DT-820793

C03 E17 F07 P21 P32 (22.11.79) A41b-11 A61f-13/06

The sock or stocking is made of hard wearing crease resistant material which is breathable. It is also elastic and has good absorbing properties and pref. is made of paper fleece. The disinfectant is typically formalin and paper is pref. also impregnated with a deodourant.

The sock may be of any type ranging from a shoe sock to an ankle sock or alternatively a knee length sock. Prevertical pleats are provided around the top portion of the sock or stocking. In use the sock is changed daily and typically requires use for at least 14 days to clear up the infection. 12.5.78 as 820793 (13pp)

JOHJ★ D22 86199B/48 ★DT 2919-3
Adhesive, workable orthopaedic bandage - contains flexible carrier coated with solid vinyl monomer, catalyst and high mol. polyethylene oxide

JOHNSON & JOHNSON 15.05.78-US-905834

A96 P32 +P34 (A14 A25) (22.11.79) A61f-13/04 A611-15 C08j-05/18

Orthopaedic bandage consists of a flexible carrier, pref. a glass fibre fabric, coated with a casting compsn. containing a water-sol. solid vinyl monomer, (I) a catalyst catalysing the polymerisation of (I) in the presence of water and a

ethylene oxide resin (II), having ave. mol. wt. 400000-100000. (I) is esp. diacetone acrylamide and/or N-isopropyl acrylamide.

The addn. of high mol. wt. (II) quickly increases adhesiveness in the initial stage, without taking part in polymerisation, and keeps the bandage in place for a sufficiently long working time. E.g. on replacing (II, having mol. wt. 100000 by control (II) having mol. wt. 300000, initial tackiness was retarded from 15- to 75-secs. 14.5.79 as 9354 (14pp200)

★ D22 86210B/48 ★DT 2919-554
hydrogen peroxide, hydroxylamine and hydrazine adducts - with alcohol and glycerol ether cpds., are redox partners in e.g. polymerisations

CIBA GEIGY AG 04.08.78-CH-008360 (18.05.78-CH-005391)

A60 C03 E36 P34 (22.11.79) A01n-11 A611-13 C01b-15/02 C07c-13/20 C07c-43/10 C11d-03/48

adducts are of formula A. m B (I) (in which m = 0.1-4; is H_2O_2 , N_2H_4 or NH_2OH ; A is a cpd. of formula $R-Y$, $OH-CHOH-R_2$ or $R_1-X-(CH_2-Q-O)n-H$; R_1 is an opt. std. 3-30C aliphatic or aromatic hydrocarbon residue interrupted by O or S; R_2 is H or 1-30C alkyl; X is O, SO or SO_2 , not being S or SO when B is H_2O_2 ; Y is a dir. bond- $CH(OH)-$, or $-CO-O-CH_2-$; Q is $-CH_2-$, $-CH(OH)-$, $-CH_2-$ or $-CH(CH_2OH)-$; and n = 1-8).

(I) are useful as redox partners in electron-transfer reactions, esp. polymerisations. (I) alone can be used as initiators for radical polymerisations, or in combination with other partners they may be used as redox initiators. Hydrogen peroxide adducts (I) may also be used as specific oxidising agents for oxidn. in organic media (e.g. epoxidations or conversion of mercaptans into disulphides), as bleaching and hygienic aids (e.g. as bleaches or as disinfectants, e.g. in medicated soaps) or as plant protection agents (e.g. as total herbicides or defoliants). (I) have high stability, even in strongly non-polar organic solvents, and surprisingly high stability, while retaining great activity as redox partners. 15.5.79 as 919554 (20pp280)

★ D22 86218B/48 ★DT 2919-792
wood preservative contg. 2-mercapto-benzothiazole - active against termites and woodworm

SANYO MOKUZAI BOFU 14.02.79-JA-015023 (19.05.78-JA-058828)

C02 E13 F09 P63 (22.11.79) B27k-03/38

new wood preservatives with anti-termite and anti-woodworm activity contains 2-mercapto-benzothiazole (I) and/or salt thereof as active ingredient, opt. together with usual carriers and adjuvants.

Used for the protection of timber (e.g. telegraph poles, house timbers) against attack by fungi, termites, woodworm, etc. The preparations are stable.

Toxicity of (I) to mammals is low

LD_{50} ca. 2300 mg/kg), and its activity against termites and woodworm is high. (I) may be formulated as a water-soluble salt. 16.5.79 as 919792 (+19.5.78-JA-058829)

(9pp280)

★ D22 86228B/48 ★DT 2919-886
maintenance of surfaces exposed to soiling - by application of film-forming substance in an organic liquid

UNILEASE SA 18.05.78-OE-003622

A82 G02 P42 (22.11.79) B05d-05/08 B05d-07/26

internal or external surfaces exposed to soiling are coated with a film-forming compsn. in an organic liq. medium, which after drying leaves a protective layer contg. or absorbing moisture. After soiling, the surface is cleaned with an aq. medium, opt. with mechanical action, or by further application of the film-forming compsn., in each case leaving at least part of the original protective layer on the surface.

Used for protection of house facades, metal window frames, advertising surfaces, animal cages, etc. and also internal surfaces, e.g. windows, staircases, railway coaches, medical and sanitary areas, swimming baths, animal stalls, etc. Also for carpets, curtains, furnishings, etc.

Use of an organic medium, instead of the aq. medium

claimed in the parent patent, allows application of water-insol. protective coatings which are resistant to weathering. 17.5.79 as 919886 Add to 2723493 (14pp195)

WALL/ ★ D22 86229B/48 ★DT 2919-923
Biosynthetic polymer compsns. and film - for covering of burns, wounds, cuts etc., contains acrylic polymer and protein

WALLICZEK E G 30.10.78-AU-006580 (19.05.78-AU-004440)

A96 P34 (A14) (22.11.79) A611-15/* C07g-07 C081-33/08 C081-89

Bio-synthetic polymer compsns. and film contains (a) $\geq 10\%$ based on dry wt., of acrylic polymer, (b) 2-30% moistener, (c) 0.5-15% protein-contg. material, and (d) total water content of 30-70 wt. %.

Content of (a) is 12-33wt. %, pref. with polymerisation degree 50-500, (b) is pref. glycerol in amt. of 3.7-28.4 wt. % (c) is pref. gelatine in amt. of 2.8-15wt. %, and water content is 39-65%. An additional nylon matrix is pref. included in the film to increase tear resistance. 17.5.79 as 919923 (23pp195)

RHEE/ ★ D22 86307B/48 ★EP ---5-615
Protective device for parts of the body - comprising a foamed plastics base held in place by stops or loops

RHEE J G 03.04.79-US-026519 (12.05.78-US-905470)

A96 P32 P36 (A86) (28.11.79) A61f-05/04 A63b-71/12

Intermediate priority: 13.9.78-US-941946

D/S:E(DT, FR, GB, IT).

A protective device for a part of the body comprises a body contacting base layer (554) of closed foamed plastics material and an outer layer (552) of relatively rigid plastics material. Opt. a softer open-celled plastics layer (558) may be interposed between the body and the base layer. The outer layer may be covered with a protective layer (550) under which the ends of straps (557) may be secured.

The straps may be provided with buckles, hooks or Velcro (RTM) type fastenings, and there may be ventilation holes extending through each layer.

The device is a comfortable cheap substitute for plaster casts, splints etc.

Pads are disclosed which may be secured about the ankle, the trunk, the neck, the wrist and the hand, (opt. with additional support of the thumb or fingers).

11.5.79 as 300812 (53pp525).

(E) ISR: US2785407; US3146461; US3607601; US3975015; US2553612; US3921222; US2266886; US3790168; US3909847; US3158871; US4111194.

JEYE- ★ D22 86446B/48 ★GB 2021-143
Lavatory cleansing tablets - prepd. by compression of particulate, free flowing compsns.

JEYES GROUP LTD 16.06.79-GB-021220 (21.03.78-GB-011218)

A97 (A81) (28.11.79) C11d-03/12 C11d-10/02

Lavatory cleansing tablets are prepd. by compressing a free-flowing, particulate mixt. of: (a) 5-90% by wt. organic surface active agent(s) (I), (b) 0.5-75% by wt. binder(s) (II), (c) 0-20% by wt. of colouring agents (d) 0-35% by wt. of solid or liq. perfume (the last opt. mixed with solid absorbent), (e) a total of 0-75% by wt. of (i) inert H_2O -soluble filler(s), (ii) H_2O -softening or chelating agent(s), (iii) H_2O -soluble acid(s), (iv) inert H_2O -insol. inorganic or polymeric organic filler(s) ($\geq 30\%$ by wt. of mixt) and (v) tablet lubricant(s) ($\geq 30\%$ by wt. of mixt.), and (f) 0-20% by wt. of ≥ 1 germicides fungicides, and/or Cl_2 release agents.

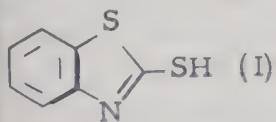
(II) are clays, and H_2O -soluble or H_2O -dispersible gel-forming organic polymeric materials. By compression of the above particulate mixt. of ingredients, a lavatory cleanser block is formed without the disadvantages associated with the compression of melts (messiness and long time periods required, etc). In addn. the tablets are much stronger and are more stable to increased temps. and humidity than conventional tablets. 19.6.79 as 021220 (9pp)

FUKU/ ★ D22 86521B/48 ★J5 4134-091
Ozone-contg. gas prodn. in ozoniser - which is fed with oxygen-enriched air produced by adsorbing nitrogen e.g. with activated charcoal

FUKUI K 11.04.78-JA-042788

E36 J03 (18.10.79) C01b-13/10

In preparation of O_3 -contg. gas from air by means of ozon



-iser, the improvement comprises removing nitrogen which inhibits generation of O_3 from air with nitrogen-adsorber so as to elevate oxygen concn., and subsequently generating O_3 from the high concn. oxygen-contg. air by means of the ozoniser, so that an O_3 -contg. gas having comparative high ozone concn. is obtd. in high efficiency and in low cost. The O_3 -contg. gas thus obtd. is suitable for use in oxidation, decolourisation, deodorisation, removal of harmful matter, and sterilisation etc.

In an example, air is passed through an activated charcoal layer contd. in an adsorbing vessel of ozone-contg. gas producing appts. to give a high concn. oxygen-contg. air, and generating ozone from the high concn. oxygen-contg. gas by means of ozone-generator so as to give an ozone-contg. gas having ozone concn. of 73.8 mg/l. 11.4.78 as 042788(7pp34)

NIRA ★ D22 86687B/48 ★ J5 4135-214
Protective material for application to wound - comprises material, e.g. film, fibres or sponge, to which coagulation factor XIII is fixed
UNITIKA KK 12.04.78-JA-043466
A96 B04 P34 (20.10.79) A611-15/03

Protective material for wounds to promote prolonged stabilised fibrin formation comprises a protective material (e.g. fibres, film or sponge) to which coagulation factor XIII is fixed.

Used to treat incisions, lacerations, penetrations, and perforations of the skin resulting from injuries or operations. Curing processes are accelerated.

Fixation is pref. affected by binding coagulation factor XIII to a protective material via a covalent or ionic bond, or by adsorption. Suitable protective materials include cotton, paper, cloth, knitted goods, films and sponges. Elements of such materials are cellulose, cellulose acetate, proteins. 12.4.78 as 043466(4pp33)

SANY ★ D22 86691B/48 ★ J5 4135-222
Preventing propagation of sulphur bacteria - using e.g. uridine, formycin or emimycin, having low toxicity and little activity towards other bacteria

SANKYO KK 12.04.78-JA-043011
C03 E19 (D15) (20.10.79) A01n-09 C02b-03/06

Prevention of propagation of sulphur bacteria comprises adding a cpd. chosen from ara-A, ara-hypoxanthine, 2-deoxyadenosine, uridine, Formycin, Tubercidin, Toyokamycin, Emimycin, N6-p-hydroxyphenylethyl-ara-A, N6-hydroxyethyl-ara-A, 8-bromo-ara-A, 8-hydrazino-ara-A, ara-A-5'-phosphoric acid ester, 3'-deoxyadenosine, 2'-deoxyuridine, 2'-deoxycytidine, to the propagation plate of sulphur bacteria.

The method prevents the disorders caused by sulphur bacteria, e.g., choking of pipes. The active cpd. is effective at very low concn., has a very low toxicity, is specifically active to the sulphur bacteria and inactive to other bacteria, can be readily decomposed by bacteria in soil after use, and is stable in water. 12.4.78 as 043011 (5pp108)

DUSK- ★ D22 86697B/48 ★ J5 4135-229
Temp. stable deodorant prepn. - by mixing aq. agar soln. with aq. gelating agent, and adding deodorising component, etc.

DUSKIN FRANCHISE KK 07.04.78-JA-040186
P34 (20.10.79) A611-09/*

The deodorant contains 1.5-4 wt.% gelating agent, 0.1-1 wt.% agar contg., as major component, agarose, 1-10 wt.% deodorising and aromatic component and 0.2-0.5 wt.% inorganic salt. It is prepd. by mixing the aq. agar soln. with the aq. inorganic salt soln. of the gelating agent; adding a deodorising and aromatic component at 60-65°C; filling into a vessel.

The compsn. is resistant to high temps. (e.g. 60°C) at which carrageenan alone melts.

The gelating agent there is carrageenan, opt. with other gelating agent. Addn. of the agar heightens the m.pt. of carrageenan. Addn. of inorganic salt increases the hardness of the gel. The inorganic salt is e.g. a ammonium chloride, sodium chloride, potassium chloride, potassium hydroxide, etc. Preservative, such as benzoic acid, dyes and pigments, may also be added. 7.4.78 as 040186 (6pp108)

ASAH ★ D22 86731B/48 ★ J5 4135-
antithrombotic polymer for catheter, artificial blood vessel, etc. comprises polyurethane resin contg. prostaglandin/E-1 to prevent thrombocyte aggregation

ASAHI CHEMICAL IND KK 13.04.78-JA-042676
A96 B05 P34 (A25 B04) (20.10.79) A61m-01/03

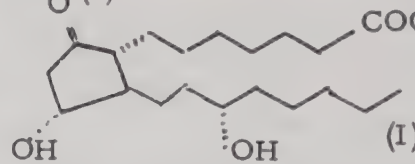
An anti-thrombus medical material consists of polyurethane resin contg. prostaglandin E_1 . The material may be in the form of a blood tube, a catheter, or an artificial blood vessel.

The polyurethane resin is pref. of a polyaddition polymer of polyesterdiol and diphenyl-methane-diisocyanate. When combined with the polyurethane resin, PGE has satisfactory stability to heat, acid and alkali. 13.4.78 as 042676(3pp)

ASAH ★ D22 86732B/48 ★ J5 4135-
Antithrombotic polymer for artificial blood vessels, catheters etc. comprises hydrophilic acrylate or methacrylate polymer contg. prostaglandin/E-1 cpd.

ASAHI CHEMICAL IND KK 13.04.78-JA-042677
A96 B05 P34 (A14 B04) (20.10.79) A61m-01/03

Antithrombotic medical material consists hydrophilic acrylate methacrylate polymer contg. prostaglandin E_1 of formula (I):



The material is pref. used as a material for medical devices such as for a blood tube, a catheter, or an artificial blood vessel.

The instability of prostaglandin E_1 to heat, is eliminated by mixing with the hydrophilic (meth)acrylate polymer.

Conventionally, acrylate gp. material is used as one of anti-thrombus materials, however, sufficient anti-thrombus property can not be obtd. Esp., thrombocyte aggregation is difficult to be prevented.

Prostaglandin E_1 give excellent thrombocyte-aggregation prevention property, however, it is unstable for heat, alkali or acid. 13.4.78 as 042677(4pp30)

ASAH ★ D22 86733B/48 ★ J5 4135-
Antithrombotic polymer for catheter, artificial blood vessel etc. comprises silicone resin contg. prostaglandin/E-1 to prevent thrombocyte aggregation

ASAHI CHEMICAL IND KK 13.04.78-JA-042678
A96 B05 P34 (A26 B04) (20.10.79) A61m-01/03

An anti-thrombus medical material consists of silicone resin contg. prostaglandin E_1 . The material is pref. used for a blood tube, a catheter, or an artificial blood vessel.

The silicone resin is e.g. of the combination of polysiloxane, organohydrozine siloxane, platinum chloride acid. When combined with the silicone resin, PGE, has satisfactory stability to heat, acid and alkali. 13.4.78 as 042678(3pp30)

MITQ ★ D22 86930B/48 ★ J5 4136-
Economically deodorising malodorous gas - by washing with water while irradiating with UV

MITSUBISHI ELECTRIC CORP 14.04.78-JA-043931
J01 (23.10.79) B01d-53/34

This method uses the oxidising effect of OH or O_2H formed in water by UV rays so that special chemicals are not needed, the process is economical.

The appts. comprises a cleaning tower, low tension mercury-arc lamp, pump, communicating vessel and spray nozzle. Cleaning water is sprayed into the tower through the nozzle by the pump, and is irradiated as it falls. air is contacted countercurrently with gas rising up the tower. When the gas contains CH_3SH and $(CH_3)_2S$, pref. the pH of the cleaning water is <12. 14.4.78 as 043931 (4pp96)

JAPE ★ D22 87040B/48 ★ J5 4137-
Hydrophilic crosslinked acrylonitrile polymer prodn. - by reacting aq. alkali metal hydroxide soln. with an acrylonitrile polymer in a heterogeneous system

JAPAN EXLAN KK 17.04.78-JA-047974
A14 (A96 A97) (24.10.79) C08f-08/12

Mfr. of a hydrophilic crosslinked polymer, comprises reacting an aq. soln. of an alkali metal hydroxide contg. electrolytic salt having a concn. of ≥ 0.5 mol. per 1000

an acrylonitrile polymer in a heterogeneous system. The concn. of an alkali metal hydroxide in the aq. soln. pref. 0.25-6.0 mols. per 1000 g. The acrylonitrile polymer used may be an acrylonitrile homopolymer, or a copolymer of acrylonitrile and ≥ 1 ethylenic unsatd. cpd., or a graft copolymer of acrylonitrile and other polymers such as starch and PVA. The starting material pref. contains ≥ 30 (pref. ≥ 50 wt. % of acrylonitrile).

Process is used in mfg. hydrogels from acrylonitrile polymers which are economically available in large quantities from waste fibres and polymers discharged in acrylic fibre industry. The prods. are useful for making soft contact lenses, sanitary materials, water retaining agents for soil, artificial soil, etc. 17.4.78 as 047974 (7pp120)

A D22 01921U/02 = NL-161-983
Regnated bandage - for long term administration of pharmacologically active materials at controlled rates

ALZA CORP (ALZ-) 18.06.71-NL-008408

A96 B07 P32 + P34 (15.11.79) *NL7108-408 A61f-13

Medical bandage for the controlled release of a systemically active pharmaceutical has an impermeable support layer holding a reservoir of active material, and a permeable cover on the opposite side of the reservoir, which is adhesive.

The reservoir is surrounded by a regulating membrane which controls the release of the active material by its rate of dissolution in and diffusion through the membrane. The membrane is made e.g. of microporous films of polyalkylenes or polycarbonates, or thick/dense films of EVA copolymers or silicone rubbers. 18.6.71 as 008408 (8pp913)

II D22 74327V/43 = NL-161-986
Surgical ligature or suture - with colour markings visible through a film of blood

ETHICON INC (RHON) 09.04.73-FR-012620

P34 (15.11.79) *BE-813-435 A61I-17

Surgical suture material is claimed with a succession of dots or stripes, ≥ 1 of which is light-coloured when viewed through a thin film of blood. The suture is made, e.g. of 3-104 elementary threads ≥ 2 gms. of contrasting colours.

The materials can be seen in blood-filled cavities during operations better than known suture materials. In an example, a suture was made on a 12-reel braiding machine using 11 reels of white polyester (polyethylene terephthalate) thread (50 dtex) and 1 reel of black pigmented polyester thread (50 dtex) to give a suture with a nominal dia. of 20/100 mm and a grained appearance. 1.4.74 as 04401 (3pp513)

DEL-★ D22 B/48 ★OE 7805-694
Sterilising installation

ODELGA JARZTLICH 04.08.78-OE-005694

P34 (15.11.79) A61I-03

STR=★ D22 87244B/48 ★SU-651-815
Vascular allo-transplant sterilisation and preservation - using aq. ethanol-mercury chloride, cetyl pyridinium chloride, sodium citrate and formaldehyde nitro-semicarbazone

ASTRAKHAN MEDICAL 28.01.77-SU-450831

P34 (15.03.79) A61I-09

Allo-transplants are sterilised and preserved by multistage treatment of sepd. vascular tissue for use in transplantation with biochemical agents-contg. soln. The transplant is first treated in soln. contg. mixt. of ethanol-mercury chloride (I), cetyl pyridinium chloride (II) and double distilled water (III) using I: II: III: ratio (0.8-1.2): (0.8-1.2): (927.6-998.4) and shaking the transplant until there is no more green colour formation after addn. of fresh soln. The transplant is then held for 6.0-6.5 hrs. at 20-22°C and then for 168-336 hrs. at 2-3°C in aq. soln. contg. I, II, NaCl, III mixt. in ratio (0.4-0.6): (0.4-0.6): (7.2-7.8): (991.0-992.0).

The final treatment comprises holding the transplant in soln. contg. furacilin (IV), trisodium citrate (V) and III in

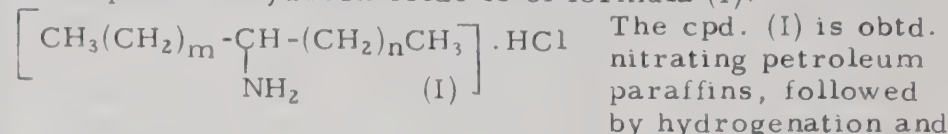
ratio (0.15-0.25): (99.0-101.0): (898.75-900.85) for 12-24hrs. at 36.5-37.5°C. The tissue: soln. wt. ratio is 1: (25-27). The resulting prod. has low antigenic activity. Suchkov, V.B., Asfandiyarov, R.I., Gladchenko, G.M. Bul. 10/15.3.79. 28.1.77. as 450831 (3pp938)

PETR=★ D22 87277B/48 ★SU-652-315
Oil well sulphate reducing bacteria inhibitor - contg. amino-paraffin hydrochloride obtd. by nitrating petroleum paraffin, hydrogenation and hydrochloric acid treatment

PETRO IND PROD TRAN 05.07.77-SU-505587

C03 E16 H01 Q49 (20.03.79) E21b-43

Aminoparaffin hydrochloride is of formula (I):-



treating with hydrochloric acid.:

The reagent acts on microorganisms which adapt to highly mineralised waters as pumped into oil formations. The reagent is more powerful than conventional sodium chloride so that less is required to obtain the same effect. The reagent prevents the formation or migration of hydrogen sulfide into the well product.

Lipovich, R.N., Asfandiyarov, F.A., Petrov, V.V. et al Bul. 10/15.3.79. 5.7.77. as 505587 (2pp26)

UTAH★ D22 87463B/48 ★US 4175-020
Sterilising reference electrodes - including treatment with soln. contg. hydroxyethyl methacrylate

UNIV OF UTAH 10.10.78-US-949573

J04 P34 R16 (20.11.79) A61I-01 G01n-27/30

A method is claimed for sterilising and charging a reference electrode which includes a tubular member open at one or both ends, one end being formed to function as a capillary, and contg. an electrode element. A soln. of a salt and hydroxyethylmethacrylate dissolved in an organic solvent is delivered into the tube, to surround the electrode, and the solvent is evaporated. The electrode is exposed to a sterilising gas. It is then aerated, and a second soln. of the salt is applied until the osmolality of the soln. within the tubular member and outside it is the same.

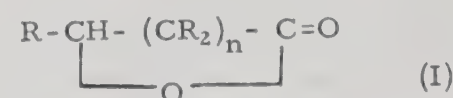
Cavities within the electrode are penetrated, and it is sterilised without damage to other parts of the measuring device. 10.10.78. as 949573 (4pp955)

UNIC D22 64990B/36 = US 4175-177
Thermoplastic crosslinkable copolymer - produced by reacting lactone and polyfunctional monomer in presence of active hydrogen initiator

UNION CARBIDE CORP 24.02.78-US-880955

A23 (A96) (20.11.79) *EP---3-846 + B01f-11

Thermoplastic crosslinkable copolymer is prepd. by reacting at 25-300°C an active H-contg. initiator with a molar excess of monomer mixt. comprising (A) 90-99.5 wt. % lactone monomer of formula (I) where n is 3-6, $\geq (n+2)$ of the R's are H and the other R's are 1-10C alkyl,



and (B) 0.5-10 wt. % polyfunctional acrylate monomer with plural acrylate or methacrylate gps.

The copolymer can be cured by ionising or actinic radiation or by a free radical peroxide catalyst. The degree of crosslinking can be controlled to give a thermoplastically processable prod. having improved rheological properties esp. suitable for the prodn. of orthopaedic casts and splints. 24.2.78. as 880955 (11pp945)

See Also

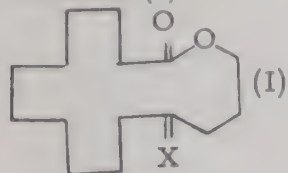
D15 GB 1556710

D23: OILS; FATS; WAXES

HAAR D23 06252B/04 = DS 2731-543
Natural musk odorant cyclopenta:decanolide prodn. - from 13-oxa-bi:cyclohexadecene

HAARMANN & REIMER GMBH 13.07.77-DT-731543
E13 (22.11.79) *DT2731-543 A61k-07/46 C07d-313

Cyclopentadecanolide (II) is prepd. by converting 13-oxa-bicyclo-[10.4.0]-hexadecene-[1(12)] (III) into a lactone of formula (I)



(where X is O, =NOH or =N-NH₂), reducing (I) to 15-hydroxypentadecanoic acid and cyclising this to (II). The reduction is carried out with sodium or sodium alcoholate after Wolff-Kishner or with hydrazine in alkali hydroxide after Huang-Minlon.

(III) may be reacted with nitrosyl chloride or a cpd. liberating nitrosyl ions under reaction conditions to form 12-oximinocyclopentadecanolide, which is converted to 15-hydroxypentadecanoic acid with hydrazine hydrate in presence of alkali hydroxide. The hydroacid is converted to a linear polyester which is depolymerised and cyclised in presence of a depolymerisation catalyst.

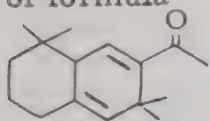
(II) is useful as a natural musk perfume. 13.7.77 as 731543 (4pp068)

INFL D23 21425A/11 = DS 2748-633
Unsaturated-acetyl-di:methyl-cyclohexane cpds. - intermediates for hexa:hydro-tetra:methyl acetophenone derivs. useful as vetiver ingredients in perfumes

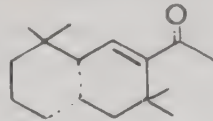
INT FLAVORS & FRAGR INC 11.11.76-US-740890

E15 (22.11.79) *US4076-749 A61k-07/46 C07c-45 C07c-49/61

New cpds. are tetramethyl-substd. hexahydroacetophenone of formula

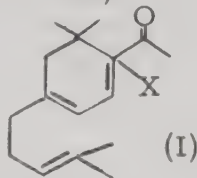


alone or mixed with a cpd. of formula



(where one of the dotted lines represents a carbon-to-carbon double bond and the other a C-C single bond). Such cpds. are useful as perfumes and may be prepd. from an acetylcyclohexadiene of formula (where X is H or Cl).

Cpd. (I) is cyclised with a mixt. of an acid, e.g. phosphoric acid, and a solvent at 70-100°C, the reaction mixt. contg. 25-50 wt % solvent. Hydrogen chloride is split from the reaction prod. in the presence of a base in molar ratio 1:0.5 to 1:5. The obtd. isomer mixt. may be sepd. in normal way e.g. by gas chromatography, fractional distillation and/or oxime formation. 18.5.78 as 748633 (20pp068)



INFL D23 68152B/38 = EP ---5-659
Diluted liq. perfume compsn. - contg. opt. hydrogenated terpene or alpha-methyl styrene dimer as extender

INT FLAVORS & FRAGR INC 10.07.78-US-923183 (30.05.78-US-902436)

E19 (28.11.79) *BE-876-005 + A61k-07/46

Intermediate Priority: 3.5.78-US-902665.

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Compsn. having a single liq. phase comprises (i) an undiluted perfume component (I), plus (ii) a diterpene (II) and/or hydrogenated diterpene (IIa) and/or (iii) a dimerisation prod. (IV) of α -methylstyrene, or a dimerisation prod. (IVa) of hydrogenated α -methylstyrene. (IV) and (IVa) may be replaced by dimers of methyl homologues of α -methylstyrene.

(I) is esp. a natural and/or synthetic perfume and component (ii) is esp. a 20C cpd. made by dimerising a monocyclic terpene each with 2 double bonds; a bicyclic terpene contg. one double bond, or one mono- and one-bicyclic terpene, or their hydrogenation prods. or mixts.

Components (ii) and (iii) extend (I) without reducing its odour characteristics.

3.5.79 as 400283 (88pp1251)

(F) ISR: US3502769; FR2335234.

SUGY ★ D23 86579B/48 ★ J5 4134-489
Potassium iodide-silica gel reagent - for quantitative determ. of peroxide in oils and fats, useful for measuring degree of putrefaction

SUGIYAMA SANGYO KAG 10.04.78-JA-042323

J04 R16 (18.10.79) G01n-21/02

Reagent of potassium iodide-silica gel for quantitative analysis of peroxide cpd. in oils and fats with colorimetric method is claimed. A silica gel granular powder which is easily pptd. in a solvent is impregnated with KI and the impregnated powder is dried. The silica gel powder has a granular degree of 70-230 mesh and it is a conventional silica gel employable for column chromatography.

Typically, 100 g conventional silica gel having a granular degree of 70-230 mesh is dipped in 100 ml aq. soln. contg. 10% KI. The impregnated gel is filtered with Buchner's funnel, freeze dried and then dehydrated by heating it at 110°C. The reagent is mixed with an appropriate amt. of ethyl alcohol to separate out iodine by elution. Further, starch and the oils and fats contg. the peroxide cpd. are added to the ethyl alcohol contg. the reagent to give a bluish colour. The blue hue and degree of colouration correspond with the peroxide content. 10.4.78 as 042323(3pp15)

DAII D23 54387V/30 = J7 9036-162
Transparent stable oil-in-water emulsion - comprising water, sugar, fat and oil stirred in presence of emulsifier

DAIICHI KOGYO SEIYA 23.05.72-JA-051515

(07.11.79) *J49009-506 + C11b-15

A compsn. of water 100, sugar and/or sugar alcohol 120-350, and fat and/or oil 100-1300 parts is stirred in the presence of 0.05-5 wt. % (based on total compsn.) emulsifier to give a transparent, stable oil-in-water-type emulsion.

In an example, 770g cottonseed oil at 70° was added slowly to a mixt. of fructose 230, water 100, and sucrose beef tallow fatty acid ester 3.3g at 70° in a blender to give transparent oil-in-water-type emulsion which was transparent during 4 months of storage at 30°C. 23.5.72 as 051515 C11b-15/00 (7.11.79) DAIICHI KOGYO SEIYAKU (3pp) (J4 9009506)

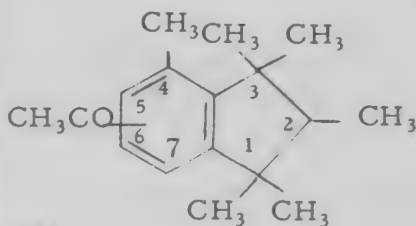
MITC D23 89135V/52 = NL-162-055
4-Alkyl-substd. acyl-polyalkyl indanes - having musk odour and prepd. from 4-alkyl-substd. polyalkyl indanes

MITSUI PETROCHEM IND KK 08.06.73-JA-063757

E14 (15.11.79) *DT2427-465 A61k-07/46 C07c-49/76 C11b-09

Acetyl-1, 1, 2, 3, 3, 4-hexamethylindane cpds. of formula (I) (where the acetyl gp. is in the 5- or 6-position) are new.

(I) are prepd. by reacting



(I)

ing m-methyl- α -methylstyrene with a 5C alkene or a sec. or tert. alcohol in the presence of a Friedel Crafts catalyst to give the corresponding poly-methylindane, which is then acetylated with an acetyl halide or acetic an-

hydride using a Friedel Crafts catalyst.

(I) are useful perfume components having a musk odour which can be used e.g. in perfumes, cologne, detergents, soap, cosmetics, etc. 7.6.74 as 007667 (5pp513)

ANIS D23 36376X/20 = NL-162-064
Dimethyl-3-hydroxy-6-octene nitrile prepn - from 2-methylhept-2-en-6-one and acetonitrile and use in substd octene-nitrile perfume prepn BE270476)

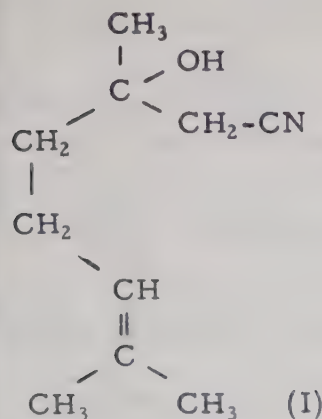
ANIC SPA (SNAM) 30.10.74-IT-028955

E16 (15.11.79) *DT2548-420 C07c-121/34

3, 7-dimethyl-3-hydroxy-6-octene nitrile (I) is prepd. by reacting 2-methyl-hept-2-ene-6-one with acrylonitrile in

the presence of Na amide and liq. NH_3 .

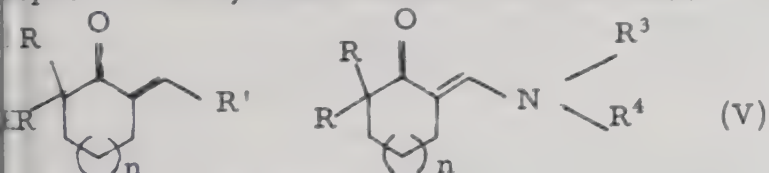
Process is selective and gives high yields of (I). (I) is useful as an intermediate in the prodn. of octene nitrile acetyl cpds. as described in NL 7512624.



10.75 as 012622 (4pp513)

US/ D23 47687W/29 = SU-651-651
compsn. with quasi-vitreous structure - by blending a dry gum with a mixt. of liquid and solid fat
COUSIN C 14.01.74-FR-001154
(09.03.79) *BE-824-057 A23d-05
fat comps. comprising (a) a fat which is crystallisable at ambient temp. and (b) oils, has a quasi-vitreous structure determined by mechanically dispersing therein a dry filler material esp. 0.01-1.5 pref. 0.02-0.8 wt. % of a dry gum. The comps. has a viscosity which varies continuously with temp. is malleable; may be extrusion moulded; is not subject to segregation of components and has a controlled liq. to solid transition i.e., delayed crystallisation on cooling. The gums are guaranates, tragacanthates, alginates, carob bean gum, pectins, gum arabic, gum tragacanth or rosin. Cousin, C., Cavois, P. 1.9/5.3.79. 13.1.75. as 100223 (3pp)

★ D23 87503B/48 ★ US 4175-087
prepn. of 2-alkylidene ketone(s) - by reaction of enamino:ketone with alkyl-lithium in solvent, esp. THF, at low temp.
ELI LILLY & CO 12.01.78-US-868774
B05 C03 E15 (20.11.79) C07c-47/45
prepn. of 2-alkylidene ketones of formula (I):



(where R is H or 1-2C alkyl; R' is 1-7C alkyl; and n = 0 or 1) comprises reacting an enamino:ketone of formula (V), (where R³ and R⁴ are 1-2C alkyl) with a 1-7C alkyl lithium in a solvent at -50 to 25°C for 2-12 hrs.

The process may be used where the direct aldol condensation of an aldehyde with a ketone is impractical. (I) are useful in the prepn. esp. of the flower oils of several varieties of jasminum. 12.1.78. as 868774 (6pp914)

MOBI ★ D23 87504B/48 ★ US 4175-089
Gamma-butyrolactone(s) from olefin(s) and carboxylic acids - in the presence of cerium or manganese ions not in lowest valency state
MOBIL OIL CORP 28.02.73-US-336857 (20.03.68-US-714447)
B03 C02 E13 (20.11.79) C07d-307/32

A gamma-butyrolactone is prepd. by reacting, at 20°-250°C, (i) an olefin selected from 2-92C acyclic mono-olefins, 3-8C acyclic diolefins, 5-8C cyclic mono-olefins and 5-8C cyclic diolefins, (ii) an acid of the formula (R')₂CH-CO₂H where each R' is independently H, 1-10C alkyl, 2-10C alkenyl, CN or -(CH₂)_nCO. OR'' in which n is 1-6 and R'' is H or CH₃; and (iii) ≥ 2 equivs. per mole of olefin, of an ion of Mg or Ce, the ion being in a valency state higher than its lowest possible one.

Gamma-butyrolactones are products with known uses e.g. pesticides, perfumes and the like, chemical intermediates, gastric secretion inhibitors, solvents, agents for rendering polyurethanes hydrophilic, flavouring agents, antioxidants for hydrocarbon lubricants and light hydrocarbons and agents for improving the adherence of a wax coating to paper. The process produces lactones in high yields e.g. 95% or more. 28.3.73. as 336857 (+21.4.70-US-030582) (13pp476)

See Also

D13 FR 2417263

D14 BE 876517

D24: SOAP; SOAP DETERGENTS

ENK D24 57440R/32 = NL-162-133
textile detergents containing softening agents
HENKEL KG AUF AKTIEN 16.12.69-DT-962919 (30.04.69-DT-922046)
(15.11.79) *BE-745-814 C11d-01/52 + C11d-10/04 D06m-13/40
washing agents contg. textile softening agents are comprised of (1) 5-100 wt. % of a combination of (a) 20-90 wt. % of 1 anionic, zwitterionic and/or non-ionic surface active agent and (b) 80-10 wt. % of a fabric softener consisting (i) 100-20 wt. % of a condensn. prod. of a triglyceride of a 8-24C fatty acid, at least 50% of the fatty acid having > 24C, with a hydroxyalkylpolyamine contg. ≥ 1 hydroxyethyl, hydroxypropyl or dihydroxypropyl gp. and ≥ 2H atoms bound to N, such that per mol. prim or sec. amino gp. and each OH gp., 1/3 mol. of fatty acid is used, and (ii) 0-80 wt. % of a quat ammonium cpd. with two 14-26C alkyl gps. and ≥ 1 quat. N atom/mol. and (2) 95-0 wt. % known washing agent components. The comps. have an improved fabric softening action and are cheaper and more economical than known fabric softeners. 6.1.70 as 00109 (+1.8.69-DT-939190) (6pp513)

ENK D24 30227A/17 = US 4175-050
mosaic-patterned coloured soap cakes - prepd. by compression of evacuated granules
HENKEL KG AUF AKTIEN 21.10.76-DT-647447
(20.11.79) *BE-859-932 C11d-13/18

A soap bar shaped washing agent based on coloured soaps and/or synthetic detergents is produced comprising > 1 individually coloured particle contg. wash active substances.

The wash active substances are soap or synthetic detergents of size range 1-20 mm., so distributed that they adjoin one another with sharply defined boundaries, which are free of occluded gas. The particles give a mosaic-like appearance to (part of) the surface. The shaped washing agent is prepd. by compressing the particles at 15-45°C at a press rate of 0.1-5 m. per min. at a pressure of 60-450 bar in the absence of gas between the particles at a vacuum of < 100 torr. The soapbar shaped article is thus formed and recovered.

The mosaic-like structure of the particles are sharply-defined polygons giving an eye-catching aesthetic effect, esp. as a flowery appearance. 17.10.77. as 842802 (4pp931)

D25: OTHER DETERGENTS

FARH ★ D25 85940B/48 ★ BE -876-427
Granular compsn. used as detergent auxiliary - comprises sodium tri:poly:phosphate and an aluminosilicate or a borosilicate
HOECHST AG 22.05.78-DT-822231
E36 (21.11.79) C11d

The compsn., consisting of particles of 0.15-1.25 mm size, comprises (a) 1-99% of a partly or wholly hydrated sodium tripolyphosphate contg. $\geq 10\%$ of the theoretical water of crystallisation content, and (b) 1-99% of a water-insol. aluminosilicate ion exchanger of formula $(\text{Cat}_{z/n} \text{O})_x \text{Me}_2\text{O}_3 (\text{SiO}_2)_y \cdot z \text{H}_2\text{O}$ (where Cat is a cation of valency n which is exchangeable with Ca, x is 0.7-1.5, Me is B or Al, y is 0.8-6 and z is 1.8-13.5). Before hydration the sodium tripolyphosphate contains 20-90% of phase I, the remainder being phase II.

The granulate is prepd. by projecting, with strong agitation, a fine mist of water onto an intimate mixt. of the anhydrous cpds. of (a) and (b). Compsn. is used as a detergence auxiliary in detergent prods. The compsn. enables less dust formation and it has good free flowing property and stability to storage. 21.5.79 as 876427 (11pp)

RHON D25 47754A/27 = DS 2759-110
Silico-aluminate(s) esp. for use in washing powders - with higher cation exchange power and less incrustation

RHONE-POULENC INDUSTRIES 25.03.77-FR-008932 (30.12.76-FR-039527)

E36 (22.11.79) *BE-862-470 C01b-33/26 C11d-03/08

A synthetic, crystalline silico-aluminate is prepd. for use in detergent compsns. or as surfactant. A sodium aluminate soln. cooled to -10 to $+10^\circ\text{C}$ is mixed with a sodium silicate soln. at room temp. The homogenous mixt. under goes gel formation at $60-100^\circ\text{C}$.

The concn. of reactants is such that at the end of the reaction the liquid phase contains ≥ 70 g/litre Na_2O and 10 g/litre Al_2O_3 in equilibrium with ≥ 200 g/litre molecular sieve. The silico-aluminate is in the form of fine particles and high dispersion. 30.12.77 as 759110 (9pp068)

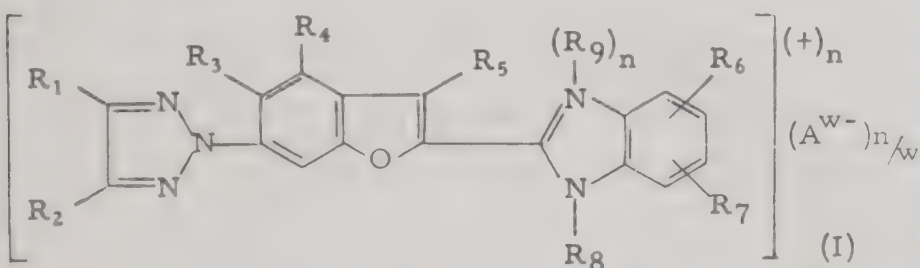
FARB D25 84359B/47 = EP ---5-465
Benzofuranyl-benzimidazole(s) - used as optical brighteners and intermediate benzofuran derivs.

BAYER AG 13.05.78-DT-821116

A60 E23 F06 (28.11.79) *DT2821-116 D06I-03/12 + C07d-405/14 C08k-05/34 D21h-03/80

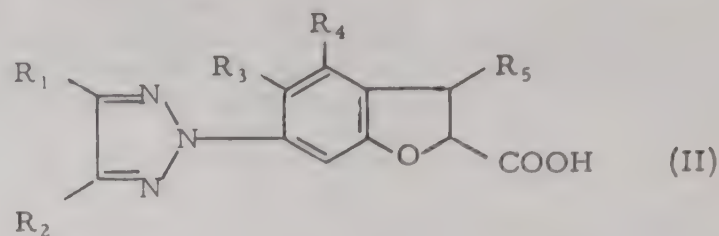
D/S: E(BE, CH, DT, FR, GB, IT).

Benzofuranyl-benzimidazole cpds. of formula (I) are claimed:



(in (I) R_1 is opt. subst. aryl, alkyl, aralkyl, styryl or alkoxy; R_2 is H, CN, COOH, COOR, opt. subst. carbamoyl, acylamino, or as R_1 ; R is the gp. of an alcohol; R_1 and R_2 may together form an opt. subst. (hydro)aromatic ring; R_3 and R_4 are H, opt. subst. alkyl or alkoxy, or halogen; R_5 is H or opt. subst. alkyl or aryl; R_6 is as R_3 or R_5 , opt. subst. alkyl sulphonyl or phenyl sulphonyl, SO_3H , COOH or derivs. including CN or CF_3 ; R_7 is as R_3 ; R_8 is cycloalkyl, alkenyl, alkyl, aryl or aralkyl, or if n is 0, it may also be H; R_9 is opt. subst. cycloalkyl, alkenyl alkyl or aralkyl, or is H; A^- is a colourless anion of valency w ; n is 0 or 1).

Also claimed are intermediates of formula (II):



(I) are used as optical brighteners of organic materials and as scintillators and laser dyes.

(I) have high fastness, esp. to light and washing. 26.4.79 as 101256 (50pp195).

(G) ISR: DT2522139; DT2166632; DT2159469.

UNIL ★ D25 86309B/48 ★ EP ---5-61
Deodorant compsn. contg. abrasive, bleach, wax or polymer carrier - used as scouring powder, bleach, polishing floor cleaner

UNILEVER NV 16.05.78-GB-019844

A97 P34 (28.11.79) A61I-09/*C11d-03/50

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

Full Patentees: Unilever Ltd. D/S: E(GB),

Unilever NV D/S: E(BE, CH, DT, FR, IT, NL, OE, SW).

A deodorant product, suitable for application to surfaces other than the human skin, comprises a deodorant and a carrier chosen from abrasive materials, bleaching agents, waxes and/or film forming polymers, the deodorant having a deodorant value of 0.50-3.5 (1.00-3.5) esp. 1.50-3.5 as measured by the deodorant value test.

Claimed deodorant products are scouring powder, liquid bleach, polish and floor cleaner.

14.5.79 as 300824 (64pp966)

(E) ISR: FR2380341; US4026813; US3953378; US3965186; US4055506; US3975309; GB1249125; FR2263300; US3978208; FR1602575; FR1598898.

STER D25 51623A/29 = GB 1556-63
Antimicrobial compsn. esp. for surgical washing of skin - contain alkylene bis-guanide, surfactant and water

STERLING DRUG INC 14.01.77-US-759265

A97 E16 P34 (28.11.79) *BE-862-808 A61k-07/40 C11d-03/4 + C11d-31/15

An antimicrobial detergent compsn. is prepd. for topical use for reducing the number of microbes on living human skin. The compsn. comprises an antimicrobial amt. of a 1,1'-4-bis(5-R-biguanide) of structural formula (I) or its acid addn. salt, a compatible surfactant or surfactant mixt., and water.

In the formula A is 2-12C alkylene having its valence bonds attached to different C atoms, and R is 6-16C alkyl. Pref. A is hexamethylene. The surfactant used is a non-ionic mixt. of a polyethoxylated alcohol, a polyethoxylated phenol and a hydroxyethylated amide.

The detergent compsn. prepd. is used as surgical scrubs, whose method of use for de-germing hands is evaluated by the gloved-hand method of Michand, McGraw and Goss. 30.12.77 as 054335 (3pp931).

ECON ★ D25 86445B/48 ★ GB 2021-1
Stabilised liq. enzyme-contg. detergent compsns. - contain antioxidant and an organic hydrophilic poly:ol

ECONOMICS LAB INC 22.05.78-US-908505

(D16) (28.11.79) C11d-01/02 C11d-03/04 C11d-10/02

Stabilised liq. enzyme-contg. detergent compsn. contains (all by wt) (a) 20-90% H_2O , (b) a proteolytic enzyme (I), (c) 1-70% anionic and/or nonionic detergent (II), and (d) 0.1-30% of an H_2O -dispersible stabilising system for (I). Stabilising system consists of (i) an H_2O -dispersible antioxidant (III) having single electrode potential (at 25°C) for the oxidn. of (III) to an oxidised sp. (i.e. E_{ox}) not less than that of ascorbic acid but less than that of Na hydrosulphite and (ii) an organic, hydrophilic, H_2O -soluble polyol (IV) mol. wt. < 500 . Compsn. is stable to pH 5.2-9.0.

Incorporation of the stabilising system in the compsn. stabilises the enzyme activity of (I). Compns. are par

effective for removing proteinaceous soils from fabrics, meat, fat and blood. 22.5.79 as 017824 (19pp478)

OC ★ D25 86795B/48 ★ J5 4135-724
Aminomethylene-di:phosphonic acid deriv. prepn. - by reacting an alkyl-orthoformate with an organic prim. or sec. amine and hydrolysing
NISSAN CHEM IND KK 11.04.78-JA-042349
C01 E11 (22.10.79) C07f-09/38

Prepn. of aminomethylenediphosphonic acid deriv. comprises reacting dialkyl phosphite of formula $(R'O)_2P(=O)H$ (where R' is lower alkyl), alkyl ortho-formate of formula $CH(OR)_3$ and organic prim. amine or organic sec. amine which has a b.pt. higher than that of the lower alcohol of formula ROH , and then hydrolysing the reaction prod.

Pref. dialkyl phosphite are, e.g. dimethyl phosphite, diethyl phosphite, dipropyl phosphite and pref. alkyl ortho-formates are, e.g. methyl, ethyl and propyl ortho-formates. Pref. organic amines are e.g. monoalkylamine, dialkylamine, dialkenylamine, piperidine, morpholine, quinopyridine, aminopyrazine, aminopyridazine, aniline, N-monoalkylaniline, N-monoalkylaminohetero cyclic cpd. The prod. is useful as chelating agent, detergent and herbicides. The method gives the prod. in high yield, and the reaction proceeds smoothly. 11.4.78 as 042349(4pp108)

ING ★ D25 86950B/48 ★ J5 4136-597
Stabilising hydrogen peroxide adducts with phosphate cpds. - e.g. sodium or potassium pyrophosphate washing agents, by adding sodium borate or its hydrate
CENTRAL GLASS KK 17.04.78-JA-044151
E34 (23.10.79) C01b-15/04 C11d-03/39 C11d-07/54

The method comprises adding sodium borate or sodium borate hydrate to the hydrogen peroxide addition prod. of the phosphate to stabilise the addition prod. The sodium borate is boric sand, anhydrous boric sand, boric sand. 5, hydrate, or boric sand. 10 hydrate.

In an example, 2wt. parts of anhydrous boric sand of B_2O_3 was added to 100wt. parts of a hydrogen peroxide addition prod. of sodium pyrophosphate $Na_4P_2O_7 \cdot 2H_2O_2$ to obtain a mixt. The resulting mixt. was set in an atmos. of 100% of relative humidity at 40°C for 24 hours. In addition of the boric sand to the addition prod., the mixt. was not hardened. 17.4.78 as 044151 (3pp51)

UMO D25 17022S/09 = NL-162-132
Vinylidene sulphonate detergent compsn
SUMITOMO CHEM CO 29.08.69-JA-068853
(15.11.79) *BE-755-471 + C11d-01/14

Washing agents are made by mixing (a) an alkylsulphonate component comprising a mixt. of (i) 30 - 70 pts. wt. of a sulphonate of an unbranched α -alkene of formula $R_1-CH=CH_2$ in which R_1 is a 12-20C alkyl gp. and (ii) 70-30 pts. wt. of a sulphonate of a vinylidene cpd. $(R_2)(R_3)C=CH_2$ where R_2 and R_3 are 1-19C alkyl and R_2 and R_3 together contain 22-22C with (b) usual washing agent components.

The components (i) and (ii) together have a synergistic effect and give washing agents with high detergency and wetting power. 28.8.70 as 012790 (7pp513)

HENK D25 35812R/20 = NL-162-134
Cleaning agents
HENKEL KG AUF AKTIEN 13.05.69-DT-924332
A16 E19 (15.11.79) *BE-741-793 C11d-07/06 + C11d-03/20

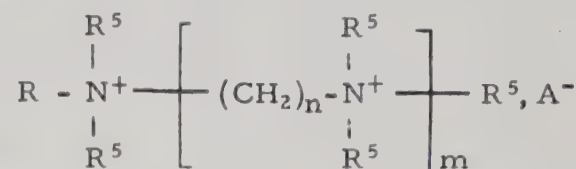
Storage stable viscous liq. or pasty oven cleaner compsn. comprises (by wt.) (a) 4-20% of an alkali metal hydroxide, esp. KOH; (b) 1-15% of an alkali-soluble thickener which is a (meth)acrylic polymer contg. up to 75 mol. % (m)ethyl or propyl (meth)acrylate; (c) 2-18% of a 2-4C glycol such as ethylene glycol or 1:2- or 1:3-propylene glycol; (d) 0.2-3% of a nonionic surfactant comprising an addn. prod. of ethylene oxide with 8-20C fatty alcohols and/or with alkyl phenols with 8-15C atoms in the alkyl gp.; (e) 0.5-4% of a toluene sulphonate and/or xylene sulphonate; and (f) $\geq 60\%$ esp. 65-85% water.

The compsn. has a viscosity of 800-10,000 cP. Perfumes, dyes, etc. may also be added. The compsns. remain stable on storage for long periods and have an excellent cleaning action on soiled ovens, rotisseries, etc.

14.11.69 as 017176 (4pp513)

PROC D25 09275Y/06 = NL-162-152
Textile softening compsns. for adding to rinsing baths - contain, as cationic surfactants, cyclic quat. ammonium, polyamine, alkyl imidazolinium, or alkyl pyridinium salts
PROCTER & GAMBLE CO 04.06.76-LU-075088 (14.07.75-US-595632)

A87 E19 F06 (15.11.79) *BE-844-122 D06m-13/46
An aq. compsn. for treating textiles contains (a) an ester of a fatty acid and a 1-8C alcohol or polyol or internal anhydride of a polyol, and (b) a quat. ammonium cpd. of formula



where either
(i) R is 10-22C alk(en)yl; R^5 is H, $(C_2H_4O)_pH$, $(C_3H_6O)_qH$ or 1-3C alkyl, in which p and q may = 0 or be

such that $p + q$ is ≥ 25 ; $m = 1-9$; $n = 2-6$; and A^- is ≤ 1 anion neutralising the total charge of the N atoms, or (ii) R and R^5 are H and/or 1-4C alkyl; and m is ≤ 3 .

The compsn. is a textile softener, and is added to the final rinse in a wash programme. Deposition of the ester on the textile is improved by the addn. of the surfactant. Sorbitan, ethylene glycol and glycerol esters of 12-22C fatty acids are pref. 14.7.76 as 007766 (10pp510)

CHIN= ★ D25 87198B/48 ★ SU-651-020
Detergent compsn. for laundering fabrics - contg. sodium alkylsulphonate fatty acid and amide derivs., dextrin, phosphate(s), optical brighteners and scent

CHEM IND RES PLAN 23.05.74-SU-026193

A97 E19 (A25) (07.03.79) C11d-01/12 C11d-03/39

The compsn. comprises (by wt. pts.) 10-14 Na alkylsulphonate, anionic surfactant, 2-4 polyoxyethylated 10-16C synthetic fatty acid monoethanolamide, 2-4 10-16C synthetic fatty acid, 0.4-0.8 KOH, 11-15 K tripolyphosphate, 3-7 Na tripolyphosphate, 1-2 dextrin as antiresorbent 0.1-0.2 optical brightener for cotton-cellulose and linen fabrics, 0.1-0.2 optical brightener for wool, silks and synthetics, 0.1-0.2 fragrance and water to 100.

The compsn. has superior laundering props.

Daurov, B.K., Bavika, L.I., Korolko, V.G. et al. Bul. 9/5.3.79. 23.5.74. as 026193 (3pp314)

CHIN= ★ D25 87199B/48 ★ SU-651-021
Detergent for laundering fabrics - includes polyoxyethylated synthetic fatty alcohol s) hydrogen peroxide and propylene glycol

CHEM IND RES PLAN 24.06.77-SU-499509

A97 E19 (A11 A25) (07.03.79) C11d-01/83 C11d-03/04

The compsn. comprises (by wt.): 9-12% polyoxyethylated alkylamide of 10-16C synthetic fatty acids and/or oxide of 10-16C alkyl dimethylamines, 4-6% alkoxy methyl diethyl-methyl ammonium-methyl sulphate (I) 8-12% polyoxyethylated 10-16C synthetic fatty alcohols (II) 2-6% propylene glycol, 0.5-2.5% H_2O_2 , 20-30% Na tripolyphosphate, 1.5-2.5% carboxymethylcellulose 3.5-8.0% NaCl, 4.5-6.0% Na_2SO_4 , 0.1-0.5% optical brightener, 0.1-0.5% aromatiser and water to 100%.

The inclusion of (II), H_2O_2 and propylene glycol improves the washing and brightening props. The compsn. has disinfecting and antistatic characteristics.

Nikitenko, A.G., Lesman, N.I., Golyatovskaya, N.I. et al. Bul. 9/5.3.79. 24.6.77. as 499509 (3pp314)

KAOS D25 40395A/23 = US 4175-051
Metal wire cleaning pad, e.g. for cooking utensils - contg. a soap and specific phosphoric ester salts

KAO SOAP KK 25.02.77-JA-020112

E11 P28 (20.11.79) *BE-863-327 C11d-09/34 C11d-17

A scouring pad is prepd. comprising a spongy, fine metal thread pad and an impregnated detergent compsn. contg. 5-40 wt. % of ≥ 1 phosphoric acid ester salt $[R(OCH_2CH_2)_m]^x PO_4H_{3-x-y}My$, and 50-95 wt. % of 10-22C fatty acid soap. In the formula, R is a 10-22C (un)branched alkyl or alkenyl or 6-18C (un)branched alkylphenyl; m is 0-10, x is 1.0-2.0 and y is 0.5-2.0, such that $x+y \leq 3$. M is an alkali metal, ammonium, alkanolamine, alkaline earth metal, zinc or aluminium cation. The wt. ratio of deter-

gent compsn. to the thread pad is 0.2-2.0/1.

The scouring pad has a high washing power, being able to remove oil stains, scorching stains and roasting stains without damaging underlying material such as steel plate, aluminium sheet, stainless steel sheet, tile or plastic articles. 26.1.78. as 872659 (6pp931)

HENK **D25** **35043A/20 = US 4175-062**
Liquid cleanser for hard surfaces - contg. synergistically acting ethoxylated di:ol or its alkyl ether deriv. and alkaryl- and/or alkane sulphonate

HENKEL KG AUF AKTIEN 05.03.77-DT-709690

A97 E19 (20.11.79) *DS2709-690 C11d-01/83 + C11d-03/06

Liq. cleanser compsns. for cleaning hard surfaces, contain an aq. soln. contg. 2-30 wt. % of a surfactant mixt. and 0-3 wt. % of a water-soluble salt of a 12-18C fatty acid, and having a pH of 7.0-10.5 as a 2% soln.

The surfactant mixt. comprises adducts of 3-30 mols. of ethylene oxide onto 10-20C aliphatic vicinal (1-4C) alkanediols or their monoalkyl ethers; and an anionic sulphonic cpd. contg. 8-20C linear alkylbenzene sulphonic acids, 8-20C linear alkane sulphonic acids or their water-soluble alkali(ne earth) metal or ammonium salt. The ratio of adduct to sulphonic cpd. in the surfactant is 1:1-20.

The cleanser prepd. readily removes dirt and grime from household appliances with enamelled metal walls with large surfaces, without scrubbing and without leaving streaks or spots on drying. 6.3.78. as 883685 (7pp931)

SHEL **D25** **38473A/22 = US 4175-0**
Refining surface active agent streams - contg. water and no surface active material, with sulphated or sulphonated organic material, by extn. with ketone or acetate as solvent

SHELL OIL CO 30.11.76-GB-049831

E19 (20.11.79) *BE-861-192 + C07c-141/04 C07c-143/02

Non-surfactant is recovered from an aq. based mixt. contg. water, surfactant organic salts comprising sulphated or sulphonated organic matter, and non-surfactant organic matter.

The mixt. is obtd. by the sulphation or sulphonation of 8-22C olefins, paraffins or alcohols to yield the corresponding monoalkyl sulphuric or sulphonic acid, followed by their neutralisation with a base to afford the corresp. surfactant organic salt. The aq. based mixt. is extracted with 6C ketone at $\leq 60^\circ\text{C}$ or a 1-6C alkyl acetate, to form a ketone- or alkyl acetate-based extract phase contg. all the non-surfactant, and a raffinate phase contg. water, some of the ketone or acetate solvent and all the sulph(on)ated matter.

The extract phase is then sepd. into a ketone or acetate fraction and a non-surfactant organic material fraction which is recycled to the sulph(on)ation reaction. 13.11.76 as 959958 (+30.11.78-US-856811) (4pp931)

See Also

D13 SU 635635

D22 DS 1695483

CPI INDEXES

ALERTING PATENTEE INDEX (III)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

M22

*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

In Country Alerting Bulletin only

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502-292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or # sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U A97D15M14
*645 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
*654 49862X A88H01Q4
*655 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A-M cumulations of from a quarter up to 5 years are available as COM.

CALI

Nitrile rubber smooth rolled sleeve for well impression packer - also contg natural rubber, hydrated 49862X/26 *US 3963-654
CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01

Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying earth in dams 49433X/26 *DT 2554-327

CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02

CANA

Emulsifying agents of microbial origin - used esp. for oil spills, are made by cultivating a species of 48076X/26 *CA -990-668
CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180
Europe	150
France	740
Germany, W. unexamined	1050
Japan unexamined	845*
Netherlands unexamined	240
PCT	40
Research Disclosure	20
South Africa	100
Sweden	260
United Kingdom unexamined	600
	<u>3325</u>

Slow publishing

Canada	450
Germany, E.	100
Germany, W. examined	465
Japan examined	340*
Netherlands examined	60
Soviet Union	1200
Switzerland	260
United Kingdom examined	300
United States	1200
	<u>4375</u>

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140
Denmark	120
Finland	60
Norway	80
Portugal	30
	<u>430</u>

Slow publishing

Austria	125
Czechoslovakia	180
Hungary	35
Israel	40
Italy	155
Rumania	25
	<u>560</u>

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. In the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
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Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
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Chile	CE	Pakistan	PK
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- * ABET- 10.04.78 A-BETONG AB C03 D13 *SW 7803-980
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- * ABHE= 23.03.77 AS BELO HEAT MASS D13 J09 *SU -652-427
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- ADWA- 18.02.78 ADWATRE INC D15 =FR 2417-476
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- AGEN 14.06.77 AGENCY OF IND SCI TECH A35 D15 J09 =J7 9036-161
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- AGRI- 20.03.78 AGRIMEL LTD C03 D13 (D16) *US 4175-121
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- AIRP 16.04.75 AIR PRODUCTS & CHEM INC D15 =CA 1066-438
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- AJIN 29.00.73 AJINOMOTO KK C03 D13 (C02) =J4 9091-873
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- AJIN 29.00.73 AJINOMOTO KK C03 D13 (C02) *J7 9036-115
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- AJIN 14.05.76 SANRAKU-OCEAN CO LT A97 B04 D16 (A11 A14) =GB 1556-584
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- AJIN 16.02.78 AJINOMOTO KK B05 D16 E17 *FR 2417-548
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- AJIN 12.04.78 AJINOMOTO KK B05 D16 E17 H04 (D13) *J5 4135-259
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- AKER- 20.02.78 AKERS MEK VERKSTED D15 H01 J01 =FR 2417-328
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- AKFB= 07.02.77 AS KAREL BIOLOGY C03 D13 *SU -651-777
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- ALBR 08.12.78 ALBRIGHT & WILSON LTD D25 E19 =GB 2021-141
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- ALFA 19.07.73 ALFA-LAVAL AB D13 =SU -652-864
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- ALFA 31.01.78 ALFA-LAVAL AB D16 E19 *SW 7801-134
Liq. organic cpd. prodn. by fermentation of carbohydrate material - 87378B/48
- ALKU 18.05.78 AKZO NV A96 D21 (A25) =GB 2020-974
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- ALKU 24.05.78 AKZO NV D15 M28 *EP ---5-580
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- ALLI/ 10.04.78 ALLIGER H D22 #DK 7801-580
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- ALZA 18.06.71 ALZA CORP A96 B07 D22 =NL -161-983
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- AMAF 17.03.78 AMERICAN AIR FILTER INC D18 =DK 7901-103
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- AMAN 19.09.72 AMANO PHARM KK C03 D13 (D16) *J7 9036-113
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- AMCY 23.12.74 AMERICAN CYANAMID CO D21 E16 =CA 1066-194
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- AMCY 20.09.76 AMERICAN CYANAMID CO A96 D22 F07 =IL --52-654
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- AMCY 26.10.76 AMERICAN CYANAMID CO A14 D15 (A97) *US 4175-100
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- ANDE/ 10.04.78 ANDERSEN E D12 =DK 7801-576
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- ANDE/ 13.04.78 ANDERSSON B A E D22 E19 =SW 7804-195
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- ANDO/ 27.03.74 ANDO M D13 =SU -651-654
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- ANIS 30.10.74 ANIC SPA D23 E16 =NL -162-064
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- ANIS 12.09.75 ANIC SPA A97 B07 C03 D15 (D16 D22) =GB 1556-710
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- ANIS 02.07.76 ANIC SPA D15 J01 =GB 1556-587
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- AQUA/ 12.05.78 AQUARIUS CH D13 =NL 7808-098
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- AQUA/ 25.07.79 AQUARIUS C D13 *BE -877-880
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- ARLA- 16.02.78 MJOLKCENTRALEN ARL D13 =FR 2417-261
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- ASAG 12.04.78 ASAHI GLASS KK A97 D15 K05 M25 =J5 4135-685
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- ASAG 14.04.78 ASAHI GLASS KK A88 D14 (A18) *J5 4135-847
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- ASAH 13.04.78 ASAHI CHEMICAL IND KK A96 B05 D22 (A25 B04) *J5 4135-493
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- ASAH 13.04.78 ASAHI CHEMICAL IND KK A96 B05 D22 (A14 B04) *J5 4135-494
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- ASAH 13.04.78 ASAHI CHEMICAL IND KK A96 B05 D22 (A26 B04) *J5 4135-495
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- ASGA/ 18.03.74 ASGAR K D21 M26 =J7 9035-860
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- * ASME= 01.03.77 AM USSR MEDIC RADIO B04 D21 *SU -650-633
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- * ASTR= 28.01.77 ASTRAKHAN MEDICAL D22 *SU -651-815
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- * ATLA 11.01.77 ATLAS AS D14 *IL --51-247
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- * ATLA= 09.08.77 ATLANTIC FISHERIES RES D12 *SU -651-773
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- AUTO- 29.09.72 AUTOTROL CORP D15 =DK 7901-099
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- BAKP 15.02.78 BAKER PERKINS HLDGS D11 =FR 2417-333
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- * BAKX 12.06.75 BAKELITE XYLONITE LTD A92 D13 *GB 1556-614
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- * BARH/ 19.05.78 BARHAM H N C03 D13 *DT 2920-272
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- BARH/ 19.05.78 BARHAM H N C03 D13 =GB 2020-957
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- BATT 22.09.77 BATTELLE DEV CORP C03 D16 =GB 2020-976
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- * BAUC/ 17.08.77 BAUCHIDZE SI D14 *SU -652-421
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- * BAUD/ 28.07.78 BAUDACH G D13 *BE -877-941
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- BEEC 13.08.74 BEECHAM GROUP LTD A97 B04 D16 =DK 7901-230
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- * BEEC 20.05.78 BEECHAM GROUP LTD B03 D16 *EP ---5-614
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- * BEER= 16.09.77 BEER NON-ALCOHOL IN D13 *SU -651-780
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- BEIE 16.02.78 BEIERSDORF AG A96 D22 L02 =FR 2417-298
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- * BELY/ 06.06.77 BELYAKOV V D B04 D16 *SU -651-028
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- BESI/ 21.09.76 BESI K F D15 =IL --52-762
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- * BESL/ 18.05.78 BESLER H D16 H09 *DT 2821-790
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- BIER- 11.08.77 BIER-DRIVE AG A92 D16 =GB 2021-070
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- BILS 10.04.78 BILLERUD UDDEHOLM A D18 F09 =SW 7803-974
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- BILS 15.05.79 BILLERUD UDDEHOLM A D18 F09 =SW 7904-235
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- BIOC 07.03.78 BIOCHEMIE GMBH B05 D16 #J5 4135-758
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- * BIOM- 18.05.78 INST BIOMED TECHNIK D15 *DT 2821-742
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- * BIOP- 26.06.78 BIO-PHARM PACKAGING D16 *US 4175-008
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- * BIOT= 18.05.76 BIOTECH RES INST B07 D14 (D17) *SU -652-950
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- * BIOT= 12.08.76 BIOTECH RES INST B04 D16 *SU -651-027
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- * BLAC= 15.01.76 BLACK SOIL AGRIC C03 D13 *SU -651-778
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- BLAI- 28.02.69 BLAIR J N LTD D12 =GB 1556-865
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- BOEF 09.12.69 BOEHRINGER C F UND B03 D13 E13 =NL -161-979
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- BOEH 21.02.78 BOEHRINGER SOHN C H D25 =FR 2417-544
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- BRAM/ 17.02.78 BRAMSS A31 D14 J02 =FR 2417-334
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- BRAU- 20.02.78 BRAUN K O KG D22 F03 #FR 2417-920
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- * BREW 26.05.78 BREWING PATENTS LTD D16 E17 *BE -876-489
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- BROV 10.04.74 BBC AG BROWN BOVERI CIE D14 =US 4175-140
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- BROV 10.04.74 BROWN BOVERI CIE AG D14 =US 4175-140
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- BRTA 16.05.78 BRIT AMER TOBACCO LTD D18 =DT 2919-842
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- BRTA 09.05.79 BRIT AMER TOBACCO LTD D18 =GB 2020-955
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- CELA 15.07.69 CELANESE CORP A11 D18 (A97) = DS 2034-798
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- CENC- 20.04.78 CENCO INSTRUMENTEN D17 E13 J04 = DT 2915-566
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- CENG 05.03.76 CENTRAL GLASS KK D15 E16 = DS 2706-603
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- *CENG 17.04.78 CENTRAL GLASS KK D25 E34 *J5 4136-597
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- CHAM/ 17.02.78 CHAMBE M C03 D13 (C04 D15) = FR 2417-483
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- CHIN 05.02.74 CHINOIN GYOGYSZER B02 C02 D21 = IL --46-531
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- *CHIN= 23.05.74 CHEM IND RES PLAN A97 D25 E19 (A25) *SU -651-020
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- *CHIN= 24.06.77 CHEM IND RES PLAN A97 D25 E19 (A11 A25) *SU -651-021
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- *CHLP 11.05.77 CHELYABINSK POLY D15 J01 M14 *SU -652-123
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- *CHUG- 07.04.78 CHUGOKU SHINYAKU KOG B04 D16 *J5 4135-300
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- CHUR- 18.05.78 CHURCH & DWIGHT CO D15 E34 M14 = DT 2823-870
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- CIBA 02.12.74 CIBA GEIGY AG A14 D22 (A97) = CA 1066-186
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- CIBA 02.12.74 CIBA GEIGY AG A14 D22 (A97) = CA 1066-187
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- CIBA 14.11.75 CIBA GEIGY AG A91 D15 F09 (A11 F06) = IL --50-899
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- CIBA 21.02.78 CIBA GEIGY AG A88 D15 J01 (A11 A14) = FR 2417-516
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- *CIBA 18.05.78 CIBA GEIGY AG A60 C03 D22 E36 *DT 2919-554
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- *CLER- 17.02.78 CLEREN SA D13 *FR 2417-260
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- *CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 *BE -876-511
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- *CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 *BE -876-512
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- COAF 01.03.71 CREUSOT-LOIRE D15 E16 H04 J01 = J7 9036-156
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- COKE 01.09.71 COCA-COLA CO D13 = SU -651-650
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- COLG 30.10.75 COLGATE PALMOLIVE CO D21 E33 #CA 1066-195
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- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) = DT 2918-267
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- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) = DT 2918-355
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- COLG 19.05.78 COLGATE PALMOLIVE CO D21 E37 (E24) = DT 2918-134
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- *CONO 28.08.78 CONTINENTAL OIL CO D15 J01 *US 4175-040
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- CORP 21.08.74 CPC INTERNATIONAL INC D13 = CA 1066-120
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- CORP 15.01.75 CPC INTERNATIONAL INC D13 = CA 1066-128
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- CORP 12.05.78 CPC INTERNATIONAL INC A89 B04 D16 = DT 2918-929
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- CORP 12.05.78 CPC INTERNATIONAL INC A89 B04 D16 = NL 7903-756
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- COUS/ 14.01.74 COUSIN C D23 = CA 1066-127
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- COUS/ 14.01.74 COUSIN C D23 = SU -651-651
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- CROA/ 17.02.78 CROASDELL D F D12 = FR 2417-258
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- *CURT- 31.07.78 CURTIS H IND INC D21 E17 (E34 E35) *BE -877-920
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- *CUZA/ 31.07.78 CUZA C R D17 *US 4174-660
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- DAEN 06.03.75 DAIKIN ENGG KK D15 E37 J01 (J03) = J7 9035-422
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- DAGM- 21.03.75 DAGMA DEU AUTOMATE D15 = IL --49-232
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- DAII 23.05.72 DAIICHI KOGYO SEIYA D23 = J7 9036-162
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- *DAIN 11.04.78 DAINIPPON PHARM KK B04 D16 *J5 4135-703
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- *DAIR- 10.05.78 DAIRY DEV LTD A97 D13 *GB 2021-140
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- *DAVI- 20.08.76 DAVIDSON EVAPORATOR D15 *GB 1556-809
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- DEBA- 02.03.77 DEBAG DEUT BACKOFEN D11 = OE 7801-516
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- DEGS 27.01.77 DEUTSCHE GOLD & SILBER A21 D14 E14 H09 (A41 E17) = OE 7800-598
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- *DELT 17.02.78 DELTA-SCIENTIFIC GM D15 J04 *FR 2417-774
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- *DENT- 28.07.78 DENTRON INC D21 E34 *US 4174-571
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- DETE- 19.05.78 DETEC SA D16 #DT 2822-034
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- DEVE- 09.05.78 MACH DEVENTER G BV D15 J01 = NL 7804-982
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- DHVR- 18.05.78 DHV RAADGEVEND ING D15 = DT 2918-419
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- DHVR- 18.05.78 DHV RAADGEVEND ING D15 = GB 2021-087
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- DIAS 10.05.78 DIAMOND SHAMROCK CORP D15 E36 J03 #NL 7805-035
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- DICK/ 07.05.76 DICKSON R D D22 = CA 1066-129
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- DIOS- 09.01.76 DIOS INC A85 D16 L03 = CA 1066-208
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- *DORO 24.05.78 DORR OLIVER INC D15 J04 *EP ---5-650
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- DOUW 16.02.78 DOUWE EGBERTS KON D13 = FR 2417-262
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- DOVE 24.02.76 DOVER CORP D13 = CA 1066-118
Crystalline confectionery food prods. esp. milk chocolate crumb, mfr. - 43991A/24
- DOWC 23.09.74 DOW CHEMICAL CO D22 E14 = CA 1066-219
Pentachloro phenol purificn. - 26764X/15
- DOWC 18.02.75 DOW CHEMICAL CO A14 D15 F09 = CA 1066-445
Acrylamide polymer compsn. - 83736Y/47
- DOWC 01.06.76 DOW CHEMICAL CO B04 D16 (D13) = CA 1066-210
Lipase compsn. for glycerol ester determn. - 81075Y/45
- DRES 29.09.75 DRESSER INDUSTRIES INC D15 J01 = IL --50-034
Membrane sepn. using rotating bundle - 25485Y/15
- DROU/ 22.02.78 DROUET J C D11 = GB 2020-953
Loading and unloading trolley for multistage baking oven - 64932B/36
- DUKO/ 30.08.75 DUKOUPIL J D18 = GB 1556-725
Leather dewatering machine operating without kinking the surface - 16683Y/10
- DUPO 15.02.78 DU PONT DE NEMOURS CO A96 B04 D16 = FR 2417-769
Sepn. of creatine kinase isoenzyme(s) - 61783B/34
- DURA/ 03.05.78 DURAN V D13 = OE 7803-219
Cooking liq.-absorbing food in protective sheath - 81079B/45
- DURA/ 12.05.78 DURAN V D13 = OE 7803-479
Cooking liq.-absorbing food in protective sheath - 81079B/45
- DURA/ 05.06.78 DURAN V D13 = OE 7804-071
Cooking liq.-absorbing food in protective sheath - 81079B/45
- *DUSK- 07.04.78 DUSKIN FRANCHISE KK D22 *J5 4135-229
Temp. stable deodorant prepn. - 86697B/48
- DYNA- 11.07.75 DYNATECH LAB INC D16 J04 = GB 1556-673
Sample transfer appts. - 07997Y/05
- DYNA- 11.07.75 DYNATECH LAB INC D16 J04 = GB 1556-674
Sample transfer appts. - 07997Y/05
- DYNN 04.11.77 DYNAMIT NOBEL AG B04 D16 = DT 2821-889
Immobilising enzymes on amorphous silica carrier - 35242B/19
- DYNN 19.05.78 DYNAMIT NOBEL AG B04 D16 = DT 2821-890
Regeneration of enzyme immobilisates - 71746B/40
- *EAST 19.05.78 EASTMAN KODAK CO B04 D16 *EP ---5-637
Fungal enzyme from Agaricus bisporus - 86317B/48
- *EBAI 15.04.78 EBARA INFILCO KK D15 *J5 4136-750
Treating night-soil polluted water - 86963B/48
- *ECON 22.05.78 ECONOMICS LAB INC D25 (D16) *GB 2021-142
Stabilised liq. enzyme-contg. detergent compsns. - 86445B/48
- ECOR- 14.03.78 ECO-RESEARCH LTD A88 D15 = J5 4135-451
Flexible down pipe in biological sewage treatment plant - 70279B/39
- EDWA- 25.06.76 EDWARDS & JONES LTD D15 = GB 1556-667
Fluid additive metering system - 02567A/02
- ELIL 25.03.76 ELI LILLY & CO B04 C03 D16 = IL --51-429
Synergistic coccidiocidal compsns. for poultry - 68877Y/39
- *ELIL 28.12.77 ELI LILLY & CO D15 *US 4174-772
Dividing stream of eluate from chromatographic column - 87413B/48

- ELIL 12.01.78 ELI LILLY & CO B05 C03 D23 E15 *US 4175-087
Prepn. of 2-alkylidene ketone(s) - 87503B/48
- ELMQ/ 27.07.77 ELMQVIST O A88 D15 =GB 2021-248
Heat exchanger flow elements comprising plastics foils - 15958B/08
- ELPA 19.05.78 EL PASO PRODUCTS D13 E15 =DT 2920-267
2-Hydroxy-2-cyclopentene-1-one synthesis from glutarate di:ester - 71627B/39
- ERAP 03.11.76 SOC NAT ELF AQUITAI D15 H09 M14 =GB 1556-598
Cyanide separation from effluent - 33422A/19
- ESIT= 12.05.77 E-SIBE TECH INST D13 *SU -651-776
Drink based on soured milk prepn. - 87230B/48
- ESSO 14.04.78 EXXON RES & ENG CO D16 E13 =DK 7901-547
Lower alpha-olefin, esp. propylene or diene epoxidation - 79327B/44
- ESSO 14.04.78 EXXON RES & ENG CO C03 D16 (D13) =DK 7901-548
Microbial cells prodn. from methylotropic microorganism strains - 77805B/43
- ESSO 14.04.78 EXXON RES & ENG CO D16 E13 =SW 7903-291
Lower alpha-olefin, esp. propylene or diene epoxidation - 79327B/44
- ETHI 09.04.73 ETHICON INC D22 =NL -161-986
Surgical ligature or suture - 74327V/43
- ETHI 12.01.76 ETHICON INC A96 D22 F01 (A25) =IL --51-240
Synthetic, absorbable, surgical sutures and prostheses - 48808Y/28
- EXER- 05.04.78 EXERGIE SOC PERSONN D15 E33 M11 =J5 4135-449
Antipollution treatment of conc. waste waters from anodisation plant - 75757B/42
- ARB 23.12.76 BAYER AG B03 C02 D16 (B04 C03 D13) =US 4175-123
Amino sugar derivs. - 51041A/28
- ARB 01.12.77 BAYER AG B02 C02 D13 =OE 7808-520
Antibacterial agents and animal feed additives - 44172B/24
- ARB 13.05.78 BAYER AG A60 D25 E23 F06 =EP ---5-465
Benzofuranyl-benzimidazole(s) - 84359B/47
- ARH 08.02.75 HOECHST AG D15 E11 M14 =DS 2505-435
Inhibiting corrosion of water-bearing systems - 65195X/35
- ARH 04.09.75 HOECHST AG A97 D12 E19 (A11) =GB 1556-817
Tubular film, esp. for sausage skin, from chemically-modified albumin - 16424Y/10
- ARH 15.02.78 HOECHST AG A97 D25 E11 (E34) =FR 2417-546
Solid cleaning prod. for glass, esp. car windows - 59824B/33
- ARH 07.04.78 HOECHST AG B04 D16 =NO 7901-169
Coagulating fermented biomass suspensions - 75297B/42
- ARH 11.04.78 HOECHST AG B04 D16 #DK 7801-596
Alpha-amylase inhibitor for treating diabetes and obesity - 53463A/30
- ARH 11.04.78 HOECHST AG B04 D16 #NO 7801-267
Alpha-amylase inhibitor for treating diabetes and obesity - 53463A/30
- ARH 11.04.78 HOECHST AG B04 D16 #SW 7804-095
Alpha-amylase inhibitor for treating diabetes and obesity - 53463A/30
- ARH 14.04.78 HOECHST AG D25 E16 =DK 7901-533
Colourless tetra:acetyl-ethylene di:amine prepn. - 79391B/44
- ARH 11.05.78 HOECHST AG D25 =DT 2820-554
Washing and cleaning prod., esp. washing powder - 82551B/46
- ARH 11.05.78 HOECHST AG D25 =NL 7903-403
Washing and cleaning prod., esp. washing powder - 82551B/46
- ARH 22.05.78 HOECHST AG D25 E36 *BE -876-427
Granular compsn. used as detergent auxiliary - 85940B/48
- ERO 18.03.76 FERROSAN B03 D21 =OE 7701-825
(4 or 3)-Spiro derivs. of (1)-hydroxyalkyl-piperidines - 52243Y/30
- FINA- 29.10.75 ET FINANCIERE MEDUN C03 D13 =DS 2548-285
Vegetable food processing - 34600Y/20
- FIND- 08.05.78 PROD FINDUS SA D14 *EP ---5-445
Meat and cheese block mincing machine - 86247B/48
- FIRM 11.05.78 FIRMENICH SA D23 E15 =NL 7903-114
Unsatd. cyclopentenyl ketone perfume components - 84404B/47
- ODA 29.02.72 FOREMOST-MCKESSON I D11 =NL -161-972
Dough-loosening additive - 62066U/42
- OOD- 31.10.74 FOOD TECH INC D13 =CA 1066-119
Food prodn. from dried sugary syrups contg. starch and soya protein - 31769X/17
- RAN- 04.11.74 FRANCE-LUZERNE C03 D13 =CA 1066-116
Drying of lucerne by pressing - 39280X/21
- RAN- 04.11.74 FRANCE-LUZERNE D13 =CA 1066-117
Protein extraction from leafy green vegetation, esp. lucerne - 81626X/44
- RLU- 04.11.74 FRANCE-LUZERNE C03 D13 =SU -651-653
Drying of lucerne by pressing - 39280X/21
- UCH/ 25.09.78 FUCHS H D15 *OE 7808-083
Processing impure liq. esp. water in long container system - B/48
- JKU/ 11.04.78 FUKUI K D22 E36 J03 *J5 4134-091
Ozone-contg. gas prodn. in ozoniser - 86521B/48
- JRU 21.12.72 FURUKAWA ELECTRIC CO A97 C03 D13 =J4 9084-864
Feed additive for livestock - 87097B/48
- JRU 21.12.72 FURUKAWA ELECTRIC CO A97 C03 D13 *J7 9036-112
Feed additive for livestock - 87097B/48
- AST/ 08.09.76 GASTROCK E A C03 D13 =IL --51-135
Cotton seed treatment - 34443A/19
- GELM- 16.05.78 GELMAN INSTR CO D15 J01 =DT 2905-897
Filter element for cross-flow filtration - 84675B/47
- GENE 20.06.75 GENERAL ELECTRIC CO A26 D15 F09 H01 (A97 D16 D17) =CA 1066-163
Antifoaming dimethyl polysiloxane compsn. - 02365Y/02
- GENO 25.08.75 GENERAL FOODS CORP C02 D13 E23 =CA 1066-113
Stabilised, nonhygroscopic iron complex food colours - 30836Y/17
- GENO 14.11.75 GENERAL FOODS CORP D13 =CA 1066-114
Continuous double coating of cereal particles - 89916Y/50
- *GENO 10.03.76 GENERAL FOODS CORP A97 D13 (A11) *CA 1066-121
Dry mixt. compsn. for acidified milk-based drinks - 86026B/48
- GENO 13.04.76 GENERAL FOODS CORP D13 =CA 1066-122
Reduced caffeine soluble (instant) coffee prodn. - 77854Y/44
- GENO 30.12.76 GENERAL FOODS CORP D13 (D12) =OE 7709-444
Simulated bacon prodn. with fat and lean phases - 32122A/18
- GENV 15.02.78 SOC GEN ALIMENTAIR GASA D13 =FR 2417-266
Fresh spice plant preservation - 61756B/34
- GEVA 06.02.74 AGFA-GEVAERT AG C03 D13 (D16) =DS 2405-589
Water soluble protein materials prodn - 54032W/33
- *GIDR= 03.05.77 GIDROLIZPROM PROD C03 D16 (D13) *SU -651-025
Feed yeast biomass culture medium prepn. - 87200B/48
- GOLD 10.01.74 GOLDSCHMIDT TH AG C03 D22 =DS 2401-014
N-Alkyl-4,4'-diamino-dicyclohexylmethanes - 35974W/22
- GOLD 06.02.75 GOLDSCHMIDT TH AG A26 D21 F06 (A87 A96) =SU -651-707
Polysiloxane-polyoxyalkylene block copolymers - 46070X/25
- GOOC- 26.02.77 GOOCH J H & CO D13 J02 =IL --54-113
Dilution apparatus esp. for applying liquid fertiliser - 63814A/36
- GOUD- 06.10.76 GOUDSCHE MACHINEFAB D14 =CA 1066-159
Steam peeler for potatoes, swedes, etc. - 26921A/15
- *GRAI= 18.11.77 GRAIN PRODS RES D11 *SU -652-964
Grain e.g. buckwheat cleaning and grading - 87322B/48
- *GREC 02.02.77 GREEN CROSS CORP D13 *GB 1556-883
Fibre contg. powder food additive - 86411B/48
- HAAR 13.07.77 HAARMANN & REIMER GMBH D23 E13 =DS 2731-543
Natural musk odorant cyclopenta:decanolide prodn. - 06252B/04
- HAAS/ 25.03.77 HAAS F D11 =OE 7702-098
Cream wafer stacking machine - 71078A/40
- HATC/ 15.01.76 HATCHER D B C03 D22 E14 F09 =CA 1066-002
Impregnation of substrates with insoluble acidic cpds. - 77909Y/44
- HAYB 11.10.71 HAYASHIBARA BIOCHEM B04 D16 (D17) =NL -162-137
Pullulan prodn by fermentation - 15492U/11
- HENK 30.04.69 HENKEL KG AUF AKTIEN D24 =NL -162-133
Textile detergents containing softening agents - 57440R/32
- HENK 13.05.69 HENKEL KG AUF AKTIEN A16 D25 E19 =NL -162-134
Cleaning agents - 35812R/20
- HENK 02.02.76 HENKEL KG AUF AKTIEN A92 D22 =OE 7700-614
Laminated polyethylene sachets contg. perfume - 54102Y/31
- HENK 02.07.76 HENKEL KG AUF AKTIEN D21 E13 (E23) =OE 7704-697
Hair dyeing compsn. using dihydroxy pyridine coupler - 02078A/02
- HENK 21.10.76 HENKEL KG AUF AKTIEN D24 =US 4175-050
Mosaic-patterned coloured soap cakes - 30227A/17
- *HENK 00.00.77 HENKEL KG AUF AKTIEN D18 E36 *DT 2822-074
Water-insoluble alkali aluminium silicate having coarse particle size - 86133B/48
- *HENK 00.00.77 HENKEL KG AUF AKTIEN D18 E36 *DT 2822-075
Water-insoluble aluminium silicate used in leather mfr. - 86134B/48
- HENK 05.03.77 HENKEL KG AUF AKTIEN A97 D25 E19 =US 4175-062
Liquid cleanser for hard surfaces - 35043A/20
- *HENK 14.04.78 HENKEL KG AUF AKTIEN D21 E16 *EP ---5-446
Amphoteric surfactant amino-ether cpds. for shampoo use - 86248B/48
- *HENK 20.05.78 HENKEL KG AUF AKTIEN D18 E36 *DT 2822-073
Water-insoluble partly acid-soluble aluminium silicate - 86132B/48
- *HENK 20.05.78 HENKEL KG AUF AKTIEN D18 E17 (E33) *EP ---5-546
Replacing waste water polluting auxiliaries in leather mfr. - 86279B/48
- HERR/ 25.08.77 HERRNDOBLER F D11 =OE 7806-122
Ingredients and processes for mfg. rolled sugar free cakes - 00057B/01
- HIEJ 31.01.74 HITACHI PLANT ENG CONST D15 E19 =J7 9035-416
Purification of waste water contg. high concn. organic substances - 42203Y/24
- *HIEJ 13.04.78 HITACHI PLANT ENG CONST D15 *J5 4136-747
Organic waste treatment, e.g for sewage sludge, night soil etc. - 86961B/48
- HITA 01.04.74 HITACHI KK A91 D15 =J7 9035-599
Metal-chelating resins contg. imino-diacetate gps. - 81606Y/46
- *HITG 11.04.78 BABCOCK-HITACHI KK D15 J01 *J5 4134-077
Multiple flash evaporator for producing fresh water from sea water - 86511B/48
- *HITG 12.04.78 BABCOCK-HITACHI KK D15 F09 J09 *J5 4135-464
Burning black liquor from kraft pulp mfr. - 86726B/48
- *HOEY- 19.05.78 HOEYER O G A/S D13 *DT 2919-097
Frozen sweets extraction device - 86191B/48
- HOFF 12.08.77 HOFFMANN-LA ROCHE AG D23 E15 =OE 7805-858
2,2,4-Tri:methyl-cyclopent-4-en-1,3-di:one prepn. - 14605B/08

HORI- 14.04.78 HORIUCHI ITARO SHOTE B03 D13 E13 = J5 4135-800
 Periandrin I, II, III and IV from Periandra roots - 79572B/44
 HOTA- 13.04.78 HOTACO A/S D15 = DK 7801-618
 Appts. for biological purification of waste water - 79396B/44
 HULE- 21.10.68 HULETTS SUGAR CORP D17 = NL-162-139
 Extraction of soluble substances from finely divided - 28380R/17

ICIL 25.09.75 IMPERIAL CHEM INDS LTD D15 = GB 1556-656
 Solids removal from effluent channel screen - 25570Y/15
 ICIL 02.04.76 IMPERIAL CHEM INDS LTD D16 E17 (D13 D15) = IL --51-822
 Cell culture with specified carbon source addition - 70754Y/40
 ICIL 08.05.78 IMPERIAL CHEM INDS LTD C02 D13 = NL 7901-947
 Treatment of ruminants with aplasmomycin or related cpds. - 52996B/29
 *ICIL 19.05.78 IMPERIAL CHEM INDS LTD C03 D15 (C04 D13) *DT 2919-801
 Nitrogen-rich solids recovery from dairy waste waters - 86219B/48
 IIDA/ 19.10.76 IIDA T D15 = J7 9036-150
 Pure water prodn. using solar energy - 43027A/24
 INFL 11.11.76 INT FLAVORS & FRAGR INC D23 E15 = DS 2748-633
 Unsaturated-acetyl-di:methyl-cyclohexane cpds. - 21425A/11
 INFL 30.05.78 INT FLAVORS & FRAGR INC D23 E19 = EP ---5-659
 Diluted liq. perfume compsn. - 68152B/38
 *INGR- 27.08.76 IND GRAIN PROD LTD A97 D11 *GB 1556-815
 Easily dispersed gluten additive for food prods. - 86408B/48
 INPL 17.05.78 INT PLAYTEX CORP A11 D22 (A96) = GB 2021-116
 Particulate water-insoluble CMC prepn. - 84161B/47
 INRG 01.09.77 INST NAT RECH AGRON D13 = GB 2021-120
 Obtaining food proteins from vegetable materials esp. soya - 16009B/09
 *INRG 20.02.78 INST NAT RECH AGRON C03 D13 (D23) *FR 2417-263
 Simultaneous extrn. of lipid and protein from oil seed - 86349B/48
 INSF 14.08.74 INST FRANCAIS DU PETROLE D15 E36 = CA 1066-021
 Sulphur recovery from sulphuric-acid-contg aq effluents - 14924X/09
 INTE- 13.05.75 INTEROX CHEM LTD D12 = CA 1066-125
 Bleaching dark fish flesh - 88797X/48
 INTE- 09.02.76 INTEROX CHEM LTD D12 = CA 1066-126
 Bleaching dark fish flesh - 88797X/48
 *INTE- 15.02.78 TEPRAL GRP INTERET D16 J01 (D15) *FR 2417-326
 Continuous decanter for sepg. solids from liquids - 86352B/48
 INTM 22.08.75 INT MINERALS & CHEM CORP B02 C02 D16 = IL --49-934
 Recovery of zearalenone from fermentation liquors - 00047Y/01
 IOWA 25.02.77 IOWA STATE UNIV RES INC B04 C03 D16 #IL --51-537
 Injectable Bordetella bronchiseptica vaccine - 27019Y/15
 *ISHI 13.04.78 ISHIKAWAJIMA-HARIMA HEAV D15 E34 F09 *J5 4135-700
 Caustic soda recovery from pulp mill waste water - 86784B/48
 *ITOC- 14.04.78 ITOCHUSEITO KK D17 J01 *J5 4136-576
 Refining coloured sugar soln. - 86935B/48

JAKI/ 05.05.78 JAKIMENKO L C03 D13 #DT 2819-830
 Feed additive for animals and poultry - 69990B/39
 JANC 27.01.75 JANSSEN PHARMACEUT NV B03 C02 D22 = IL --48-902
 Fungicidal and bactericidal imidazole derivs - 60212X/32
 *JAPE 17.04.78 JAPAN EXLAN KK A14 D22 (A96 A97) *J5 4137-092
 Hydrophilic crosslinked acrylonitrile polymer prodn. - 87040B/48
 JELK/ 16.02.76 JELKS J W C03 D13 #SU -651-652
 Proc. for incg. digestibility of cellulosic plant matter to ruminants - 16796X/09
 *JEYE- 21.03.78 JEYES GROUP LTD A97 D22 (A81) *GB 2021-143
 Lavatory cleansing tablets - 86446B/48
 JOHJ 04.04.78 JOHNSON & JOHNSON A81 D22 G03 (A18 A96) = J5 4135-221
 Pressure sensitive adhesive tape for surgical use - 75725B/42
 *JOHJ 15.05.78 JOHNSON & JOHNSON A96 D22 (A14 A25) *DT 2919-354
 Adhesive, workable orthopaedic bandage - 86199B/48
 JOHJ 15.05.78 JOHNSON & JOHNSON A96 D22 (A14 A25) = GB 2021-128
 Adhesive, workable orthopaedic bandage - 86199B/48

KABI 06.10.75 KABI AB B04 D16 J04 = IL --50-547
 Determining enzymatic and other biological activity - 11217Y/07
 *KAIS/ 20.05.78 KAISER-WIRZ M A32 D14 F09 L02 (A81) *GB 2020-988
 Mixing pourable powder or granules with liq. - 86413B/48
 KALK 01.08.68 CHEMISCHE FAB KALK GMBH D11 E33 = NL-162-038
 Preparation of granular calcium phosphate for use as - 08216R/06
 KALK 11.06.76 CHEMISCHE FAB KALK GMBH C03 D13 = GB 1556-518
 Feed for hens to strengthen eggshells - 38149Y/22
 *KANE 06.04.78 KANEBO KK D21 E14 (E17) *J5 4135-235
 Nail enamel-removing compsn. - 86700B/48
 *KANE 08.04.78 KANEBO KK D21 E17 (E13) *J5 4135-233
 Storage stable, non-toxic cosmetic compsn. - 86698B/48
 KAOS 22.03.76 KAO SOAP KK A96 D21 E16 (A25 E17) = J7 9035-203
 Aq. hair shampoo compsn. - 70987Y/40
 KAOS 25.02.77 KAO SOAP KK D25 E11 = US 4175-051
 Metal wire cleaning pad, e.g. for cooking utensils - 40395A/23
 KAOS 15.02.78 KAO SOAP KK D25 E16 (E14) = FR 2417-545
 Dry-cleaning compsn. yielding soft antistatic clothes - 61760B/34

KAOS 10.05.78 KAO SOAP KK D23 E15 = DT 2918-747
 Tri:cyclo-alpha,beta-unsatd. ketone derivs. - 84687B/47
 *KATA 29.00.73 KATAKURA KOGYO KK C03 D13 (C02) *J7 9036-115
 Breeding of silkworms - 87099B/48
 KATA- 11.04.78 KATAYAMA KAGAKU KOG A97 C03 D22 F09 (A25 D15) = J5 4135-223
 Microbicide for industrial cooling water and paper pulp - 77643B/43
 *KAWA- 14.04.78 KAWAI SEIYAKU KK D13 E24 *J5 4135-822
 Colourant compsn. - 86834B/48
 *KEPI= 08.08.77 KAZA EPIDEM MICROBI B04 D16 *SU -651-813
 Antigen-antibody reaction medium - 87242B/48
 *KERN- 10.05.78 GES KERNENERGIE SCH A88 D15 J01 (A11) *DS 2820-265
 Semipermeable asymmetric membrane for sea-water desalination - 86035B/48
 KETT- 18.02.78 KETTENBACH FAB CHEM A96 D21 E33 (A26) = FR 2417-290
 RTV silicone impression compsns. - 63305B/35
 *KHER= 12.05.77 KHERSON AGRIC INST D17 E16 L02 *SU -652-138
 Frost-resistant structural concrete mixt. - 87274B/48
 *KHSU= 27.04.77 KHARK SUPPLY INST D11 *SU -651-771
 Baking laminar dough cakes etc. - 87228B/48
 *KIKK 16.05.78 KIKKOMAN SHOYU KK B04 D16 *DT 2919-578
 Enzyme for decomposing methyl-guanidine - 86211B/48
 *KLFI= 09.08.77 KALIN FISHING IND D12 *SU -651-773
 Smoked lean fish prod. mfr. - 87229B/48
 KNHS 10.04.78 HOOGOVENS IJMUIDEN BV C04 D15 H09 = J5 4136-751
 Ammonia and ammonium salt removal from waste water - 77650B/43
 KNVS 30.08.76 KERNENERGIE VERWERTUNG D15 = DS 2639-034
 Adjustable check valve used in e.g. desalination plant - 17984A/10
 *KOML/ 15.07.77 KOMLEV A P C04 D13 (D12 D25) *SU -635-635
 Protein hydrolysate prodn. from waste collagen contg. material - 87167B/48
 KONN 31.05.73 GIST-BROCADES NV B04 D13 (D12) = NL-162-138
 Antibiotic residues determination in milk and meat - 87202V/51
 KONN 16.05.75 GIST-BROCADES NV B03 C02 D13 = NL-162-136
 Antibiotic dihydromocimycin and its salts - 90985X/49
 *KOPP/ 12.05.78 KOPPEN M C03 D22 E17 F07 *DT 2820-793
 Disinfected paper sock or stocking for public bathing places - 86059B/48
 KOSH/ 16.05.74 KOSHIKAWA J D15 E16 = J7 9035-417
 Dye separation from waste water - 14495A/08
 KOTT/ 07.04.75 KOTT R D12 = OE 7601-743
 Skinless smoked sausage - 90734X/49
 KRKA 00.00.72 KRKA FARMACEVTIKA D21 E14 (D22 E33) = IL --50-636
 Deodorising and antiperspirant insole for shoes - 49130Y/28
 *KSPO= 27.08.74 KISH POLY D16 *SU -644-809
 Alcoholic beverage of low fusel oil content - 87169B/48
 KUBI 22.06.74 KUBOTA KK D15 = J5 1067-669
 Treatment of sludge from night soil purificn. vessel - 87064B/48
 *KUBI 22.06.74 KUBOTA KK D15 *J7 9035-412
 Treatment of sludge from night soil purificn. vessel - 87064B/48
 *KURK 10.04.78 KURITA WATER IND KK D15 J08 M12 *J5 4134-046
 Removing scale formed in heat exchangers used for treating waste water - 86494B/48
 *KURK 17.04.78 KURITA WATER IND KK D15 *J5 4136-749
 Decolouration of and organics removal from waste water - 86962B/48
 KYOW 28.08.75 KYOWA HAKKO KOGYO B04 D16 = CA 1066-211
 Creatinine-desamidase prodn. - 18459Y/11
 *KYOW 14.04.78 KYOWA HAKKO KOGYO KK B04 D16 *J5 4135-704
 Antibacterial SUM-4 and its salts - 86787B/48
 *KYOW 14.04.78 KYOWA HAKKO KOGYO KK B04 D16 *J5 4135-705
 Antibacterial substance SU-1 - 86788B/48
 KYOW 17.04.78 KYOWA HAKKO KOGYO KK B04 D16 J04 = J5 4136-895
 Cholinesterase activity determination - 77672B/43

LABO 27.12.77 LABOFINA SA A97 D25 H03 (D15) = J5 4135-677
 Surfactant compsn. for treating oil slicks and beaches - 47162B/26
 LEIS/ 02.02.76 LEISTNER K D15 = DS 2603-842
 Polluted water aeration - 55966Y/32
 *LERO/ 16.02.78 LEROIG J D15 *FR 2417-475
 Purificn. plant for waste water from small settlements - 86370B/48
 *LERO= 07.07.76 LENGDR OSMYASOMOLRE D12 *SU -652-939
 Animal carcass cleaving unit - 87307B/48
 LIGG 09.07.74 LIGGETT & MYERS INC D18 E14 = CA 1066-040
 Cinnamyl derivatives contg. ether or sulphide functions - 72521W/44
 LIND/ 20.07.76 LINDMAN W E D15 J01 #IL --50-076
 Waste liquids purificn. - 18498B/10
 *LINM 17.01.78 LINDE AG D15 *IL --53-827
 Rearing aquatic animals in water reservoirs - B/48
 *LIOY 12.04.78 LION FAT & OIL KK A96 D21 E19 *J5 4134-711
 Shampoo compsn. - 86601B/48
 *LIOY 12.04.78 LION FAT & OIL KK A96 D21 E19 *J5 4134-712
 Shampoo compsn. - 86602B/48
 *LIOY 12.04.78 LION FAT & OIL KK A96 D21 E16 (A11) *J5 4135-234
 Hair rinsing compsn. - 86699B/48
 *LIOY 14.04.78 LION FAT & OIL KK A96 D21 E12 (E16) *J5 4135-805
 Shampoo compsn. contg. anionic surfactant and cellulose ether - 86825B/48

- LLEG- 15.02.78 LLEGOMAT D13 *FR 2417-345
Spray tunnel washing screens for draining cheese curds etc. - 86355B/48
- LUMM 15.05.78 LUMMUS CO A41 D15 E16 (A35) *DT 2918-979
Treatment of aq. effluent from prodn. of nitrile s) by ammoxidation - 86187B/48
- MAAS/ 30.11.76 MAAS-MORANT A D11 =DS 2654-318
Stippling plate for rolls - 40662A/23
- MAHA/ 03.01.79 MANAHL R D15 E17 H09 *OE 7900-051
Recovering methane gas from organic waste - B/48
- MCCA- 29.08.73 MCCAIN FOODS LTD D13 =NL-161-976
Deep-frozen fried potato chips - 17830W/11
- MCKE/ 03.01.78 MCKENDREE S W D12 *US 4174-551
Feather plucking drum with peripheral rubber projections - 87390B/48
- MECH- 24.05.78 STICHT INST MECHANI D15 *BE-876-479
Scroll filter press for sepg. water from organic fibres - 85955B/48
- MEDI- 16.02.77 MEDIPHARM AB C03 D13 (D16) =OE 7801-134
Green fodder conservation - 60747A/34
- MEHN/ 09.08.75 MEHNERT W D15 J07 =DS 2535-668
System for recovering water from the atmosphere - 11431Y/07
- MEIJ 18.12.67 MEIJI SEIKA KK B04 D16 =NL-162-135
Antibiotic S.F. - 38214F/00
- MENN- 17.05.78 MENNEN CO D21 E13 *DT 2918-380
Lubricating, quick-drying hair-rinsing and conditioning cream - 86174B/48
- MERE 23.09.77 MERCK PATENT GMBH D16 G04 =GB 1556-853
Oxygen-absorbing compsn. for anaerobic bacteria culture medium - 27983B/15
- MERE 16.02.78 MERCK PATENT GMBH D13 =FR 2417-264
Low decomposition rate granulated dietetic foodstuff - 63486B/35
- MERE 20.02.78 MERCK PATENT GMBH D17 E17 (E13) =FR 2417-489
Fructose and gluconic acid prepn. from glucose fructose mixt. - 68340B/38
- MERI 14.05.75 MERCK & CO INC B04 D16 =CA 1066-191
Hepatitis B vaccine concentrates purificn. - 90953X/49
- MERI 29.10.76 MERCK & CO INC B03 C02 D16 *US 4175-007
Antibiotic a21a, prodn. antibacterial and animal growth promoter - 87456B/48
- MERI 02.06.77 MERCK & CO INC B04 D16 =GB 1556-651
Automatic appts. for virus growth - 87850A/49
- MERI 14.11.77 MERCK & CO INC B02 C03 D16 E13 (D13) =BE-876-426
Recovery of purified riboflavin from fermentation broths - 66229B/36
- MERI 07.04.78 MERCK & CO INC B04 D16 #NO 7801-227
Preservatives for vaccines - 78323A/44
- MERI 10.04.78 MERCK & CO INC B04 D16 #DK 7801-572
Preservatives for vaccines - 78323A/44
- MERI 12.04.78 MERCK & CO INC B04 D16 #SW 7804-124
Preservatives for vaccines - 78323A/44
- MERI 13.04.78 MERCK & CO INC A11 D16 H01 (D13 D21) =DK 7901-521
Low calcium xanthan gums - 79440B/44
- MERI 08.05.78 MERCK & CO INC B02 C02 D22 (D13) *DT 2820-055
1-Aza-bi:cyclo(3,2,0)heptene carboxylic acid derivs. - 86053B/48
- MERI 09.05.78 MERCK & CO INC B02 C02 D22 (D13) #NL 7804-976
1-Aza-bi:cyclo(3,2,0)heptene carboxylic acid derivs. - 86053B/48
- MEYH- 10.05.78 MEYHALL CHEM AG A11 C03 D17 H01 =DT 2918-225
Phosphated locust bean gum soluble in cold water - 61444B/33
- MEYH- 10.05.78 MEYHALL CHEMICAL AG A11 C03 D17 H01 =NL 7903-2630
Phosphated locust bean gum soluble in cold water - 61444B/33
- MIFI 18.05.78 MILLIPORE CORP A88 B06 D15 J01 *DT 2920-253
Pyrogen removal from aq. solns. - 86238B/48
- MIFI 18.05.78 MILLIPORE CORP A88 B06 D15 J01 =GB 2020-997
Pyrogen removal from aq. solns. - 86238B/48
- MILE 18.10.76 MILES LABORATORIES INC D13 E16 =NL-161-980
Glycinamide salt food seasoning compsns. - 29162Y/17
- MILE 16.03.77 MILES-YEDA LTD A96 B04 D16 J04 =IL --51-667
Quantitative determination of hapten(s) - 69285A/39
- MINN 30.06.75 MINNESOTA MINING CO A97 D22 J04 =CA 1066-141
Indicator for concn. of vapour at phase boundary - 20315Y/12
- MINN 22.05.78 MINNESOTA MINING CO A96 D21 G03 (A14) *GB 2021-1123
Readily mixed surgical cement for dentistry - 86437B/48
- MITC 08.06.73 MITSUI PETROCHEM IND KK D23 E14 =NL-162-055
4-Alkyl-substd. acyl-polyalkyl indanes - 89135V/52
- MITK 27.05.74 MITSUI TOATSU CHEM INC A97 D15 J01 =J7 9035-418
Removing finely divided oil from effluent water - 84267W/51
- MITP 30.03.78 MITSUBISHI PETROCH KK B04 D16 =GB 2021-118
Collagenase microbiological prodn. - 75570B/42
- MITQ 14.04.78 MITSUBISHI ELECTRIC CORP D22 J01 *J5 4136-571
Economically deodorising malodorous gas - 86930B/48
- MITR 11.04.78 MITSUBISHI RAYON KK D15 J01 *J5 4134-873
Material for removing oil from waste water - 86659B/48
- MITR 13.04.78 MITSUBISHI RAYON KK D15 *J5 4135-667
Appts. for producing fresh water from sea water - 86762B/48
- MITU 14.06.74 MITSUBISHI CHEM IND KK A97 D15 =J5 0159-151
Treating coloured waste water - 87066B/48
- *MITU 14.06.74 MITSUBISHI CHEM IND KK A97 D15 *J7 9035-420
Treating coloured waste water - 87066B/48
- MIYA- 15.03.71 MIYAIRI KINZAI KEN C03 D13 (D16) =J4 7027-792
Feed mfr. for fish farming - 87100B/48
- *MIYA- 15.03.71 MIYAIRI KINZAI KEN C03 D13 (D16) *J7 9036-120
Feed mfr. for fish farming - 87100B/48
- *MOBI 20.03.68 MOBIL OIL CORP B03 C02 D23 E13 *US 4175-089
Gamma-butyrolactone(s) from olefin(s) and carboxylic acids - 87504B/48
- *MOFO= 18.11.77 MOSC FOOD IND TECHN INST D11 *SU -652-964
Grain e.g. buckwheat cleaning and grading - 87322B/48
- MOLE- 26.11.74 MOLECULAR ENERGY RE A41 D24 E37 M11 (D25) =CA 1066-024
Inorganic monomer and polymer complexes contg. metals - 31907X/18
- MONS 21.09.66 MONSANTO CO D22 E13 F06 (D25) =DS 1695-483
Sodium-potassium cyanurates and potassium-chloro cyanurates - 60569Z/00
- *MONS 24.05.78 MONSANTO CO B04 D16 *EP ---5-644
Urokinase prodn. in increased yields - 86321B/48
- *MOPO= 18.05.78 MOSCOW POWER INST D15 J09 *DT 2821-782
Thermal disposal of effluents - 86099B/48
- MORE/ 13.10.66 MORELLE J V B05 D21 E16 =DS 1695-498
Mixts of acylated aminoacids from proteins - 31893F/00
- MORG 11.08.76 MORINAGA MILK IND C D13 =GB 1556-801
Momen Tofu prepd. from soybean milk - 26440A/14
- MRSC 02.08.76 MARS LTD C03 D13 =OE 7705-658
Protein foodstuff prepd. from blood - 10232A/06
- MULL- 09.11.74 MULLER V A & CO D13 =CA 1066-112
Food contg. powdered water-insoluble component - 38471X/21
- MUND/ 18.02.78 MUNDY RE C03 D13 =FR 2417-265
Animal feeds contg. cement kiln flue dust - 47225B/26
- MURP/ 08.02.78 MURPHEY J D D14 =US 4174-742
Vending dispenser for snow cones - 66703B/37
- *NACO- 12.05.78 NAT COOP AAN CEBECO D11 *NL 7805-155
Inhibition of dust from flour by oil coating - 87116B/48
- NATR 12.04.78 NATIONAL RES DEV CORP D21 L02 #J5 4136-793
Fluorescent dental porcelain imitating natural teeth - 76943A/43
- NATT 20.03.78 NAT STARCH & CHEM CORP A11 D17 (A97 D13) =J5 4135-237
Cold water swelling starch prodn. - 74669B/41
- NEST 27.05.76 SOC PROD NESTLE SA B02 D13 =OE 7703-775
Extracting caffeine from aqueous extract with fatty liquid - 82949Y/47
- NEST 11.05.78 SOC PROD NESTLE SA D13 =NL 7903-295
Protein esp. for children's diets and cheese mfr. - 84384B/47
- *NIOF 07.04.78 NIPPON OILS & FATS KK A97 B05 D16 E16 (A25 E17) *J5 4135-298
Additive for fermentative prodn. of glutamic acid - 86705B/48
- *NIRA 12.04.78 UNITIKA KK A96 B04 D22 *J5 4135-214
Protective material for application to wound - 86687B/48
- *NISC 11.04.78 NISSAN CHEM IND KK C01 D25 E11 *J5 4135-724
Aminomethylene-di:phosphonic acid deriv. prepn. - 86795B/48
- *NISS 07.04.78 NISSHIN FLOUR MILL KK B04 D16 *J5 4135-300
Geldanamycin and related antibiotics prodn. - 86707B/48
- NITA 11.10.74 NITTETSU CHEM ENG D15 =J7 9035-428
Disposal of organic waste contg ammonium and sulphate ions - 48528X/26
- NITN 20.09.76 NIHON TOKUSHU NOYAK B05 C01 D22 =OE 7706-739
(N)-Sulphonyl phosphoric acid ester amide derivs. - 23603A/13
- NORD- 17.03.78 NORDBRAU INGOLSTADT D16 =GB 2021-146
Beer of low alcohol content - 63165B/35
- *NOVO 19.04.78 NOVO INDUSTRI AS B04 D16 *GB 2021-119
Penicillin V-acylase obtd. by bacterial cultivation - 86435B/48
- *NREN 14.06.74 NIPPON RENSUI KK A97 D15 *J7 9035-420
Treating coloured waste water - 87066B/48
- NYBL- 14.03.75 NY BLOOD COUNCIL INC B04 D16 =CA 1066-190
Viral hepatitis vaccine - 57893X/31
- *ODEL- 04.08.78 ODELGA J ARZTLICH D22 *OE 7805-694
Sterilising installation - B/48
- *ODST= 23.08.77 ODESS STOMATOLOGY A96 D21 *SU -651-807
Paste for lining tooth cavity before filling - 87236B/48
- *OLIN 21.07.78 OLIN CORP D15 E34 (E33) *US 4175-038
Redn. of available chlorine content of waste streams - 87475B/48
- OREA 11.08.69 L'OREAL SA A14 D21 E14 (A96 E24) =DS 2066-053
Leuco derivs of indoanilines and indophenols - 13680S/07
- OREA 02.08.74 L'OREAL SA A96 D21 =CA 1066-449
Amine-functional polymer-contg. hair-conditioning cosmetic compsn. - 13435X/08
- OREA 17.09.76 L'OREAL SA D21 E14 =OE 7706-357
Substd. alkoxy para-phenylene di:amine - 15862A/09
- *ORGT= 26.04.77 ORGTEKHSTROI TECH A82 D16 G02 L02 *SU -651-956
Lubricant covering for mould used in reinforced concrete mfr. - 87258B/48
- *PALL 15.05.78 PALL CORP A23 D15 J01 (A88) *EP ---5-536
Skinless hydrophilic alcohol insoluble polyamide membrane - 86275B/48

- PASE 07.08.62 PASSAVANTW MICHELbacher D15 =NL-162-043
Liquid sewage aerating rotor - 6666Z/00
- PERE/ 04.05.78 PEREZ R D D21 L02 M22 =DT 2918-124
Artificial tooth with ceramic core - 84669B/47
- PERF- 13.03.78 PERFETI SPA D13 =J5 4135-275
Chewing gum contg. liq. flavoured filling - 49043B/27
- *PETR= 05.07.77 PETRO IND PROD TRAN C03 D22 E16 H01 *SU -652-315
Oil well sulphate reducing bacteria inhibitor - 87277B/48
- PFIZ 03.03.76 PFIZER INC B05 D13 E17 H04 =CA 1066-214
Citric acid by aerobic Candida fermentation in slack wax media - 25058Y/14
- PHAA 04.03.77 PHARMACIA FINE CHEM A11 B04 D16 (A97) =US 4175-073
Reactive derivs. of sulphhydryl contg. polymers - 65621A/37
- *PLAN= 15.11.77 PLANT PROTECTION C03 D13 *SU -651-761
Synthetic plant eating insect culture medium - 87225B/48
- POLA 10.04.78 POLAK'S FRUTAL WORKS INC D23 E13 =J5 4135-780
Perfume component cyclic acetal(s) and ketone(s) - 75302B/42
- POLQ 17.02.78 POLYSAR LTD A96 D22 =FR 2417-524
Foil-forming thermoplastic compsn. for orthopaedic use - 63399B/35
- PROC 04.07.68 PROCTER & GAMBLE CO D13 #DS 1757-986
Chip type product cut from dough and fried - 31248S/18
- PROC 14.07.75 PROCTER & GAMBLE CO A87 D25 E19 F06 =NL -162-152
Textile softening compsns. for adding to rinsing baths - 09275Y/06
- PROC 11.01.78 PROCTER & GAMBLE CO A97 D25 E23 (A25) =J5 4135-806
Washing and bleaching laundry compsn. - 54921B/30
- *PROC 07.07.78 PROCTER & GAMBLE CO D13 *US 4175-075
Protein isolation from seeds - 87498B/48
- PROG- 11.09.75 PROGRESSIVE EQUIP D15 #CA 1066-227
Electrostatic water purifier operating and control circuit - 58924A/33
- PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 =US 4174-976
Glucose prodn. by cellulose acid hydrolysis - 68608B/38
- *QUAK 19.05.75 QUAKER OATS CO C03 D13 *CA 1066-115
Solid, semi-moist animal foods - 86025B/48
- RACK/ 20.09.69 RACK M A88 D12 (A18) =NL -161-971
Dry fish food plastics supply apparatus - 22682S/13
- RENT 28.05.76 ARZNEIMITTEL GMBH A97 D16 =GB 1556-905
Mass culture of diploid cells for vaccine prodn. etc. - 66981Y/38
- RENT- 28.05.76 RENTSCHLER ARZNEIMI A97 D16 =OE 7703-627
Mass culture of diploid cells for vaccine prodn. etc. - 66981Y/38
- RETO 19.05.75 REYNOLDS TOBACCO CO D13 E13 (D18) =CA 1066-039
Tobacco and foodstuff additives - 81010Y/45
- *RETR- 25.02.77 RES TRIANGLE INST D13 *US 4175-141
Heat resistant protease destruction in sterile milk - 87528B/48
- *RHEE/ 12.05.78 RHEE J G A96 D22 (A86) *EP ---5-615
Protective device for parts of the body - 86307B/48
- RHON 01.08.72 RHONE-POULENC INDUSTRIES A88 D15 F07 J01 =NL -161-989
Tubular semi-permeable membrane support - 11323V/07
- RHON 30.12.76 RHONE-POULENC INDUSTRIES D25 E36 =DS 2759-110
Silico-aluminate(s) esp. for use in washing powders - 47754A/27
- RHON 04.08.77 RHONE-POULENC INDUSTRIES B02 C02 D13 =US 4175-126
Antibiotic 35665 RP useful as animal growth promoter - 09974B/06
- RHON 16.02.78 RHONE-POULENC INDUSTRIES B04 C03 D16 (D13) =FR 2417-514
Enzymes immobilised on inorganic supports - 65025B/36
- RICH 07.11.73 RICHARDSON-MERRELL INC B02 C02 D13 (D22) =CA 1066-269
Penicillins and cephalosporins as broad-spectrum antibiotics - 22543W/14
- RICH 22.07.75 RICHARDSON-MERRELL INC B02 C02 D22 =IL --49-717
Antibacterial cephalosporanic acid derivs. - 92451X/50
- RICH 22.07.75 RICHARDSON-MERRELL INC B02 C02 D22 =IL --49-718
Antibacterial cephalosporanic acid derivs. - 92452X/50
- RIGA/ 16.02.78 RIGATTI-LUCHINI L D21 M26 =FR 2417-912
Electric vacuum furnace for melting gold or dental alloys etc. - 63393B/35
- RIJK- 09.05.78 MACHINEFAB RIJKAAR D11 =EP ---5-570
Forming a continuous layer of emulsified material - 87114B/48
- *RIJK- 09.05.78 MACHINEFAB RIJKAAR D11 *NL 7804-983
Forming a continuous layer of emulsified material - 87114B/48
- RNTK 31.10.74 RENTOKIL LTD D22 E36 =DS 2548-953
Sterilising compsn with delayed sulphur dioxide generation - 36409X/20
- ROHM 19.08.69 ROHM & HAAS CO A18 D15 J01 (A91) =NL -162-089
Reticulated resins contg. tert amine oxide - 11906S/06
- *ROTH- 13.05.78 APPARATEBAU ROTHMU D15 K07 *DT 2821-097
Decontaminating radioactive liq. effluent - 86069B/48
- ROUS 07.04.78 ROUSSEL UCLAF B02 D22 =J5 4135-793
Amino:thiazolyl-acetamido cephalosporin derivs. - 73624B/41
- *ROWT 28.08.78 ROWENTA-WERKE GMBH D14 J01 *BE -877-998
Vessel for cooking in oil - 86021B/48
- RUTT- 10.12.75 RUTTE J B BV D15 =NL -162-044
Dewatering of settled effluent sludge - 46342Y/26
- *RUTT/ 09.05.78 RUTTEN J P D11 *NL 7804-983
Forming a continuous layer of emulsified material - 87114B/48
- SAAR/ 28.06.76 SAARIR D15 J01 #CA 1066-182
Flash evaporator for e.g. seawater or industrial effluent - 04265A/03
- SANN 24.06.74 SANYO CHEM IND KK D15 E19 =J7 9035-413
Waste water treatment - 13654X/08
- SANO 04.11.75 SANDOZ AG B03 D16 =IL --50-836
(Dihydro)cyclosporin C immunosuppressant and antiarthritic prepn. 32745Y/19
- *SANY 12.04.78 SANKYO KK C03 D22 E19 (D15) *J5 4135-222
Preventing propagation of sulphur bacteria - 86691B/48
- *SANY- 19.05.78 SANYO MOKUZAI BOFU C02 D22 E13 F09 *DT 2919-792
Wood preservative contg. 2-mercapto-benzothiazole - 86218B/48
- *SAOC 11.04.78 SANRAKU OCEAN B02 D16 *J5 4135-790
Antibiotic PS-5 S/oxide and salts - 86820B/48
- *SAUK/ 08.01.79 SAUKEL H D13 *OE 7900-121
Drinking straw with flavouring - B/48
- SCGR 15.02.78 SOC CHIM GRANDE PAROISSE A25 D22 E16 =FR 2417-492
Prepn. of 2-nitro-2-methyl-propanol from 2-nitro propane - 68495B/38
- SCHI- 07.04.77 MAJA-MASCH SCHILL H D12 =GB 1556-644
Machine for removal of bacon rind - 55133A/31
- SCHO/ 08.05.78 SCHONERT K D13 =NL 7903-306
Stable, aromatised carbohydrate food flavouring material prepn. 84266B/47
- *SCHO/ 30.10.78 SCHOLE M L B05 D21 *US 4175-120
Water-contg. dentifrice for removing or preventing calculus - 87517B/48
- SCHW- 17.12.74 SCHWARTE A GMBH D13 =DS 2459-505
Milk spray dryer exhaust fines recovery - 36013X/20
- SCKH 09.07.76 SCHRODER CO D13 =US 4175-142
Mayonnaise and/or derived prods. continuous mfr. - 75944Y/43
- SEAR 09.05.69 SEARLE G D & CO B05 D13 E14 =NL -161-978
Sweetening compn contg. l-aspartyl-l-phenyl - 82782R/44
- *SECA- 16.02.78 SECATOL D12 *FR 2417-259
Preheater for animal carcass by immersion prior to depilation 86347B/48
- SETO- 09.09.76 SETON CO D18 =GB 1556-913
Pre-tanning hide treatment - 88066Y/49
- SHEL 30.11.76 SHELL OIL CO D25 E19 =US 4175-092
Refining surface active agent streams - 38473A/22
- SHEL 10.05.79 SHELL INT RES MIJ BV D23 E15 =NL 7903-667
Ester(s) of (1,5)-di:methyl-bi:cyclo-(3,2,1)octanol-8 - 82556B/46
- *SHIM/ 10.04.78 SHIMODA H D15 *J5 4134-076
Prodn. of fresh water from sea water using solar heat - 86510B/48
- SHIR- 12.04.78 SHIRAIMATSU SHINYAK D13 E24 =DK 7901-578
High yield and purity anthocyan prodn. - 75687B/42
- SHIR- 12.04.78 SHIRAIMATSU SHINYAK D13 E24 =J5 4134-736
High yield and purity anthocyan prodn. - 75687B/42
- *SHOW 10.04.78 SHOWA DENKO KK B04 C03 D16 (D13) *J5 4135-296
Prodn. of clear bacterial body with high vitamin protein content 86703B/48
- *SHOW 10.04.78 SHOWA DENKO KK B04 C03 D16 (D13) *J5 4135-297
Prepn. of bacterial body having high protein and vitamin contents 86704B/48
- SIMC 15.04.78 SIMON ENGINEERING LTD C03 D15 (D13) =DK 7901-534
Removal of metallic impurities from sewage sludge - 79430B/44
- SIMM- 11.05.78 SIMMERING-GRAZ-PAUK D16 =NL 7902-379
Preliminary extn. of hops for use in beer prodn. - 52591B/29
- SIRE/ 21.02.78 SIREN M J A35 D18 J01 (A11) =FR 2417-329
Filter material for gas or liq. media, esp. tobacco smoke - 63432B/35
- SMIC 14.04.77 SMITH A O HARVEST D13 =CA 1066-013
Self adjusting breather bag for sealed storage silo - 09703B/05
- SNAM 03.12.75 SNAMPROGETTI SPA D15 H03 =IL --50-879
Biological treatment of oil pollution in sea water etc. - 39853Y/23
- SNAM 12.05.78 SNAMPROGETTI SPA A96 B04 D16 =DT 2919-127
Reduction of phenylalanine levels in blood and other media - 82559B/46
- SNAM 12.05.78 SNAMPROGETTI SPA A96 B04 D16 =NL 7903-789
Reduction of phenylalanine levels in blood and other media - 82559B/46
- *SNAM 23.05.78 SNAMPROGETTI SPA B05 D16 E19 *BE -876-408
Prepn. of D-aminoacids - 85938B/48
- *SNAM 24.05.78 SNAMPROGETTI SPA D14 J01 (D23) *BE -876-517
Continuous solid-liq. extn., esp. of vegetable material - 85965B/48
- SODA- 29.07.77 SODASTREAM LTD D15 =OE 7805-373
Portable water carbonator for sparkling drinks - 84161A/47
- SPIE 23.02.74 SPIESS CF SOHNE D15 =OE 7700-146
Destruction of waste carbonaceous substances - 03865W/03
- *SPOR= 11.04.78 SPORT CAMPING ARTIC A97 D18 (A11) *SW 7804-063
Greasing agent for leather articles - B/48
- SPOR= 19.04.78 SPORT CAMPING ARTIC A97 D18 (A11) #OE 7802-779
Greasing agent for leather articles - B/48
- *SQUI 18.05.78 SQUIBB E R & SONS INC B04 D16 *DT 2920-293
Beta-lactamase inhibitor EM4615 - 86241B/48
- SQUI 18.05.78 SQUIBB E R & SONS INC B04 D16 =GB 2021-096
Beta-lactamase inhibitor EM4615 - 86241B/48
- SQUI 19.05.78 SQUIBB E R & SONS INC C03 D13 =GB 2020-954
Animal feed compsn. contg. aminoacid tri:chloroethyl ester - 80782B/44

- STAHL/ 22.05.78 STAHLER T D15 *EP ---5-553
Aerobic sewage treatment - 86284B/48
- STAL 12.05.69 STALEY A E MFG CO D16 =NL-162-140
Storage stable starch conversion syrup with high - 12832R/08
- STAM- 25.10.78 STAMAG AG D11 *OE 7807-659
Meal-based bakery prods. mfr. - B/48
- STAU 20.01.75 STAUFFER CHEMICAL CO B05 C03 D22 H01 (D15) =IL --48-
B51
1,3-Dichloro-acetone oxime alkyl carbonates - 58200X/31
- STAU 20.01.75 STAUFFER CHEMICAL CO B05 C03 D22 H01 (D15) =IL --54-
570
1,3-Dichloro-acetone oxime alkyl carbonates - 58200X/31
- STAU 01.08.75 STAUFFER CHEMICAL CO C03 D13 =SU -651-647
2,6-Dialkyl-9-aryl-3-nonyl alkyl ethers - 16835X/10
- STEAD/ 27.08.75 STEAD E T D12 =CA 1066-124
Processed bacon product from pork belly meat - 97976X/52
- STEF- 14.09.78 INST JOZEF STEFAN D15 J01 K05 M25 *OE 7806-659
Uranium ore ion exchange column soln. ppte. purificn. - B/48
- STER 14.01.77 STERLING DRUG INC A97 D25 E16 =GB 1556-632
Antimicrobial compsn. esp. for surgical washing of skin - 51623A/29
- STIC- 03.05.79 STICHTING BEDRIJVEN D13 *NL 7903-483
Instant fat-contg. spray dried milk powder - 87118B/48
- STOM= 11.08.77 STOMATOLOGY RES INS A96 D21 (A26) *SU -651-803
Dental rubber based moulding compsn. - 87235B/48
- STOR- 16.07.74 STORCK A KG D13 =NL -161-975
Filled centre sweet-forming rotary moulds - 44426W/27
- SUDD 12.05.78 SKW TROSTBERG AG A23 D13 E12 (A97) *DT 2820-942
Over-acid solid metal lactate for food additive use - 86066B/48
- SUDD 12.05.78 SKW TROSTBERG AG A23 D13 E12 (A97) =NL 7903-111
Over-acid solid metal lactate for food additive use - 86066B/48
- SUGY 10.04.78 SUGIYAMA SANGYO KAG D23 J04 *J5 4134-489
Potassium iodide-silica gel reagent - 86579B/48
- SULZ 10.05.78 SULZER BROTHERS LTD D15 J01 =NL 7902-698
Drainage and filtration plant, esp. for water purificn. - 84377B/47
- SUMI 03.06.77 SUMITOMO SHOJI KK A91 B04 D16 =GB 1556-652
fibrinolytic and anticancer potentiator enzyme urokinase purificn. -
00262B/01
- SUMO 29.08.69 SUMITOMO CHEM CO D25 =NL -162-132
Vinylidene sulphonate detergent compsn - 17022S/09
- SUMO 27.05.74 SUMITOMO CHEMICAL KK A97 D15 J01 =J5 0152-554
Oil sepn. from oil-water emulsions - 87065B/48
- SUMO 27.05.74 SUMITOMO CHEMICAL KK A97 D15 J01 *J7 9035-419
Oil sepn. from oil-water emulsions - 87065B/48
- SUMO 12.08.75 SUMITOMO CHEMICAL KK A88 D15 J01 (A89 J04) =CA
1066-439
Metal ion absorption using filter paper contg. ion exchange gps. -
14969Y/09
- SUMO 12.09.75 SUMITOMO CHEMICAL KK B04 D16 =CA 1066-212
Antiulcer procidine derivs. - 05729Y/04
- SUMO 11.04.78 SUMITOMO CHEMICAL KK D15 *J5 4135-448
Biological digestion and denitrification of waste water - 86724B/48
- SUMO 12.05.78 SUMITOMO CHEMICAL KK B04 D16 *DT 2917-899
Fibrinolytic enzyme urokinase lyophilisate stabilisation - 86170B/48
- SUPE- 08.05.78 SUPERFORNI RINALDI D11 =NL 7903-562
Continuous electric oven for cooking pizzas on plates - 64747B/36
- SYNT 05.04.78 SYVA CO B04 D16 J04 =J5 4136-896
Immunoassay method for component of ligand anti:ligand pair -
77640B/43
- TABA/ 10.08.72 TABATA H D15 =DS 2340-119
Sea water desalination plant - 15852V/09
- TAKE 13.04.78 TAKEDA CHEMICAL IND KK D15 E36 J01 *J5 4135-694
Regeneration of activated carbon from water- or gas treatment -
86780B/48
- TANA 07.04.78 TANABE SEIYAKU KK A96 B04 D16 *J5 4135-295
Fixed microorganisms prodn. - 86702B/48
- TEEP 18.10.74 TEE PAK INC A97 D12 (A11) =CA 1066-123
Skins for sausages etc. - 24471X/14
- TEGE/ 09.05.78 TEGELAAR P F D15 *NL 7804-946
Prodn. of drinking water from sea water using circulated air stream -
87113B/48
- TEIC- 30.05.78 FOLIENWALZ BRUDER T D15 *OE 7803-929
Distillation method and appts. for raw water esp. sea-water - B/48
- TFOO= 26.07.77 TADZ FOOD IND TECH D13 *SU -651-779
Non-alcoholic medicinal herbal drink compsn. - 87233B/48
- THOR- 02.08.78 THORN SVENSKA AB D15 *BE -878-003
Water carbonator for making sparkling drinks at home - 86022B/48
- TOBI- 07.04.78 TOBISHI YAKUHI KOGYO B04 D16 *J5 4135-300
Geldanamycin and related antibiotics prodn. - 86707B/48
- TOKA- 25.06.74 TOKAI PULP KK D15 E33 F09 =J7 9035-421
Waste water treatmn. - 13656X/08
- TOSH- 11.04.78 TOSHIN TANPAKU KK D12 *J5 4135-260
Fish processing - 86701B/48
- TOXN 19.04.77 TOYO JOZO KK B04 C03 D16 =OE 7802-747
Aculeacin A alpha, A gamma, D alpha and D gamma - 61914A/35
- TOXN 17.02.78 TOYO JOZO KK A96 B04 D16 J04 (A14) =FR 2417-513
Immobilised protein for quantitative analysis of enzymatic reactions -
64907B/36
- TOXN 10.05.78 TOYO JOZO KK B04 D16 =DT 2918-711
Macrolide antibiotics with antibacterial and anti:mycoplasma activity -
84686B/47
- TOXN 10.05.78 TOYO JOZO KK B04 D16 =NL 7903-601
Macrolide antibiotics with antibacterial and anti:mycoplasma activity -
84686B/47
- TOYJ 13.02.76 TOYO SODA MFG KK B05 D13 E36 =IL --51-163
Pure phosphoric acid prodn. - 59683Y/34
- TOYJ 13.02.76 TOYO SODA MFG KK B05 C04 D13 E36 (C03) =IL --51-
166
Removing organic impurities from phosphoric acid - 59674Y/34
- *TOYJ 14.04.78 TOYO SODA MFG KK D15 J01 M25 *J5 4136-585
Adsorption of metals dissolved in alkaline soln. - 86941B/48
- TSUB 19.09.72 KUMIAI CHEM IND KK C03 D13 (D16) =J4 9047-152
Feed additive contg. chitinase - 87098B/48
- *TSUB 19.09.72 KUMIAI CHEM IND KK C03 D13 (D16) *J7 9036-113
Feed additive contg. chitinase - 87098B/48
- TSUB 28.10.75 KUMIAI CHEM IND KK B04 C03 D13 (D16) =IL --50-214
Multhiomycin prepn. by culture of Streptomyces 8446-CC1 - 30918Y/18
- TSUK 13.03.74 TSUKIBOSHI KASEI KK A97 D13 =NL -161-974
Preservative compsn. for agricultural prods. - 50975W/31
- TSZE 12.06.75 TATABANYAI SZENBANYAK D15 J03 =OE 7604-252
Electrochemical purification of aq. effluents - A/23
- UNIC 28.10.75 UNION CARBIDE CORP D15 =IL --50-781
Removing phosphates from effluent by the activated sludge process -
30923Y/18
- UNIC 27.06.77 UNION CARBIDE CORP D15 =DS 2825-879
Sequestration of calcium and magnesium ions - 58574A/32
- *UNIC 05.10.77 UNION CARBIDE CORP D15 *US 4175-041
Trough for degassing floating sludge - 87478B/48
- UNIC 24.02.78 UNION CARBIDE CORP A23 D22 (A96) =US 4175-177
Thermoplastic crosslinkable copolymer - 64990B/36
- UNIC 14.04.78 UNION CARBIDE CORP B02 D16 E17 #DK 7801-650
Glutaraldehyde sterilisation of fermentation media - 76297A/43
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 =NL 7903-598
Wrapping for food products esp. sausages - 82545B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 =NL 7903-600
Conc. aq. smoke flavour compsn. for coating tubular food wrapping -
32544B/46
- UNIL 18.06.68 UNILEVER NV A97 D12 =NL -161-973
Collagen-encased sausage - 43635Q/00
- UNIL 24.10.69 UNILEVER NV A15 D21 E16 (A96) =DS 2051-523
Hair cosmetic - 30122S/17
- UNIL 13.11.70 UNILEVER NV D13 =DS 2156-121
Pourable margarine - 33803T/21
- UNIL 21.06.72 UNILEVER NV D13 E19 =NL -161-977
Cheese flavour improvement - 02828V/02
- UNIL 15.02.78 UNILEVER NV A32 D22 =FR 2417-382
Rendering plastics foil water permeable - 63269B/35
- UNIL 15.02.78 UNILEVER NV A96 D22 =FR 2417-389
Absorbent bandage with perforated facing sheet - 61693B/34
- UNIL 20.02.78 UNILEVER NV D25 =FR 2417-547
Mfg. striped detergent bars - 63500B/35
- UNIL 11.05.78 UNILEVER NV D25 (D24) =DT 2918-742
Prepn. of spray dried soap contg. washing powders - 82563B/46
- UNIL 11.05.78 UNILEVER NV D25 (D24) =NL 7903-622
Prepn. of spray dried soap contg. washing powders - 82563B/46
- *UNIL 16.05.78 UNILEVER NV A97 D25 *EP ---5-618
Deodorant compsn. contg. abrasive, bleach, wax or polymer carrier -
86309B/48
- UNIL 14.05.79 UNILEVER NV A97 D25 =GB 2020-977
Deodorant compsn. contg. abrasive, bleach, wax or polymer carrier -
86309B/48
- *UNIL- 18.05.78 UNILEASE SA A82 D22 G02 *DT 2919-886
Maintenance of surfaces exposed to soiling - 86228B/48
- UNVO 25.09.75 UOP INC D15 J01 #J7 9035-995
Laminated semi-permeable membrane stack - 68885W/41
- *UPJO 21.10.77 UPJOHN CO B01 D16 *US 4175-006
9-Alpha-hydroxy testosterone prepn. - 87455B/48
- UPJO 15.05.78 UPJOHN CO B03 D22 E13 F09 (D15) =DT 2918-878
Alpha-amino-3-chloro-alpha-isoxazoline-5-acetic acid and analogues -
84158B/47
- USAS 09.06.76 NAT AERO & SPACE ADMIN A88 D15 J01 =IL --52-271
Polymer membrane for reverse osmosis - 01401A/01
- *UTAH 10.10.78 UNIV OF UTAH D22 J04 *US 4175-020
Sterilising reference electrodes - 87463B/48
- UYFL- 05.04.78 UNIV OF FLORIDA D21 L02 =J5 4135-496
Inorganic dental or surgical implant - 77620B/43
- VBER- 15.05.78 VAN DEN BERGH ENG L D13 =DT 2919-389
Steam peeling fruit and vegetables - 84667B/47
- VEOS 08.02.74 VER OSTERR EISEN & STAHL D15 J01 =DS 2458-577
Removing oil, esp. oil emulsions from factory effluents - 57417W/35

- *VETI = 05.01.77 VET PREP SCI TEST B04 D16 *SU -651-026
Antigen activity and specificity evaluation - 87201B/48
- *VOTE = 11.07.75 VORON TECHN INST D17 *SU -651-030
Purification of spent, sugar-contg. solns. - 87204B/48
- *VOTE = 19.07.76 VORON TECHN INST D17 *SU -644-837
Beet sugar crystallisation from massecuite - 87170B/48

- WAGB 19.05.78 WAAGNER BIRO AG D16 =DT 2917-411
Preserving yeast culture during continuous alcoholic fermentation - 71748B/40
- *WALL/ 19.05.78 WALLICZEK E G A96 D22 (A14) *DT 2919-923
Biosynthetic polymer compsns. and film - 86229B/48
- WALL/ 19.05.78 WALLICZEK E G A96 D22 (A14) =GB 2021-125
Biosynthetic polymer compsns. and film - 86229B/48
- *WELA 20.05.78 WELLA AG A96 D21 *DT 2822-125
Liq. permanent hair waving compsn. - 86138B/48
- *WELA 20.05.78 WELLA AG A96 D21 *DT 2822-198
Evenly dyeing and colour-fixing of hair - 86151B/48
- *WELL 26.05.78 WELLCOME FOUNDATION LTD B05 C03 D13 *BE -876-563
Compsns. contg. eicosa:penta:enoic acid - 85978B/48
- WERN 09.05.74 WERNER & PFLEIDERER D11 =DS 2422-560
Dough mixing and kneading machine - 78922W/48
- WERN 23.12.77 WERNER & PFLEIDERER D11 =OE 7807-869
Multideck baking oven - 49266B/27
- WERN 25.01.78 WERNER & PFLEIDERER D11 =OE 7900-551
Baking oven heat exchanger - 02020B/02
- *WESS- 24.05.78 WESSANEN (UK) LTD D17 *EP ---5-651
Washing particulate feedstock esp. starch in hydrocyclones - 86325B/48
- WILK/ 01.02.77 WILKE G D11 =OE 7709-067
(Flaky) pastry prodn. without a baking stage - 57016A/32

- YAMS 14.04.78 YAMASA SHOYU KK B03 D13 E13 =J5 4135-800
Periandrin I, II, III and IV from Periandra roots - 79572B/44
- YOSH 11.04.78 YOSHITOMI PHARM IND KK A97 C03 D22 F09 (A25 D15)
=J5 4135-223
Microbicide for industrial cooling water and paper pulp - 77643B/43

- ZNEM- 19.05.78 ZUID-NED MELKIND BV D13 =DT 2919-701
Cooking fat giving good browning - 84175B/47

93-F BDE	CA -949-381 V27	ZA 7008-264 S40	J4 9064-574 V34	DL -111-152 W19	J5 0102-603 W41	US 4052-993 Y42	16796-X CD
-704-363 Q00	CH -560-515 W21	FR 2073-165 T01	DS 2339-025 W26	SF 7401-172 W22	DK 7500-058 W42	GB 1494-788 Y50	US 3939-286 X09+
-870-021 S19	DS 2022-499 B39	CA -915-505 T50	GB 1415-752 W48	ZA 7402-656 W27	FR 2282-809 X24	J7 8027-359 A35	DT 2606-084 Y34+
-132-126 S19	NL -161-978 B48	GB 1315-724 U18	CH -573-264 X19	J5 0069-263 W32	GB 1496-213 A01	CH -610-495 B20	BR 7600-957 Y38+
3624-114 T01		NL -161-979 B48	CA -991-999 X29	GB 1468-405 Y12	CH -603-064 A37	CA 1066-040 B48	SW 7601-726 Y39+
-350-250 U19	06275-S AD		IL -42-861 X42	SU -652-864 B48	OE 7500-196 A40		FR 2340-690 Y48+
6013-121 X21	BE -753-481 S03	33803-T D	US 3984-328 X42		US 4145-452 B14	78922-W D	CA 1052-616 B20+
6713-780 Q01	NL 7010-487 S04	BE -775-304 T21	J7 6035-554 X44	17830-W D	SU -651-651 B48	DT 2422-560 W48	SU -651-652 B48+
1153-408 Q01	DT 2034-798 S06	NL 7115-372 T22	NL -161-989 B48	DT 2359-672 W11	CA 1066-127 B48	NL 7502-855 W48	
1518-665 Q01	FR 2051-760 S29	DT 2156-121 T22		NL 7316-404 W12		BR 7502-779 X14	16835-X CD
1695-498 B48	ZA 7004-808 T09	J4 7011-971 T26	15852-V D	GB 1411-838 W44	50975-W AD	CH -586-014 Y18	BE -832-492 X10+
	GB 1296-473 T46	FR 2113-957 T42	DT 2340-119 V09	CA -996-813 X40	BE -826-614 W31+	OE 7501-821 Y44	NL 7509-640 X10+
14-F BD	CA -919-543 U06	ZA 7107-558 U31	FR 2195-593 V19	DS 2359-672 B28	DT 2510-840 W39+	DS 2422-560 B48	DT 2536-298 X11+
6818-105 Q00+	CH -535-020 U25	CA -938-493 U52	US 3923-607 W51	NL -161-976 B48	NL 7502-989 W40+		FR 2281-913 X22+
-545-849 V12+	J7 9034-080 B46	GB 1359-639 V28	GB 1444-242 X31		DK 7500-981 W50+	84267-W ADJ	DL -119-701 X28+
3799-842 V14+	DS 2034-798 B48	CH -555-644 V52	J4 9036-576 A38	22294-W DM	FR 2263-707 X01+	NL 7505-945 W51+	BR 7505-234 X34+
-725-674 Q01		J7 6016-507 X25	J7 8030-673 A38	US 3871-876 W13	DL -117-804 X18+	DT 2522-250 X02+	ZA 7505-325 X37+
0017-150 R24	11906-S ADJ	DS 2156-121 B48	DS 2340-119 B48	NL 7502-941 W40	PT -63-473 X25+	SW 7505-947 X03+	J5 1125-734 X51+
1019-584 S21	BE -754-452 S06			DT 2505-934 W40	J5 1051-537 X25	DK 7502-301 X11+	US 4002-769 Y04+
-876-693 S31	NL 7011-675 S09	56242-T DEHJ	27500-V D	SW 7502-497 W45	US 3997-674 X52+	FR 2272-954 X12+	IL -47-928 A28+
1603-553 S35	DT 2040-618 S10	BE -779-668 T35	DT 2349-029 V15	J5 0125-922 W48	ZA 7602-330 Y19+	J5 1037-886 X20	GB 1519-635 A31+
1254-883 S46	FR 2058-906 S36	NL 7202-735 T39	US 3817-857 V26	FR 2264-521 X02	GB 1500-534 A06+	J5 0152-550 A12	CS 7505-625 A38+
3661-892 T22	ZA 7005-106 S40	DT 2209-578 T39	FR 2201-259 V27	BR 7501-521 X02	CS 7501-667 A10+	CH -602-495 A33+	CH -610-726 B23+
1814-735 U10	DL -85-645 T07	J4 7030-584 T52	ZA 7307-425 V40	GB 1476-100 Y23	OE 7501-949 A22	J7 9035-418 B48	SU -651-647 B48
-162-135 B48+	CH -532-103 U12	FR 2127-432 U04	US 3869-380 W11	DS 2505-934 A20	J7 9007-862 B18		
	GB 1318-962 U22	GB 1336-281 U45	GB 1418-584 W52	CA 1039-538 A42	CA 1054-843 B23+	03921-X D	24471-X AD
85-Q AD	US 3749-668 U34	US 3901-818 W36	CA -998-481 X44	IT 1028-449 B16	IL -49-454 B29+	BE -832-598 X03	BE -834-491 X14
6909-339 Q00	US 3751-507 U35	J7 9036-156 B48	CH -594-569 A09	J7 9035-860 B48	IT 1032-283 B39+	NL 7509-008 X11	DT 2546-681 X18
1930-887 R02	CA -939-441 V02		US RE29-969 B18+		DS 2510-840 B41+	DT 2439-993 X11	SW 7511-620 X23
-888-120 S51	J7 4014-347 V18	01921-U ABD	DK 7901-099 B48	22543-W BCD	NL -161-974 B48+	SW 7509-316 X16	J5 1063-962 X29
3010-545 U14	CA -956-978 V46	NL 7108-408 U02		BE -821-950 W14+		NO 7502-890 X17	SF 7502-889 X31
-734-585 Q01	US 3847-995 V47	DT 2135-533 U07	54387-V D	NL 7414-395 W21+	54032-W CD	SF 7502-352 X22	BR 7506-779 X42
1030-009 B26	CA -973-982 W38	FR 2143-564 U16	J4 9009-506 V30	SW 7413-947 W26+	BE -825-026 W33	FR 2282-235 X23	GB 1470-726 Y16
-161-973 B48	RU -58-858 W47	CA -930-668 U32	J7 9036-162 B48	NO 7403-991 W27+	NL 7501-421 W33	J5 1051-533 X25	FR 2330-322 Y32
	SU -469-257 X08	GB 1361-289 V30+		DK 7405-648 W33+	DT 2405-589 W34	ZA 7505-362 X35	DS 2546-681 Y50
16-R DE	CS 7005-727 X51	IL -37-065 W37+	74327-V D	J5 0082-088 W35+	SW 7501-267 W39	PT -64-187 X36	CA 1066-123 B48
6908-608 R06	NL -162-089 B48	CH -574-742 X23+	BE -813-435 V43	PT -62-782 W37+	J5 0107-155 W42	GB 1470-646 Y15	
2014-821 R30		OE 7106-261 X24+	NL 7404-401 V43	FR 2257-290 W44+	DK 7500-395 W43	CS 7505-727 A13	26764-X DE
1275-280 T21	13680-S ADE	NL -161-983 B48	DT 2417-351 V44	ZA 7406-454 X03	FR 2259-899 W47	OE 7506-438 A35	DT 2541-591 X15
-523-663 T34	BE -754-649 S07		NO 7401-304 V48	GB 1446-409 X34+	DL -118-519 X22	US 4156-020 B23	J5 1056-420 X27
1792-185 U38	NL 7011-768 S08	15492-U BD	SW 7404-715 V49	US 3989-687 X46+	US 3974-294 X34	CH -612-074 B35	FR 2285-363 X27
-162-038 B48	DT 2039-358 S14	BE -789-940 U11	DK 7401-933 V50	DT 2450-048 W21+	OE 7500-392 Y27	CA 1066-120 B48	GB 1484-981 Y36
	FR 2056-799 S33	DT 2249-836 U18	FR 2224-171 W05	GB 1446-409 Y47+	GB 1483-953 Y34		US 4142-943 B11
B2-R D	GB 1276-771 T23	NL 7213-743 U18	US 3949-755 X17	US 4119-775 A42+	CH -604-556 A41	13435-X AD	CA 1066-219 B48
-737-938 R08	CH -533-986 U22	ZA 7206-693 U27	GB 1452-376 X42	CH -610-326 B20+	CA 1041-351 A46	DT 2534-514 X08	
6912-963 R46	US 3787-174 V05	FR 2156-220 U30	CH -583-038 Y02	IL -45-877 B44+	IT 1029-460 B21	BE -832-063 X08	31769-X D
1942-749 R47	CH -550-235 V30	J4 8044-492 U39	CA 1033-250 A27	CA 1066-269 B48+	DS 2405-589 B48	NL 7509-188 X08	US 3950-551 X17
2042-553 S17	US 3853-464 V52	CH -540-975 U47	NL -161-986 B48			FR 2280-361 X21+	GB 1469-062 Y13
1273-789 T19	US 3905-761 W39	US 3827-937 V33		35974-W CD	57417-W DJ	DK 7503-508 X21	CA 1066-119 B48
3791-865 V08	US 3953-508 X19	GB 1368-903 V40	87202-V BD	BE -824-181 W22	DT 2458-577 W35	J5 1051-528 X25	
-986-050 X15	CA 1007-247 Y14	CA -994-269 X33	BE -815-759 V51	NL 7500-128 W30	OE 7401-005 W35	BR 7504-935 X33	31907-X ADEM
-986-045 X15	US 4042-627 Y34+	J7 6036-360 X45	NL 7407-251 V51	DT 2401-014 W30	FR 2260-536 W48	CH -579-909 X42	BE -835-992 X18+
-162-140 B48	DT 2066-053 A11	DS 2249-836 Y45	DT 2425-999 V52	FR 2257-568 W44	IT 1028-849 B17	US 4013-787 Y13+	NL 7513-824 X24+
	NL -161-490 B41	NL -162-137 B48	SW 7407-176 W06	CH -569-690 X02	DS 2458-577 B48	GB 1510-489 A19	NO 7503-974 X29
80-R D	DS 2066-053 B48		DK 7402-926 W07	OE 7500-125 X28		GB 1510-488 A19	DT 2553-103 X34+
6915-875 R17+		16370-U D	FR 2231-966 W12	GB 1455-543 X46	58740-W D	OE 7505-985 B35	DK 7505-304 X35+
-740-491 R17	17022-S D	NL 7211-742 U12	ZA 7403-465 W27	DS 2401-014 B48	BE -827-699 W36	CA 1066-449 B48	SF 7503-326 X35+
1952-961 R19	BE -755-471 S09	DT 2243-189 U13	DS 2425-999 X09		NL 7504-149 W44		SW 7513-226 X38+
6806-802 R36	NL 7012-790 S10	BE -788-120 U14	US 3941-658 X11	41013-W BCD	DT 2425-026 W44	13654-X DE	FR 2292-663 X41+
2021-152 R45	DT 2042-871 S11	ZA 7205-479 U21	GB 1467-439 Y11	BE -825-035 W25	NO 7501-206 W49	J5 1000-763 X08	ZA 7507-451 Y01
3597-163 S43	CA -877-911 S33	FR 2151-042 U24	CA 1040-517 A44	DT 2504-052 W34	SW 7503-959 W49	J7 9035-413 B48	J5 1132-196 Y01
1283-573 T30	FR 2059-411 S36	J4 8035-061 U28	CH -611-033 B23	SW 7501-124 W39	DK 7501-463 X04		US 4029-747 Y25+
3020-698 U26	DT 2042-871 S38	CH -563-123 W30	NL -162-138 B48	NO 7500-354 W40	FR 2267-245 X05	13656-X DEF	BR 7602-116 Y45
1952-961 X45	US 3691-108 T39	GB 1403-086 W33		DK 7500-374 W44	BR 7502-118 X06	J5 1000-765 X08	OE 7509-002 A31+
-162-139 B48	GB 1304-565 U04	CA -991-010 X27	89135-V DE	SF 7500-305 W44	CH -572-415 X15	J7 9035-421 B48	DT 2559-974 A34+
	J7 5005-722 W14	SU -651-650 B48	DT 2427-465 V52	FR 2259-602 W47	ZA 7502-222 X24		GB 1532-416 A46+
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-741-793 R20		62066-U D	FR 2232-529 W12	J5 0131-967 W50	IL -47-044 A06	BE -832-292 X09+	CH -612-403 B35+
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1924-332 R46	NL 7012-011 S13	BE -798-343 U50	DS 2427-465 X20	DL -120-877 X36	US 4121-107 A43	DT 2535-886 X10+	CA 1066-024 B48+
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-550-244 V30	FR 2062-940 S40	J4 8098-053 V08	CH -592-596 Y48	GB 1462-015 Y03		FR 2281-900 X22	36013-X D
1924-332 A32	CH -531-826 U12	US 3803-326 V16	NL -162-055 B48	OE 7500-755 Y27	68885-W DJ	J5 1045-456 X22+	BE -836-557 X20+
-162-134 B48	GB 1319-637 U23	DS 2309-254 W14		SU -581-864 A43	US 3909-418 W41	FR 2302-971 Y02+	DT 2459-505 X27
	NL -161-971 B48	GB 1420-843 X03	03865-W D	CA 1043-797 A51	DT 2542-957 Y14+	US 4039-649 Y32+	DT 2517-037 X45+
40-R D		J7 6001-773 X07	BE -818-763 W03+	IL -46-531 B48	DK 7504-135 Y23+	GB 1524-233 A36+	DS 2459-505 B48
-745-814 R32+	30122-S ADE	CA -995-513 X37	NL 7410-972 W10+		FR 2325-405 Y26+	CA 1066-021 B48+	
7000-109 R44	BE -757-957 S17	NL -161-972 B48	DT 2341-300 W13	44426-W D	J5 2040-482 Y30+		36376-X DE
1922-046 S04	NL 7015-441 S18		SW 7410-493 W15+	BE -825-405 W27	IL -48-121 A28+	14942-X ABD	DT 2548-420 X20
1939-190 S07	DT 2051-523 S19	02828-V DE	FR 2240-757 W22+	DL -115-423 X01	GB 1517-220 A28+	BE -832-366 X09+	BE -834-897 X20
2040-417 S14	FR 2064-463 S41	NL 7308-548 V02+	J5 0051-068 W27+	NL 7500-794 X06	J7 9035-995 B48+	NL 7509-667 X10+	NL 7512-622 X21
1962-919 S26	ZA 7007-193 T29	DT 2331-522 V06+	DS 2341-300 W35	DT 2434-024 X07		DT 2535-951 X10+	NO 7503-642 X25
3689-424 T38	GB 1329-242 U36	FR 2188-969 V12+	DT 2408-778 W37	ZA 7500-914 X13	70058-W D	SW 7509-008 X15+	SW 7512-122 X25
1314-381 U16	CA -935-379 U48	US 3883-668 W21+	US 3977-952 X37+	DK 7500-202 X17	NL 7416-833 W42	SF 7502-275 X19+	J5 1068-524 X31
3020-403 U26	US 3972-998 X33	GB 1427-701 X11+	GB 1482-600 Y32+	FR 2278-269 X19	SW 7415-437 W47	DK 7503-652 X21+	DK 7504-843 X32
-544-805 W38	DS 2051-523 B48	GB 1427-702 X11+	CH -591-891 Y48+	BR 7501-524 X30	NL -159-569 B13	J5 1051-582 X25+	FR 2289-494 X36
1922-046 X52		CA -986-357 X16+	OE 7406-442 A02	CH -585-020 Y16	US 4166-868 B37+	FR 2288-748 X34+	PT -64-423 X41
1939-190 A17	31248-S D	CH -583-001 Y02+	IT 1018-953 A02+	IL -46-645 Y30	SU -651-654 B48	BR 7505-186 X34+	BR 7507-201 X42
1962-919 A23	US 3576-647 S18+	NL -157-489 A35	CA 1026-706 A10+	CA 1016-814 Y38		ZA 7505-140 X35	ZA 7506-355 X44
-162-133 B48	DS 1757-986 B48+	DS 2331-522 B42+	OE 7700-146 B48	GB 1486-483 Y38	72521-W DE	GB 1463-513 Y05+	DL -123-740 Y12
		NL -161-977 B48		US 4063-864 A01	BE -829-542 W44	IL -47-893 A33+	OE 7508-230 Y27
32-R BDE	40672-S BDE		10115-W D	OE 7501-164 A06	NL 7507-618 X05	SF 7801-273 A38+	HU T013-404 Y29
-750-131 R44+	DT 1961-769 S24		NL 7405-993 W06	NL -161-975 B48	DT 2527-228 X05	CA 1053-595 B22+	GB 1494-939 Y50
7006-712 R45	IL -35-777 W15	11323-V ADFJ	DT 2420-135 W07		US 3943-9		

36409-X

36409-X DE	US 4118-479 A41	85701-X DEJ	FR 2321-492 Y21	US 4104-444 A47	30836-Y CDE	42203-Y DE	65264-Y DE
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BE -835-175 X21	CA 1066-190 B48+	J7 9035-422 B48	ZA 7603-861 Y26		CA 1066-113 B48	J7 9035-416 B48	J5 2108-911 Y4
NL 7512-745 X21			PT --65-502 Y29	16683-Y D			FR 2342-952 Y5
SW 7512-231 X25	58200-X BCDH	88797-X D	OE 7605-338 B26	DT 2538-703 Y10	30918-Y BCD	46342-Y D	GB 1511-470 A2
DK 7504-887 X32	DT 2601-867 X31+	BE -841-684 X48+	CA 1057-220 B28	NL 7609-422 Y11	BE -847-684 Y18	NL 7514-425 Y26	US 4093-670 A3
FR 2289-206 X36	BE -837-702 X32+	NL 7605-097 X49+	GB 1551-783 B36	FR 2322-201 Y22	NL 7609-445 Y20	NL -162-044 B48	DS 2706-603 B4
ZA 7506-869 X48	NL 7600-493 X32+	DT 2620-720 X49+	IL --49-934 B48	DL -126-212 Y33	SW 7611-871 Y23		
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US 4128-397 A50	J5 1095-021 X40+	J5 1139-655 Y03+	02365-Y ADFH	BR 7605-662 A14	DT 2647-158 Y26	BE -850-247 Y28	BE -854-898 Y3
DS 2548-953 B48	SW 7600-485 X40+	DK 7602-093 Y04+	DT 2626-942 Y02	CH -610-009 B16	DK 7604-889 Y29	NL 7700-216 Y30	NL 7705-808 Y5
	DK 7600-208 X41+	FR 2310-703 Y10+	US 4005-044 Y06	OE 7606-402 B31	BR 7606-978 Y39	DT 2700-729 Y30	DT 2624-047 Y5
	BR 7600-311 X44+	ZA 7602-656 Y19	J5 2002-887 Y08	GB 1556-725 B48	FR 2361-907 A20	J5 2090-183 Y36	DT 2145-590 A0
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J5 1070-837 X31	US 4018-894 Y17	CA 1066-125 B48	CA 1066-163 B48	NL 7610-159 Y13+	30923-Y D	FR 2361-092 A19	OE 7703-627 B4
FR 2290-160 X37	OE 7600-285 Y35	CA 1066-126 B48		J5 2046-117 Y21+	BE -847-702 Y18	PT --66-060 A35	GB 1556-905 B4
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OE 7508-488 A26	GB 1542-832 B13	90734-X D	BE -846-035 Y04+	GB 1556-710 B48+	DT 2648-797 Y20	GB 1540-053 B06	68877-Y BCD
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CA 1066-112 B48	OE 7706-024 B22	DT 2640-420 Y14+	DT 2640-420 Y14+	18459-Y BD	NO 7603-670 Y24	IL --51-240 B48	NL 7703-237 Y4
39280-X CD	OE 7706-025 B22	SW 7609-960 Y16+	SW 7609-960 Y16+	DT 2637-671 Y11+	DK 7604-862 Y29		DT 2711-953 Y4
NL 7512-820 X21	CA 1058-199 B32+	J5 2034-982 Y17	J5 2034-982 Y17	NL 7609-184 Y11+	SF 7603-060 Y30	49130-Y DE	J5 2117-437 Y4
DK 7504-937 X31	IL --48-851 B48	J5 2038-086 Y18	J5 2038-086 Y18	J5 2028-391 Y15	US 4042-493 Y34	FR 2326-885 Y28	FR 2345-160 A0
FR 2294-648 X44	IL --54-570 B48	DS 2515-067 B35	FR 2323-394 Y24+	SW 7609-154 Y15+	BR 7607-195 Y40	OE 7607-384 A11	US 4075-323 A1
ZA 7506-775 X48		OE 7601-743 B48	J7 7035-759 Y40	NO 7602-825 Y16+	ZA 7605-966 Y43	IL --50-636 B48	US 4083-962 A2
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HU T016-661 B29	DT 2602-770 X32+	90953-X BD	US 4091-093 A28+	DK 7603-746 Y21+	GB 1540-469 B07	52101-Y D	IL --51-429 B4
SU -651-653 B48	BE -837-831 X33+	DT 2621-276 X49	GB 1519-101 A30+	FR 2322-200 Y22+	IL --50-781 B48	US 4035-518 Y29	
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	SW 7600-637 X42+	NL 7604-429 X49	CA 1066-212 B48+	US 4087-329 A25+	32745-Y BD		BE -853-186 Y48
46051-X AD	J5 1100-073 X42+	SW 7604-818 Y01		GB 1515-805 A26+	BE -847-941 Y19	52243-Y BD	NL 7703-573 Y4
BE -836-147 X25	DK 7600-302 X42+	J5 1139-619 Y03	07997-Y DJ	DT 2660-172 A44+	NL 7612-026 Y20	BE -852-578 Y30	DT 2714-708 Y4
NL 7513-521 X25	SF 7600-175 X44+	DK 7601-907 Y04	DT 2630-543 Y05	DS 2637-671 A46+	DT 2648-121 Y20	DT 2711-087 Y39	SW 7703-773 Y4
SW 7512-039 X29	FR 2298-328 X48+	FR 2315-947 Y15	FR 2317-634 Y16	US 4134-793 B04+	SW 7611-906 Y24	NL 7702-897 Y40	J5 2122-688 Y4
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J5 1082-717 X36	GB 1528-639 A42+	GB 1488-774 Y41	US 4058-146 Y47	20315-Y ADJ	J5 2059-180 Y26	SW 7703-083 Y44	DK 7701-434 Y5
DK 7504-533 X37	HU T016-923 B36+	CA 1066-191 B48	GB 1556-673 B48	DT 2629-690 Y12+	SF 7603-049 Y30	NO 7700-957 Y45	BR 7702-085 A0
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ZA 7507-523 Y01		DT 2621-615 X49+	09275-Y ADEF	US 4063-452 A01+	FR 2338-251 Y44	FR 2344-539 A02	GB 1525-535 A3
OE 7509-130 A06	61611-X D	BE -841-880 X49+	BE -844-122 Y06+	GB 1554-441 B43+	PT --65-791 A12	GB 1524-325 A37	DL -132-795 B0
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US 4125-602 A47	NL 7602-678 X41+	SW 7605-536 Y01+	DT 2631-114 Y07+		US 4108-985 B11	OE 7701-825 B48	70987-Y ADE
GB 1533-405 A47	DT 2556-067 X41+	DK 7602-151 Y05+	FR 2318-267 Y17	25058-Y BDEH	IL --50-836 B48		DT 2709-400 Y4
IL --48-581 B32	BR 7601-637 X45+	J5 2000-277 Y07+	SW 7706-458 A03	US 4014-742 Y14	34475-Y ADF	54102-Y AD	J5 2114-604 Y4
CH -612-983 B38	SW 7603-516 X45+	SF 7601-380 Y08+	J5 2148-295 A04	BE -848-666 Y22	BE -848-255 Y20	BE -850-908 Y31	FR 2345-142 A0
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BE -836-148 X25	DL -123-590 Y12	DS 2621-615 Y28+	US 4128-484 A50	BR 7607-882 Y46	SW 7612-651 Y25	FR 2339-360 Y46	
NL 7513-811 X25	US 4011-733 Y12	NL 7811-282 B19+	GB 1550-205 B32+	FR 2343-046 Y51	J5 2061-360 Y26	US 4114-284 A39	75925-Y ABD
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DT 2553-594 X34	ZA 7601-694 Y17			CA 1066-214 B48	BR 7607-606 Y43		NL 7705-329 Y4
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IL --48-582 A45	65195-X DEM	FR 2318-641 Y18	DK 7604-500 Y26	IL --50-034 B48	DT 2548-285 Y20	FR 2340-901 Y48	GB 1556-584 B4
GB 1533-406 A47	DT 2505-435 X35	US 4020-060 Y18	FR 2327-547 Y28		NL 7611-978 Y20	BR 7700-886 A01	75944-Y D
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CA 1066-187 B48	NL 7601-244 X35	GB 1496-750 A01+	ZA 7605-850 Y43	DT 2643-178 Y15	PT --65-774 Y42	DS 2704-075 A42	DT 2630-872 A0
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J5 1103-200 X43	CH -597-366 A15	BE -844-403 X50	HU T017-085 B41	BE -850-141 Y19+	DT 2626-167 Y51	J5 2097-387 Y39	BR 7700-637 Y42
FR 2309-584 Y09	CA 1058-474 B32	NL 7607-827 Y07	IL --50-547 B48	DT 2700-338 A29+	NL 7706-325 A01	FR 2340-902 Y48+	GB 1548-490 B2
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US 4136-239 B05	DT 2616-212 X44	SW 7608-159 Y14	NL 7608-580 Y08	J5 3094-031 A38+	OE 7607-045 A26	IL --51-163 B48+	DT 2716-398 Y4
DS 2555-053 B47	US 3994-802 X50	FR 2318-640 Y18	J5 2021-271 Y13	FR 2376-665 A41+	GB 1556-518 B48		J5 2134-054 Y5
SU -651-707 B48	FR 2307-768 Y07	DK 7602-966 Y19	FR 2321-016 Y21	CA 1057-658 B29+		62691-Y ADF	FR 2347-891 A0
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BE -839-306 X31+	79268-X DE	US 3997-672 X52+	DT 2635-824 Y09	NL 7613-871 Y22+	J5 2068-751 Y29	NO 7604-099 Y29	BR 7700-252 Y4
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FR 2303-562 Y03	81626-X D	BE -845-377 Y01		J5 2083-979 Y35	FR 2346-292 A04	FR 2364-661 A24+	
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-855-150 Y48	CA 1066-182 B48+	US 4140-811 B09	J7 9036-150 B48	OE 7709-067 B48	NL 7808-098 B48+		J5 4135-275 B48
7706-000 Y51		GB 1556-801 B48				16151-B AD	
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2353-859 A12	DT 2734-466 A07	BE -859-389 A15	GB 1518-468 A29	GB 2000-113 B01	EP -813 B07+	HU H002-477 B45	EP -2-702 B29
1519-126 A30	NL 7708-561 A08	DT 2744-448 A16	GB 1518-469 A29	DT 2825-879 B02	DK 7803-351 B11+	GB 2021-070 B48	PT -68-797 B31
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	69966-B ABD	75757-B DEM	OE 7804-071 B48	BE -876-408 B48	86199-B AD		86726-B DFJ
	BE -876-180 B39	EP ---4-841 B42			DT 2919-354 B48		J5 4135-464 B48
	NL 7903-756 B48	J5 4135-449 B48	82544-B AD	85940-B DE	GB 2021-128 B48		
	DT 2918-929 B48		BE -876-120 B46	BE -876-427 B48			86731-B ABD
		77620-B DL	DT 2918-164 B47		86210-B ACDE		J5 4135-493 B48
	69974-B DE	DT 2910-335 B43	GB 2020-533 B47	85955-B D	DT 2919-554 B48+		
	BE -876-230 B39	NL 7902-497 B43	NL 7903-600 B48	BE -876-479 B48			86732-B ABD
	GB 2020-689 B47	US 4171-544 B44			DT 2919-578 B48+		J5 4135-494 B48
	DT 2918-355 B48	GB 2020-197 B46	82545-B AD	85956-B DE			
		J5 4135-496 B48	BE -876-121 B46	BE -876-489 B48	86218-B CDEF		86733-B ABD
	69975-B DE		GB 2020-157 B46		DT 2919-792 B48+		J5 4135-495 B48
	BE -876-231 B39	77635-B DF	DT 2918-258 B47	85962-B D			
	GB 2020-690 B47	DT 2913-354 B43+	NL 7903-598 B48	BE -876-511 B48	86219-B CD		86762-B D
	DT 2918-267 B48	GB 2018-849 B43+			DT 2919-801 B48		J5 4135-667 B48
		SW 7803-974 B48	82551-B D	85963-B D			
	69990-B CD	SW 7904-235 B48	BE -876-146 B46	BE -876-512 B48	86228-B ADG		86780-B DEJ
	DL -136-331 B39		NL 7903-403 B48		DT 2919-886 B48		J5 4135-694 B48
	CS 7803-268 B34+	77640-B BDJ	DT 2820-554 B48	85965-B DJ			
	DT 2819-830 B48+	DT 2913-550 B43		BE -876-517 B48	86229-B AD		86784-B DEF
		GB 2018-986 B43	82556-B DE		DT 2919-923 B48+		J5 4135-700 B48
	70279-B AD	J5 4136-896 B48	BE -876-161 B46	85978-B BCD	GB 2021-125 B48+		
	DT 2909-846 B39		DT 2918-901 B47	BE -876-563 B48+			
	GB 2017-073 B40		GB 2020-659 B47		86437-B ADG		
					GB 2021-123 B48		

86-B BD 4135-703 B48	87187-B BD SU -650-633 B48	87404-B D US 4174-660 B48
87-B BD 4135-704 B48	87198-B ADE SU -651-020 B48	87413-B D US 4174-772 B48
88-B BD 4135-705 B48	87199-B ADE SU -651-021 B48	87455-B BD US 4175-006 B48
95-B CDE 4135-724 B48	87200-B CD SU -651-025 B48	87456-B BCD US 4175-007 B48+
320-B BD 4135-790 B48	87201-B BD SU -651-026 B48	87457-B D US 4175-008 B48
325-B ADE 4135-805 B48	87202-B BD SU -651-027 B48	87463-B DJ US 4175-020 B48
334-B DE 4135-822 B48	87203-B BD SU -651-028 B48	87475-B DE US 4175-038 B48
352-B AD 4135-847 B48	87204-B D SU -651-030 B48	87477-B DJ US 4175-040 B48
330-B DJ 4136-571 B48	87225-B CD SU -651-761 B48	87478-B D US 4175-041 B48
335-B DJ 4136-576 B48	87228-B D SU -651-771 B48	87498-B D US 4175-075 B48
341-B DJM 4136-585 B48	87229-B D SU -651-773 B48	87503-B BCDE US 4175-087 B48
350-B DE 4136-597 B48	87230-B D SU -651-776 B48	87504-B BCDE US 4175-089 B48+
361-B D 4136-747 B48	87231-B CD SU -651-777 B48	87506-B AD US 4175-100 B48+
362-B D 4136-749 B48	87232-B CD SU -651-778 B48	87517-B BD US 4175-120 B48
363-B D 4136-750 B48	87233-B D SU -651-779 B48	87518-B CD US 4175-121 B48
340-B AD 4137-092 B48	87234-B D SU -651-780 B48	87528-B D US 4175-141 B48
364-B D 9035-412 B48 1067-669 B48	87235-B AD SU -651-803 B48	
365-B ADJ 9035-419 B48 0152-554 B48	87236-B AD SU -651-807 B48	
366-B AD 9035-420 B48 0159-151 B48	87242-B BD SU -651-813 B48	
397-B ACD 9036-112 B48 9084-864 B48	87258-B ADGL SU -651-956 B48	
398-B CD 9036-113 B48 9047-152 B48	87267-B DJM SU -652-123 B48	
399-B CD 9036-115 B48 9091-873 B48	87274-B DEL SU -652-138 B48	
400-B CD 9036-120 B48 7027-792 B48	87277-B CDEH SU -652-315 B48	
413-B D 7804-946 B48	87289-B D SU -652-421 B48	
414-B D 7804-983 B48 ---5-570 B48	87295-B DJ SU -652-427 B48	
416-B D 7805-155 B48	87307-B D SU -652-939 B48	
418-B D 7903-483 B48+	87311-B BD SU -652-950 B48	
467-B CD J -635-635 B48	87322-B D SU -652-964 B48	
469-B D J -644-809 B48	87378-B DE SW 7801-134 B48 SW 7801-134 B38	
470-B D J -644-837 B48	87390-B D US 4174-551 B48	
	87395-B DE US 4174-571 B48	

BE -876

* 408 85938B B05D16E19
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* 427 85940B D25E36
* 479 85955B D15
* 489 85956B D16E17
* 511 85962B D15
* 512 85963B D15
* 517 85965B D14J01
* 563 85978B B05C03D13

BE -877

* 880 85982B D13
* 920 85997B D21E17P2
* 941 86005B D13
* 998 86021B D14J01P2

BE -878

* 003 86022B D15

CA 1066

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= 013 09703B D13P1 + Q4
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= 039 81010Y D13E13P1
= 040 72521W D18E14P1
= 112 38471X D13
= 113 30836Y C02D13E23
= 114 89916Y D13 + P4
* 115 86025B C03D13
= 116 39280X C03D13
= 117 81626X D13
= 118 43991A D13
= 119 31769X D13
= 120 03921X D13
* 121 86026B A97D13
= 122 77854Y D13
= 123 24471X A97D12 + P4
= 124 97976X D12
= 125 88797X D12
= 126 88797X D12
= 127 47687W D23
= 128 52101Y D13P1
= 129 86308Y D22
= 141 20315Y A97D22J04R1 + P1
= 159 26921A D14
= 163 02365Y A26D15F09H01
182 04265A D15J01
= 186 46051X A14D22P3
= 187 46052X A14D22 + P3
= 190 57893X B04D16
= 191 90953X B04D16
= 194 79268X D21E16
195 65184A D21E33
= 208 79897A A85D16L03P4
= 210 81075Y B04D16R1
= 211 18459Y B04D16R1
= 212 05729Y B04D16
= 214 25058Y B05D13E17H04
= 219 26764X D22E14 + P3
227 58924A D15 + P4R5
= 269 22543W B02C02D13
= 438 66809X D15
= 439 14969Y A88D15J01
= 445 83736Y A14D15F09
= 449 13435X A96D21

DK 7801

572 78323A B04D16
= 576 75611B D12
580 41958A D22P4 + P3
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= 618 79396B D15
650 76297A B02D16E17

DK 7901

= 099 27500V D15
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= 547 79327B D16E13
= 548 77805B C03D16
= 578 75687B D13E24

DS 1695

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= 498 31893F B05D21E16

DS 1757

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DS 2034

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DS 2051

= 523 30122S A15D21E16

DS 2066

= 053 13680S A14D21E14

DS 2156

= 121 33803T D13

DS 2340

= 119 15852V D15

DS 2401

= 014 35974W C03D22P3

DS 2405

= 589 54032W C03D13

DS 2422

= 560 78922W D11

DS 2458

= 577 57417W D15J01

DS 2459

= 505 36013X D13

DS 2505

= 435 65195X D15E11M14 + Q6

DS 2535

= 668 11431Y D15J07Q7 + Q4

DS 2548

= 285 34600Y C03D13 + P7
= 953 36409X D22E36P3

DS 2603

= 842 55966Y D15

DS 2639

= 034 17984A D15Q6 + R2

DS 2654

= 318 40662A D11

DS 2706

= 603 65264Y D15E16

DS 2731

= 543 06252B D23E13

DS 2748

= 633 21425A D23E15

DS 2759

= 110 47754A D25E36

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* 265 86035B A88D15J01

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DT 2819

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DT 2820

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* 942 86066B A23D13E12

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* 742 86097B D15
* 782 86099B D15J09
* 790 86100B D16H09
= 889 35242B B04D16
= 890 71746B B04D16

DT 2822

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* 074 86133B D18E36
* 075 86134B D18E36
* 125 86138B A96D21
* 198 86151B A96D21

DT 2823

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DT 2905

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DT 2917

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* 899 86170B B04D16

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= 355 69974B D25E33

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* 354 86199B A96D22P3
= 389 84667B D13
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* 578 86211B B04D16R1
= 701 84175B D13
* 792 86218B C02D22E13F09P6
* 801 86219B C03D15
= 842 71731B D18P1
* 886 86228B A82D22G02P4
* 923 86229B A96D22P3

DT 2920

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* 272 86240B C03D13
* 293 86241B B04D16

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* 445 86247B D14P4
* 446 86248B D21E16
= 465 84359B A60D25E23F06
* 536 86275B A23D15J01
* 546 86279B D18E17
* 553 86284B D15
= 570 87114B D11 + P6Q3
* 580 86295B D15M28
* 614 86306B B03D16
* 615 86307B A96D22P3
* 618 86309B A97D25P3
* 637 86317B B04D16R1
* 644 86321B B04D16
* 650 86324B D15J04
* 651 86325B D17P4
= 659 68152B D23E19

FR 2417

= 258 63417B D12
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* 260 86348B D13Q7
= 261 64892B D13
= 262 64900B D13
* 263 86349B C03D13
= 264 63486B D13
= 265 47225B C03D13
= 266 61756B D13
= 290 63305B A96D21E33 + P3
= 298 47216B A96D22L02P3
* 326 86352B D16J01
= 328 63493B D15H01J01 + Q4
= 329 63432B A35D18J01P1
= 333 44099B D11
= 334 63400B A31D14J02 + P1
* 345 86355B D13P1P4
= 382 63269B A32D22 + P2
= 389 61693B A96D22P2P7
* 475 86370B D15
= 476 65803B D15
= 483 65802B C03D13Q7
= 489 68340B D17E17
= 492 68495B A25D22E16
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= 514 65025B B04C03D16
= 516 63424B A88D15J01
= 524 63399B A96D22 + P3
= 544 63355B D25 + Q7
= 545 61760B D25E16
= 546 59824B A97D25E11 + P4Q1
= 547 63500B D25
* 548 86373B B05D16E17
= 769 61783B A96B04D16 + R1
* 774 86384B D15J04R1
= 912 63393B D21M26Q7 + R5
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GB 1556

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= 656 25570Y D15Q4
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= 673 07997Y D16J04Q3R1
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GB 1556

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= 865 44455A D12Q3 + Q6
* 883 86411B D13
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= 913 88066Y D18

GB 2020

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GB 2021

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= 118 75570B B04D16
* 119 86435B B04D16
= 120 16009B D13
* 123 86437B A96D21G03
= 125 86229B A96D22P3
= 128 86199B A96D22P3
* 140 86444B A97D13
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* 142 86445B D25
* 143 86446B A97D22
= 146 63165B D16
= 248 15958B A88D15Q7

IL --46

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IL --48

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IL --49

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= 718 92452X B02C02D22 + P3
= 934 00047Y B02C02D16

IL --50

= 034 25485Y D15J01
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= 547 11217Y B04D16J04R1 + R4
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= 781 30923Y D15
= 836 32745Y B03D16
= 879 39853Y D15H03
= 899 34475Y A91D15F09

IL --51

= 135 34443A C03D13 + P4
= 163 59683Y B05D13E36
= 166 59674Y B05C04D13E36
= 240 48808Y A96D22F01P3
* 247 B D14Q3
= 429 68877Y B04C03D16
537 27019Y B04C03D16
= 667 69285A A96B04D16J04R1
= 822 70754Y D16E17

IL --52

= 271 01401A A88D15J01
= 654 62691Y A96D22F07P3
= 762 23565A D15

IL --53

* 827 B D15P1Q3

IL --54

= 113 63814A D13J02 + P1Q3R2
= 570 58200X B05C03D22H01P3

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J4 9047

= 152 87098B C03D13

J4 9084

= 864 87097B A97C03D13

J4 9091

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* 077 86511B D15J01
* 091 86521B D22E36J03
* 489 86579B D23J04R1
* 711 86601B A96D21E19
* 712 86602B A96D21E19
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* 214 86687B A96B04D22P3
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* 222 86691B C03D22E19
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* 229 86697B D22P3
* 233 86698B D21E17
* 234 86699B A96D21E16
* 235 86700B D21E14
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* 260 86701B D12
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* 297 86704B B04C03D16
* 298 86705B A97B05D16E16
* 299 86706B B05D16E17H04
* 300 86707B B04D16
* 448 86724B D15
= 449 75757B D15E33M11
= 451 70279B A88D15
* 464 86726B D15F09J09Q7
* 493 86731B A96B05D22P3
* 494 86732B A96B05D22P3
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* 576 86935B D17J01
* 585 86941B D15J01M25
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* 749 86962B D15
* 750 86963B D15
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= 413 13654X D15E19
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* 113 87098B C03D13
* 114 87099B C03D13
* 115 87100B C03D13

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= 162 54387V D23

NL -161
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= 973 43635Q A97D12
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= 975 44426W D13
= 976 17830W D13
= 977 02828V D13E19
= 978 82782R B05D13E14
= 979 40672S B03D13E13
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= 986 74327V D22P3
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NL -162
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= 044 46342Y D15
= 055 89135V D23E14
= 064 36376X D23E16
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= 133 57440R D24
= 134 35812R A16D25E19
= 135 38214F B04D16
= 136 90985X B03C02D13
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* 155 87116B D11

NL 7808
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OE 7700
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OE 7703
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= 598 56790A A21D14E14H09

OE 7801
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CENTRAL PATENTS INDEX CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

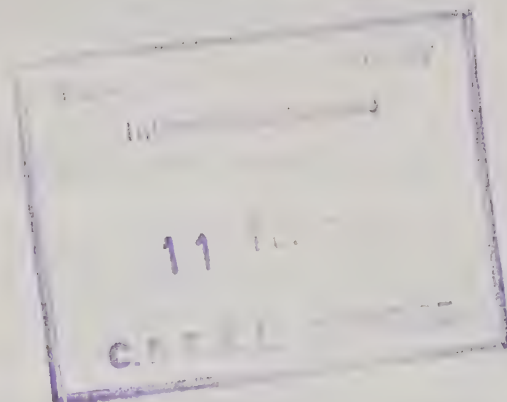
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ABSTRACTS

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COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	27 NOV - 3 DEC 79	876,570 - 876,748
BRAZIL	20 NOV 79	7,605,415 - 7,905,218
CANADA	20 NOV 79	1,066,451 - 1,066,850
DENMARK	12 NOV 79	7,801,653 - 7,901,649
E. GERMANY	5 SEP 79 + 12 SEP 79 + 19 SEP 79 + 26 SEP 79	67,182 - 131,524 137,393 - 137,872
W. GERMANY		
-DAS	29 NOV 79	1,521,387 - 2,923,255
-OLS	29 NOV 79	2,757,631 - 2,921,639
FRANCE*	21 SEP 79 (BOPI 26 OCT 79)	2,417,925 - 2,418,610
UNITED KINGDOM	5 DEC 79	1,556,921 - 1,557,380 2,021,371 - 2,021,910
ITALY	10 JUL 79	1,033,001 - 1,033,500
JAPAN		
-Unexamined		47,029,404 - 54,098,366
	25 OCT - 31 OCT 79	54,137,301 - 54,140,600
-Examined	8 NOV - 14 NOV 79	79,036,201 - 79,037,400
NETHERLANDS	19 NOV - 25 NOV 79	7,805,229 - 7,904,582
NORWAY	12 NOV 79	7,801,301 - 7,903,163
PORTUGAL	15 NOV 79	62,973 - 69,424
RUMANIA	MARCH 79	58,489 - 68,291
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UNITED STATES		
-Reissues	27 NOV 79	Re30,159 - Re30,161
-Patents	27 NOV 79	4,175,292 - 4,176,406
PCT	29 NOV 79	7,900,971 - 7,901,050

*Printed patents actually published mid - late November, 1979

Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Other Classes	Publication Date	Main CPI Class for Section	Latest Priority	Earliest Disclosure Basic Patent	Accession No	Earliest Priority	Patent No	IPC
MEDA-				A89			69369W/42		=US3964-992	
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)										
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)										
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26										

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

MP- ★ D11 B/49 ★ BR 7904-260
Dough shaping and dividing machine
CIMPAM COM IND MAQ 06.07.79-BR-004260
(20.11.79) A21c-05

UAK ★ D11 87614B/49 ★ CA 1066-552
Cutting food extrudate with upward cutting stroke - to allow cooling
of material through a surrounding vapour-permeable safety shroud
QUAKER OATS CO 31.10.75-US-627760
P71 (20.11.79) A22c-07 B30b-11/22

Food e.g. dough, is shaped by extrusion and the extruded
strand is cut into pieces such that the pieces are forced
forward upon exiting the extruder. Heat and steam is
dissipated from the extrudate at the cutting point. The cut
pieces fall gently onto a conveyor for transfer to a
packaging device. A vapour-permeable shroud surrounds
the cutting device.

The appts. dissipates steam build-up at prod. recovery
and minimises clumping and deformation of the prod.
The vapour permeable shroud provides protection to
machine operators as well as permitting the extrudate to
cool to a described stability. 16.9.76 as 261363 (15pp1044)

IMM/ ★ D11 87624B/49 ★ DL-137-397
Dosing and spreading viscous heterogeneous toppings and fillings -
at infinitely variable speed on bakery products vibrated afterwards
ZIMMER L 23.06.78-DL-206228
(05.09.79) A21c-05

Profiled cylinders are set up a forward in a heterogeneous
mass of paste to be dosed out as topping or filling for
pastries. As the flow passes through an adjustable open-
ing, it forms a viscous film which is made to flow unifor-
mly by being passed over a vibrator plate.

The plant is intended to dispense toppings and fillings
of different consistency and structure, so that there is
uniform covering without an auxiliary manual operation
being necessary. The work is mechanised and the quality
and the uniformity of the layering is improved. Damage
to stones in fruit is avoided as is also the soiling of the
end faces of the baking tins, by a brief interruption of
the flow. 23.6.78 as 206228 (6pp1045)

NN- D11 61481V/35 = DS 2416-624
Automatic distribution appts. for cut lengths - partic. for moving
slices into ovens in perfect alignment
BONNAND/LORNAC 12.04.73-FR-013316
+Q35 (29.11.79) *BE-813-122 A21b-03/07 B65g-47/84 B65g-
59/12

The carriers extending along the mantle line of a transfer
cylinder for distributing stacks of slices of dough for bis-
uits singly onto a conveyor belt feeding an oven, are form-
ed by rectangular cutouts in the surface of the cylinder.
Each carrier projects to a distance less than the thickness
of the slices, and carries a single row of slices with it into
a slot between the cylinder and a sheet metal guide plate.
The plate is curved to suit the cylinder and is fixed at a
constant distance from it to allow the slices to pass through

The feed table to which the stacks of slices are trans-
ferred from a conveyor is inclined upwards towards the
cylinder, and is formed by a series of parallel, equally
spaced bars aligned in the same plane. A row of plungers
guided by cam tracks projects between the bars to move
the stacks of slices forward towards the transfer cylinder.
The arrangement works efficiently either continuously
or intermittently and delivers the slices to the baking oven
at high speed, perfectly flat and without crumb formation.
4.74 as 416624 (8pp1045)

BRIA D11 38210X/21 = DS 2451-326
Combined cutting and shaping machine for bakeries - compact
installation without pre-sheeters feeds laminates of single dough
sections

MASCH FAB BRIEM-HEN 29.10.74-DT-451326
(29.11.79) *DT2451-326 A21c-11

The two conveyors beneath the pair of feed cylinders in
each of the hoppers of a machine for the prodn. of strips
of dough with a laminator, for various kinds of bakery
prods., are extended outwards, beyond the pairs of cylin-
ders at each side, so as to be able to feed another belt at
each outer end.

The two conveyors are roller conveyors and means are
provided for reversing their direction of motion. The
plant with its two dough mixers, smoothing cylinders, cut-
ters, etc., is very compact and its cost of prodn. is red-
uced considerably. 29.10.74 as 451326 (6pp1045)

WERN ★ D11 87795B/49 ★ DT 2821-846
Dough mixing and kneading machine - has double arm tool inclined
at small angle to vertical
WERNER & PFLEIDERER 19.05.78-DT-821846
(29.11.79) A21c-01/04

The bowl of a dough mixing and kneading machine rotates
on a vertical axis and has inside it, a mixing and kneading
tool extending from above to the bottom of the bowl. The
axis on which the tool rotates is inclined and eccentric to
that of the bowl, and the enveloping surface of the tool
which has ≥ 1 arm is represented by a cylindrical rotary
body which is tangential to the wall of the bowl over the
whole height of the wall.

The axis of the tool is inclined at an angle of 15 - 30°
to the vertical. The tool is, moreover, in a vertical plane
which is spaced at a distance from the centre of the bowl
corresponding to 0.9 - 1.1 times the radius of the rotary
body representing the enveloping surface of the tool.

Used to improve the efficiency of machines with inclin-
ed mixing and kneading tools, so that dough of the same
good quality is produced from mixts. of very different ch-
aracter, irrespective of whether the capacity of the bowl
is used partly or to the full. The machine is of simple de-
sign and easy to handle. 19.5.78 as 821846 (17pp1045).

FABR/ ★ D11 87998B/49 ★ FR 2417-945
Bakery dough moulder for cylindrical stick loaves - uses opposed
belt elongators for improved form and texture of prod.
FABRE H S 23.02.78-FR-005473 (05.06.75-FR-017992)
(26.10.79) A21c-03

A bakery machine for moulding dough pieces into elong-
ated sticks via rollers, rolling belt and extending belt with
reaction plate. An intermediate proving conveyor gives
supplementary expansion of the dough to permit maximum
elongation without tearing. The elongated sticks are cut in
to short loaves by a rotary disc cutter.

In this addn, elongation of the dough is effected betwe-
en pairs of belts rather than belt opposed by reaction plate

The pairs of belts provide additional rolling of the
dough upon itself so that the cylindrical form of the stick
and the texture of the prod. are improved. 23.2.78 as
005473 Add to 5.6.75-017992 (7pp448)

EQUI- D11 45908A/26 = GB 1557-025
Continuous oven for baking bread - has rotary beds vertically
spaced coaxially to fit in confined spaces
EQUIPOS IND LLOYD 21.02.77-ES-456397
Q77 (05.12.79) *BE-864-145 A21b-01/42

A continuous oven has a circular baking chamber contg. a
firebox at the bottom, and a rotary soleplate between two
heat-radiating chambers each having its own heat control.

The oven pref. has ≥ 2 baking chambers, each operable
separately. Each baking chamber is pref. inclined at 6°

to the horizontal, with an access door at the lowest part. The soleplate is pref. of a refractory material.

Uniform cooling of different batches is assured. Used esp. for baking bread. 8.2.78 as 005086 (5pp1376)

SPIIL-★ D11 88136B/49 ★GB 2021-792
Removing dough from hopper and dividing into pieces - with weighing of hopper periodically to adjust action of divider
SPILLERS LTD 08.06.79-GB-019957 (10.03.78-GB-009503)
R13 R26 (05.12.79) G01g-19 G05b-11/*

Bread in a hopper supplies a divider positioned beneath the hopper and forming individual dough pieces. The hopper is mounted on weighing cells and after a predetermined number of cycles of the divider e.g. 32, the hopper weight is measured. From these measurements the quantity of dough used is calculated and compared with a target value. The error signal is used to adjust the divider to alter the size of the dough pieces. Pref. a gate can be slid across the hopper discharge during weighing to isolate the dough from the hopper. 8.6.79 as 019957 (20pp295)

ASAE ★ D11 88496B/49 ★J5 4139-612
Prepn. of fluid fat used in cakes - by adding glycol mono:stearate(s) and soybean lecithin to vegetable fat and heating repeatedly
ASAHI DENKA KOGYO 21.04.78-JA-048288
(30.10.79) A23d-05 C11b-07

A mixt. of emulsifiers consisting of 6.0-12.0 wt. % propylene glycol monostearate, 1.0-3.0 wt. % glycerin monostearate, and 0.1-1.0 wt. % soybean lecithin, each based on the wt. of a vegetable fat, is added to the fat and the mixt. is heated until it is melted completely. Then, α -type crystals of the emulsifier mixt. are deposited by cooling quickly and kneading. The mixt. is heated again to a temp. above the m.pt. of β -type crystals of the emulsifier mixt. The temp. is not higher than the m.pt. of the intermediate type crystals. The intermediate type crystals are allowed to deposit by holding its temp. in the temp. range for 1-100 hrs. It is further cooled to the room temp. to deposit the β' -type crystals of the emulsifier mixt. Thus, a fluid fat used for cake-making is prepd.

The fluid fat prepd. has a lower temp. limit of the fluid state as low as 0°C and very high higher temp. limit of the sepn. of crystals by melting as high as 30°C. The fluidity of the fat is preserved for a long time without causing sepn. 21.4.78 as 048288 (5pp126)

KAOS ★ D11 88671B/49 ★J7 9036-223
Prod. of cake e.g. short-cake - includes addn. of delta-gluconic lactone to non bleached flour
KAOSOAP KK 13.01.78-JA-002460
(08.11.79) A21d-02/18

In the mfr. of cakes from non-bleached flour, the improvement comprises adding to the non-bleached flour 0.1 to 3 wt. % δ -gluconic lactone (I). (I) prevents volume shrinkage of cakes. Used for making roll cake, christmas cake, etc. 13.1.78 as 002460 A21d-2/18 (8.11.79)
KAOSOAP KK (3pp83)(J5 4098366)

QPPP D11 10889B/06 = J7 9037-213
Brightening agent for bread and confectionery - is prepd. by mixing sugar alcohol with egg
Q.P. CORP 31.05.77-JA-062738
E17 (14.11.79) *J53148-558 + A21d-15/08 A23g-03

The brightening agent is prepd. by combining 1.5-18 pts. wt. sugar alcohol with 100 pts. wt. of whole egg. The agent is cheaper and is not oxidn. acidified. It gives a brilliance to bread and confectionery which is not rapidly lost.

Pref. sugar alcohol is sorbitol, maltitol, reduced maltose, millet jelly, etc., and the egg must be fresh. 31.5.77 as 062738 A21d-15/08, A23g-3/00 (14.11.79)
Q.P. CORP (3pp)(J53148558)

DAII D11 33911A/19 = J7 9037-219
Powdery surfactant compsn. for incorporating into food prods. - comprises sugar or sugar alcohol granules contg. surfactant particles and has good foaming and solubility properties
DAIICHI KOGYO SEIYA 02.09.76-JA-105478
(14.11.79) *J53032-162 A21d-02/16

A powdery emulsifying and foaming agent is prepd. by adding surfactant (e.g. sucrose fatty acid ester, glycerol fatty acid ester sorbitan fatty acid ester or propylene glycol fatty acid ester) to sugar and/or sugar alcohol, under melted condition, kneading the mixt. cooling it and crushing it.

The powder emulsifying and foaming agent has excellent solubility in water and foaming property and can be added to powdery foods such as powdery cake mixt without deteriorating the taste or flavour.

The surfactant combines with the sugar and/or sugar alcohol to give a surfactant in sugar type emulsion. The powder prod. has such a structure that the surface of the granules is composed of highly soluble sugar and/or sugar alcohol and the fine granular surfactant is present inside of the granules.

As sugar, soluble sugar such as sucrose, maltose, fructose, glucose, etc. and sugar alcohol such as sorbitol, maltitol etc. are used. They are melted at 100-200 °C and powdery surfactant is mixed in. Pref. sucrose fatty acid opt. with other surfactant is used to provide excellent solubility and foaming property. 2.9.76 as 105478 A21d-2/16 (14.11.79) DAIICHI KOGYO SEIYAKU (5pp)
(J53032162)

KIFO=★ D11 89032B/49 ★SU -654-2
Bread-baking oven - has initial hydrothermal processing section, which conveyor travels up and along while dough pieces are sprayed with steam

KIEV FOOD IND TECHN 15.03.77-SU-462997
(30.03.79) A21b-03/04

Bread-baking oven, in which the pieces of dough are hydrothermally processed prior to being fed into the working chamber of the oven proper, comprises a conveying base which rises up in the zone where the blanks are treated. It is formed into three sections, i.e. the two end parts which slope upwards and downwards, respectively, and the centre horizontal part. Above the conveyor is the steam-moisturising manifold to which perforated tubes are connected. The uniformity with which the steam is distributed over the width of the oven bottom is increased and the consumption of steam is reduced, by positioning the tubes along the direction in which the conveyor is moving and bending them to conform to the profile of the horizontal and sloping parts of the conveyor. The number of tubes equals the number of rows of pieces of dough. The manifold is located at the inlet side of the conveyor and connected to the sloping parts of the tubes.

Shulgin I. M., Bul. 12/30.3.79 15.3.77 as 462997 (3pp29)

MCGR ★ D11 89150B/49 ★US 4175-48
Doughnuts moulded between heated plates - with central well holding oil displaced into cavity when mould is closed
MCGRAW EDISON CO 18.05.78-US-907045
(27.11.79) A21b-05/08

Doughnut maker comprises a pair of heated moulds which are brought together to create toroidal moulding chamber. The lower mould carries a well in the centre of the toroid and the upper mould carries a plunger which is received within the well when the mould parts are closed. Typically the well and plunger are frustoconical. Oil is placed in the well when the moulds are open and is displaced by the plunger when the moulds are closed.

The oil coats the mould when it is closed to produce a doughnut crust. The plunger and well interengage to ensure the accurate closing of the mould halves. 18.5.78 as 907045 (4pp295)

D12: MEAT; FISH PROCESSING

★ D12 87597B/49 ★ BE-876-700
paring coherent flesh product from pieces of flesh - by working,
plying specified emulsifier and then cooking
UNILEVER NV 31.05.78-GB-025164
(30.11.79) A23/A23p

The process comprises first mechanically working on the
ces of $\geq 30g$. to form a sticky exudate on the surface.
en 0.01-5% of an emulsifier is applied selected from
mono- and/or di-glycerides and sodium 2-stearyl-lactyl-
. The coated pieces are then cooked under pressure in
essel such that the temp. in the middle of the flesh is
80°C. The process is applied e.g. to pork, beef, lamb,
oultry and fish. The use of the emulsifier enables great-
cohesion in the product which is stable to reheating.
The emulsifier is pref. applied by powdering the sur-
e, esp. during the mechanical treatment. The pref.
nt. is 0.1-4%. Additionally a water-absorbing agent is
ef. applied which gels on heating, esp. 1-10% of an at
st partly non-gelatinised starchy material, specifically
ya flour, applied after the emulsifier. The cooking is
ef. in an atmosphere of high humidity with a pref. inter-
l temp. of 65-75°C. 31.5.79 as 876700 (6pp597).

★ D12 87844B/49 ★ DT 2822-854
awns or shrimps mechanically crushed between bolts or rolls -
ble flesh is then swept sideways to separate from broken shells
THOMSEN W 26.05.78-DT-822854
(29.11.79) A22c-29

awns, shrimps, etc., specifically North Sea prawns,
e broken up by collecting them individually, esp. by an
Hless belt, from a tank and discharging them onto an
Hless belt or roller system which crushes them to flatt-
the shells. The internal organs are squashed to form a
sh and the fleshy portions are expelled from the shells
H separately removed for use.
An endless belt has hooks each capable of picking up one
awn from the tank, a revolving brush sweeps them from
e belt onto an endless belt cooperating with an upper
lt; as the prawns are conveyed between these two endless
lts over a stationary table a diagonal scraper bearing
wn on the upper belt crushes them. Due to the diagonal
rangement of this scraper the fleshy portions are swept
one side of the belt, while the portions of shell are
nveyed onwards and discharged. The tank may be water-
led and contain a large number of prawns and the water
kept in motion to direct the prawns towards the hooks
the belt.

The pleasant-tasting portions of the flesh are removed
om the internal organs and shell in an entirely automatic
eration. 26.5.78 as 822854 (12pp236).

★ D12 87852B/49 ★ DT 2822-886
ular packing film, esp. sausage skins - of cellulose hydrate
nforced with fibres coated with a binder and an optically active
stance

HOECHST AG 26.05.78-DT-822886
A97 Q34 (A11 A21 A92) (29.11.79) A22c-13 B65d-65/38
Abular packing film of opt. chemically plasticised cell-
ose hydrate has a fibrous insert in the walls. At least
rt of the fibres are coated (partially) with a compsn.
mprising a major proportion of a synthetic hydrophilic
sin precondensate as binder and a minor proportion of
optically active chemical substance.

The fibrous insert is e.g. a paper fibre web coated
th a com psn. comprising a urea-formaldehyde,
elamine-formaldehyde or epichlorohydrin-polyamide-
lyamide binder resin and an optically active substance
ch as a dye or light-protective agent. The web is coated
th viscose soln., treated with a coagulating liq., opt.
eated with a chemical plasticiser and dried.

Prods. are fibre reinforced cellulose hydrate mater-
ls with excellent strength properties. Formation of the
llulose hydrate structure is not hindered as in some
lor processes where the optically active material is
dded to the viscose. The walls of the tube are comprised
ly of cellulose hydrate and opt. the plasticiser. The

prods. are esp. useful as sausage skins. 26.5.78 as
822886 (15pp513).

KOND/ ★ D12 87916B/49 ★ DT 2917-077
Sausage-making press with stack of rectangular frames - made as
single units esp. from drawn or rolled aluminium alloy
KONDIC-DELNON V 16.05.78-CH-005270
(29.11.79) A22c-07

A press for making sausages consists of a rectangular
base plate, a stack of frames of equal size on the base
plate and a top cover applied under pressure. Each frame
is made in one single piece and has a horizontal, outward-
ly projecting flange. The vertical flange of the frame is
reinforced with peripheral ribs.

Preferably, the pressure is applied by ≥ 1 pneumatic
cylinders supplied from a compressed air source and fix-
ed on a top beam above the press, so that the piston press-
es down onto the cover.

Each frame is light and economical to mfr. and is
easy to clean. 27.4.79 as 917077 (8pp236).

★ D12 87930B/49 ★ DT 2919-594
Small crustaceans processing system - using high speed working
medium to crack shells and separate fleshy parts in three stages
PROVISIONS EQUIP (SEAF) 01.12.78-SU-690463 (15.05.78-SU-
614820)
(29.11.79) A22c-29/02 A23k-01/10 A23l-01/32

The fleshy parts of shrimps, krill and other crustaceans
are separated from the shells by moving a working
medium such as air at a velocity which is high enough to
produce a pressure differential between the inside of the
shells and the outside. This destroys the shells. The pro-
cess is pref. done in stages.

The end prod. is pure flesh with a minimum content
of lipids or other underisable admixtures. 15.5.79 as
919594 (+ 13.7.78 - US - 631402) (30pp39).

AIRR ★ D12 88071B/49 ★ GB 2021-382
Two/stage cooling of bacon slabs - prior to slicing with intermediate
holding stage for equalisation of temp. throughout slab
AIRCO INC 30.05.78-US-910918
(05.12.79) A23p-01

Bacon slabs are prepared for slicing by initially cooling
them from $\geq 90^\circ\text{F}$. to an average temp. of $45-50^\circ\text{F}$. The
cooled slabs are held at this temp. to equalise the temp.
throughout the slab. The slabs are then further cooled to
an average temp. of $22-26^\circ\text{F}$. when they are moulded
preparatory to slicing. Pref. the holding time for equalis-
ing the temp. is about 30 mins., and they are pref. held
in an inert atmos.

The method is used to cool cured and smoked bacon
slabs from the smokehouse temperature of about 120°F .
to $22-28^\circ\text{F}$. before being inserted into a mould press.
18.5.79 as 017480 (6pp295)

CASH- ★ D12 88129B/49 ★ GB 2021-725
Safety device for bacon press - has vertically moving transparent
guard door which is released to drop under own weight and
activate press in lowered position
CASHIN SYST CORP 22.05.78-US-908536
Q68 (05.12.79) F16p-03/10

The transparent door prevents operation of press when
in any position other than closed, initiates operation of
the press when closed, and is automatically opened when
the press angle of operation is completed.

The press is entirely enclosed by safety screens and
by the door which may be closable under its own weight
when released. The door is interconnected with the elec-
trical and hydraulic systems of the press. Two micro-
switches are mounted on the door track and have respec-
tive actuating arms engaged by the door. A stop arrests
door movement slightly above the level of the top plate of
the press. 3.5.79 as 015377 (10pp552)

BARR- D12 14872U/11 = J7 9036-221
Shell fish treatment - to prevent discolouration while awaiting preservation by freezing
BARREIROS HNOS FINA (BAR -) 23.03.72-ES-401129 (07.05.71-ES-390948)
(08.11.79) *FR2137-541 A23b-04/06

Process to prevent deterioration, partic. discolouration by blackening, of shell fish awaiting freezing for preservation, the process avoids the use of boric acid and sodium bisulphite which have previously been used to prevent blackening, but which have undesirable side-effects.

The shell fish are submerged in an aq. soln. of a harmless acid other than boric acid, e.g. citric, ascorbic or tartaric acid, at a pH 2-4, and the soln. is pressurised to 3 to 6 kg/cm² by injection of CO₂, this pressure being held for a while after which decompression is effected gradually over 1 to 2 mins. 8.5.72 as 045825 (clg. 7.5.71, 24.3.72-ES-390948, 401129) A23b-4/06 (8.11.79)

BARREIROS HNOS. S.A. FINANCIERA. (5pp)(J48001157)

SANY D12 34152W/20 = J7 9036-222
Deodorisation and blood-removal of meats and fish eggs - by immersion into an aq soln contg. lipase and a water-soluble salt of citric acid

SANKYO KK 27.07.72-JA-075260

(08.11.79) *US3882-249 A231-01/31

Deodorisation and blood removal of fish meat, marine animal meat and fish egg comprises immersing the meat or egg into an aq. soln. contg. lipase and a water-soluble salt of citric acid pref. Na citrate, The concn. of the lipase in the soln. being 1×10^3 to 1×10^5 units per litre soln. and the concn. of the water-soluble salt is 0.6-3.0 in soln., for a period of 0.5 to 6 hr.

The process is simple and efficient, and the products show a highly improved colour tone by the effective removal of blood and have a highly deodorised level of offensive odour including irritating fishy, rancid smells etc. 27.7.72 as 075260 A231-1/31 (8.11.79) SANKYO KK (3pp)(J49031853)

SEIW- D12 18798Y/11 = J7 9036-665
Euphausia pacifica fat-free dried powder prodn. - by boiling in water, steeping in aq. soln. pressing and drying

SEIWA KASEI KK 18.07.75-JA-088042

(10.11.79) *J52012-947 A231-01/32 + A23b-04/04

Euphausia pacifica (I) is boiled in water. 0.1-1 Kg of boiled (I) is steeped in one litre of aq. soln. contg. 50-5000 units/l of lipase, 0.05-1.5 g citrate salt, 0.005-0.5g of fatty acid ester and 0.0025-0.05g of calcium salt. Thus fat (3%) contained in Euphausia pacifica is removed. The steeped Euphausia pacifica is pressed and dried, to yield the dry powder.

The pref. citrate is of sodium and the fatty acid ester is a sugar ester or glycerine ester.

By-prodn. of peroxide is avoided. The dried powder is used. as food. 18.7.75 as 088042 A231-1/325, A23b-4/04 (10.11.79) SEIWA KASEI KK (2pp)(J52012947)

AUTO- ★ D12 88751B/49 ★NL 7805-289
Conveying system for suspended objects has weighing station - with flexible endless element which bears total wt. of each carrier as it passes through weighing station so that wt. is accurately measured

AUTOSYSTEMS LTD 17.05.78-NL-005289

P43 (20.11.79) A22c-21 B07c-05/22

The system incorporates a weighing station which bears the full wt. of the carriers and their load as they move through the station and is equipped with a wt. transducer which gives an electrical output related to the imposed wt. To ensure that the full wt. of the carrier is born by the weigh device without disturbances due to vibration or oscillation, the carrier is transferred from the conveying track onto a flexible endless element which moves around the weigh station or part of it.

The flexible element is pref. in the form of two chains of rollers linked together with a split in between them through which the hanging element of the carrier can pass whilst the carriage spans the split and is entirely supported on the chains. The chain linkage is such that there is a positive location of the carriage onto the chains and, since the rollers enable the chains to move freely, the motion of

the chains is determined by the motion of the carriage, the conveying system determines the speed of the chains. The chains themselves are supported by a support element which is a part of the weighing mechanism.

The weighing device can be incorporated into, for example, a dead fowl conveying system and will weigh accurately and consistently without being affected by the environment or the vibrations to which the conveying system itself may be subjected. 17.5.78 as 005289 (16pp1370)

ALEK/ ★ D12 88777B/49 ★SU -652-0
Meat carrying overhead conveyor - has pusher with additional rollers connected to supporting rollers by vertical stanchion

ALEKSANDROV B N 26.08.70-SU-469410

Q35 (18.03.79) B65g-17/20

Enhanced safety of the overhead conveyor handling half-carasses of meat is ensured by pusher having additional rollers connected to the supporting rollers by a vertical stanchion articulated to the traction chain. The additional rollers have treble the width of the trolley roller and a diameter that is twice as large, to prevent jamming.

Aleksandrov B.N., Lavrov G.I., Lempert E.N., Bul. 15.3.79 26.8.70 as 469410 (5pp89)

MIME = ★ D12 88905B/49 ★SU -653-1
Suspension conveyor for animal head processing plant - has contg. hooks and a hydraulically operated remover and deflector whose angle can be varied

MINSK MEAT DAIRY 06.10.77-SU-529172

Q35 (28.03.79) A22b-05 B65g-17

Suspension conveyor, for use in the meat industry to carry the heads of slaughtered animals, etc., comprises body with traction units disposed in it plus hooking equipment, the ends of which are bent in the same direction. Underneath it is a remover operated by a hydraulic drive.

Construction is improved and the field of application is widened, by fitting the conveyor with a sloping deflector plus sensors, to switch on the hydraulic remover. The hooks are fitted with catches to interact with the sensors on the drive. The deflector and the remover are installed so that their slop can be regulated.

Litovko V.I., Dyagilev N.I., Gabelev V.M., et al. Bul. 11/25.3.79 6.10.77 as 529172 (2pp29)

LIND/ D12 75911X/41 #SU -654-1
Removing the skin from fish, esp fish fillets - with denatured skin washed off by knifelike water jets

LINDWALDS 12.03.75-DT-510711 (05.09.75-SU-171010)

(28.03.79) *DT2510-711 A22c-25/17

Process effectiveness is increased by using as the chemical reagent, an acid, pref. acetic or citric, at 14-20 °C (pref 15-17 °C) the treatment being done by spraying. The fish are loaded on to a conveyor belt, skin uppermost, the sprayed acid being supplied under pressure through spray nozzles. Denaturation of the skins is done by increasing the isoelectric point i.e. by moving the pH into the acid region. The treatment imparts a gelatinous consistency to the skin. The process effectiveness is controlled by varying the speed at which the conveyor travels along, thus fixing the speed at which the fish move through the spray or by changing the pressure of the jets and/or the distance between the nozzles.

Linblad S., Stolberg W., Bul. 11/25.3.79 5.9.75 as 171010 (3pp29)

BURL/ ★ D12 89033B/49 ★SU -654-2
Animal e.g. rabbit slaughtering and dismembering equipment - has holder and plates in pairs with spring-loaded carcass holder and knives for head and legs

BURLAK V G 19.07.76-SU-385791

(30.03.79) A22b-03

The device comprises table which can be revolved, and having radial holders for the animals, knife elements, a pattern guides.

To carry out both the slaughtering and the removal of the front and rear limbs, each holder consists of a base, head support and two pairs of connected plates with spring mechanisms, mounted so that they can rotate as they interact with the pattern guides. One pair of plates and the corresponding spring mechanisms have symmetric cutouts for placing the heads and the front limbs, with a second

of plates and spring mechanisms, having cutouts for back limbs. Each holder has a limiter for the front limbs.

Trak V.G., Kaodnikov A.A., Kamenskii N.N. et al.
Bul. 12/30.3.79 19.7.76 as 385791 (4pp29)

ME = ★ D12 89034B/49 ★SU -654-229
Poultry feeding system for slaughter conveyor - has entry, intermediate and exit sections through which birds pass ready for suspension

MINSK MEAT DAIRY 16.12.76-SU-431599
(02.04.79) A22b-05

Device for feeding poultry on to a slaughter conveyor has belt-conveyor enclosed inside a box. The poultry are fed uniformly and the productivity is increased by dividing the belt into entry, exit, and intervening sections. The entry has slide plates mounted so that their angle of slope can be varied. The intervening section is fitted with dividing curtains in such a way that they can be deflected as the poultry move through. The exit section has longitudinal partitions made up of stationary and revolvable parts, forming channels with the walls, for passage of the poultry.

Novko V.I., Chetverikov V.B., Gabelev V.M., et al.
Bul. 12/30.3.79 16.12.76 as 431599 (3pp29)

MEA = ★ D12 89035B/49 ★SU -654-230
Sausages heat treatment line - has chamber divided into browning, cooking and cooling sections, through which working medium passes after heating-up

UKR MEAT DAIRY IND 05.04.76-SU-351728
(30.03.79) A22c-11

Prod. line for having natural or artificial skins, consists of a chamber divided into browning, cooking and cooling sections. A chain conveyor passes through the chamber and has carriers for the sausages, plus a system for introducing and withdrawing the working medium, incorporating pressure and evacuation boxes, fans and calorifiers. The structure is made compact and the amt. of lost heat is reduced by using an air-duct to extract part of the working medium into the atmosphere; this is located in the top part of the chamber. The two boxes are distributed in the same plane in the bottom part of the chamber, with the fans and calorifiers between them. The air-ducts and packing are distributed in the space formed by the side walls of the chamber and the chain conveyor.

Abanov G.K., Dukhnenko N.P., Piznyak G.I. et al.
Bul. 12/30.3.79 5.4.76 as 351718 (4pp29)

MP = ★ D12 89036B/49 ★SU -654-231
Poultry processing plant feathers remover - has sloping chamber mtg. revolving drums bearing beaters and with bird carcass holding hot water supply

KOMPLEKS POULTRY 30.03.77-SU-470102
(30.03.79) A22c-21/02

The device comprises a sloping shell, inside which are given drums with the operational units on their outside surfaces, loading and unloading hoppers, and pipe with nozzles to supply hot water, positioned between the drums. Productivity is increased by fitting the surfaces of the drums with parallel rings mounted on spindles. The surface of each of the rings is made of two parts in the form of truncated cones between which is a cylindrical middle part.

The working units are located in rows, displaced relative to one another on the cones and helically on the cylindrical part. These units consist of beaters in the loading zone and pins over the remainder of the surfaces. The spray pipes have holes of increasing dia. along the length of the drums.

Samkov E.G., Plyasov Yu.A., Kakoveev I.I., Bul. 12/30.3.79 30.3.77 as 470102 (4pp29)

H = ★ D12 89037B/49 ★SU -654-232
Device for removal of internal organs from fish in processing - has spring-loaded fish holder, hydraulic unit and distributor to supply organ removal jet and wash water under pressure

FISHING FLEET DES 01.11.76-SU-416732
(30.03.79) A22c-25/14

The mixt. for use on either ship or shore stations, comprises hydraulic attachments movable in the vertical plane,

water distributor and spring-loaded clips to hold the fish in position and kinematically linked to the attachments.

The removal of the organs from the unoriented fish bodies and economies in water use are guaranteed, by making each of the hydraulic attachments from two parallel spring-loaded hollow movable shells with holes. They are connected to the distributor by means of a shut-off valve. The attachments are also kinematically linked to the clip via the shut-off valve. The clip can be moved by a spring-loaded wedge, movable in the horizontal plane and with a sloping catch. The valve has a spring-loaded piston interacting with the catch.

The force of one spring acts on a wedge which compresses a second spring, so that a rod moves to position the fluted clip for holding the decapitated body of the fish in place. Under the influence of a further spring the hydraulic attachment plus the shut-off valve begin to move downwards. The piston comes up against a catch, compresses a return spring and allows water to come from the distributor to the hydraulic attachment and, at the same time, limit the downward movement. The hydraulic attachment finishes its movement in a position corresponding to one-half the fish thickness. Water under pressure is fed to the distributor and comes out into the abdominal cavity through the shells so that the internal organs are flushed out. When the operation is over the springs act to lift the attachments ready for the next operational cycle.
Shkarin A.S., Ozeretskii S.V., Kolpakov V.B., et al.
Bul. 12/30.3.79 1.11.76 as 416732 (4pp29)

FARE = ★ D12 89038B/49 ★SU -654-233
Automatic three grade fish sorter - has fish thickness sensors transmitting signals to executive unit, delay elements, triggers, etc.

FAR-EAST POLY 09.11.76-SU-419610
(30.03.79) A22c-25/14

The unit used to grade fish for filleting, comprises a conveyor, sensors for the linear dimensions of the fish, executive mechanisms with electro-magnetic drives and control circuit for the drives. These comprise logic elements, triggers and power amplifiers.

The sorting accuracy is increased by making the sensors in the form of cassettes, made up of two spring-loaded flaps with flanges and provided with contactless traveling switches. The control circuit additionally has conjunctions and delay elements, and each contactless switch is connected to an electromagnetic drive of the respective executive mechanism via a logic element, delay element, two triggers, conjunction and power amplifier. The logic element is connected to the input of the corresponding delay element and with the calculated input of one of the triggers, the output from the latter and the straight output of the delay element are connected to the input of the conjunction, etc.

Sobchenko V.V., Bul. 12/30.3.79 9.11.76 as 419619
(4pp29)

SIFI = ★ D12 89039B/49 ★SU -654-234
Meat and fish blanching equipment - has bath with two conveyors, one inside hot water and other feeding rotating proportionating combs

SIBE FISHING RES 09.03.77-SU-461712
Q31 (30.03.79) A23b-04 B65b-01

Device for blanching meat and fish prods., during the prodn. of conserves such as forcemeat, including a bath with two conveyors, one of which is located inside the bath.

Proportionation and packaging of the prods. is guaranteed, by positioning the proportionator at the exit from the bath; this consists of wheels on a shaft connected together by clips in the form of combs, plus an attachment to take-off the portions. This is also made as combs positioned at an angle to the horizontal and in contact with the rings, so that the teeth are distributed between the teeth of the clips. The removal attachment can oscillate using a ratchet wheel mounted on the shaft of the proportionator.

Nedvigo D.M., Lipchinskii M.I., Bul. 12/30.3.79 9.3.77 as 461712 (4pp29)

SIMO- ★ D12 89126B/49 ★US 4175-302
Rotary feather picking unit with sealed bearings - including stationary sleeve over shaft outwardly of bearings

SIMON-JOHNSON INC 28.07.78-US-929121

(27.11.79) A22c-21/02

A rotary feather picking unit includes an open-ended housing within which are bearings for a shaft which can rotate about its longitudinal axis and projects outwardly beyond the open end of the housing. Feather-engaging projections are secured to the shaft at its outer end for rotation with the shaft.

There is an annular seal outwardly adjacent the bearings which circumscribes the shaft in sealing relationship with it and with the housing. A close-fitting sleeve surrounds the shaft from the feather-engaging projections inwardly towards the seal. This sleeve is held stationary with the seal and housing during rotation of the shaft.

The appts. is used to pluck feathers from a chicken carcass. Due to the sleeve small feathers cannot work between the shaft and seal and cause damage to the seal. 28.7.78 as 929121 (4pp295)

BETT- ★ D12 89128B/49 ★US 4175-321
Manually held and manipulated knife for e.g. meat - with ring blade adjustable to vary depth of cut

BETTCHE IND INC 02.10.78-US-947487 (17.10.77-US-842585)

P62 (27.11.79) B26b-29

A handheld knife for trimming e.g. meat, has a frame including a handle which projects radially from an annular member of short axial length. A ring-like blade is rotatably supported in the annular member and this has a short axial length with an annular cutting edge at one end.

A gauge assembly includes a tube-like member within the blade having a base at one side connected to the frame, and a flexible arcuate portion with an end connected to the base and being spaced from the interior of the blade to provide a gap through which meat trimmings can pass. A gauge adjuster is connected to the frame for adjusting the gauge axially of the knife. The adjuster is located at the outer circumference of the gauge.

The appts. is a hand held tool used for trimming meat. The depth of the cut can be readily varied and controlled by the operator. 2.10.78 as 947487 C.i.p. 4142291 (4pp295)

SUGA- ★ D12 89329B/49 ★US 4176-199
Extn. of protein from beef bones - also yielding gelatin bone and tallow as by/products

SUGARDALE FOODS INC 15.05.78-US-906029

(27.11.79) A23j-01/10 A23l-01/31

Beef bones are crushed to fragments of max. dimension 5/8 ins., mixed with about equal wt. of water, and about 3½% of Tona-300 (RTM) or 0.1-1% Papain 90 L (RTM) enzyme is added. The mixture is heated and agitated at 125-155°F. for 3-3½ hrs., then the temp. is increased to 195°F., the total heating time being not more than 6 hrs., and the period of holding at 195°F. being long enough to inactivate the enzyme. The solids are filtered off while keeping the temp. in the range 135-190°F., to recover gelatin bone of particle size 3/16-5/8 ins., and the liquid is centrifuged to obtain an edible tallow and a broth contg. 4-7% protein.

The broth may be used as a protein supplement for foods. The prodn. of peptides and peptones, which impart an unpleasant flavour is minimised at the temps. used. The process is simple, economical, and does not require chemical additives. 15.5.78 as 906029 (7pp955)

WINK/ D12 76151W/46 =US 4176-204
Pleating appts. for tubular membranes - for making compacted sausage skins

WINKLER B (BECK-) 25.01.74-DT-403470

Q31 (27.11.79) *FR2259-016 A22c-13/02

Shirred tubular films are mfd. by passing an unshirred tube over a mandrel against a fixed stop and simultaneously subjected to shirring action by symmetrical shirring members which move in the direction of the travel of the tube and rotate about the tube axis.

The shirring members are pref. toothed rollers which rotate about an axis perpendicular to the mandrel axis. After shirring the tube is pref. cut and stripped from the mandrel. The tube pref. contains collagen and is used for sausage skins. High quality uniform shirring is achieved. 23.9.77 as 836047 Div.ex. 4085483 (+22.1.75-US-543073) (7pp1376)

See Also

D13 DL 137400

D13 J5 4138136

D13 US 4176202

D13: OTHER FOODSTUFFS

UNIL ★ D13 87596B/49 ★BE -876-699
Fat mixt. for low temp.-spreadable margarines, etc. - contains a transesterified mixt. of oil and oil rich in lauryl

UNILEVER NV 31.05.78-NL-005893

(30.11.79) A23d

The fat mixt. suitable for refrigerator storage, contains ≥35% of a statistically disordered transesterified mixt. of 20-80 pts. of an oil which is liquid at the refrigerator temp. and 80-20 pts. of an oil rich in lauric acid radicals and also other oils and fats, such that the expansion values are >700 at 10°C, 100-400 at 20°C, >150 at 30°C and >50 at 35°C.

The margarines, etc. are spreadable directly after removal from the refrigerator. The fat uses more oil rich in lauryl radicals with greater economy. 31.5.79 as 876699 (7pp597).

UNIL ★ D13 87598B/49 ★BE -876-701
Stable liquid animal feed, e.g. milk substitute for calves - is prepd. using, as stabiliser, casein hydrolysed by a proteolytic enzyme to give no peptide of mol. wt. below 10000

UNILEVER NV 31.05.78-GB-025165

A97 C03 (30.11.79) A23j A23k

Homogeneous liq. compsn. (e.g. liquid animal feeds, such as milk replacement prods. for calves) is prepd. from (a) a solvent, (b) a mixt. contg. constituents which, after mixing with the solvent, tend to ppte. or to migrate towards the surface of the solvent and (c) a stabiliser which maintains the constituents in suspension. The stabiliser is a casein which has been hydrolysed by a proteolytic enzyme under

conditions such that the casein K fraction is hydrolysed without formation of peptides of molecular wt. <10⁴. The animal feed is also claimed.

The stabiliser is less expensive and water for diluting the compsns. does not need to be at >37°C. 31.5.79 as 876701 (14pp395).

BAUE/ ★ D13 87625B/49 ★DL -137-398
Plastic wax compsn. for coating cheese - contg. paraffin waxes, vaseline, plasticiser, EVA copolymer and antioxidant

BAUERFEIND G 29.06.78-DL-206373

A97 (05.09.79) A23c-19/16

Plastic wax compsn. for coating cheese comprises (a) 50-60 wt. % hard paraffin of freezing point (f.pt.) 56-62°C (b) 10-20 wt. % soft paraffin of f.pt. 48-54°C, (c) 5-10 wt. % vaseline of drop point 38-50°C, (d) 15-25 wt. % commercial plasticisers (pref. made from butadiene) of viscosity 6000-14000cP at 80°C, (e) 3-10 wt. % EVA copolymer of VA content >25wt. % and (f) 0.01 wt. % antioxidant. Opt. the compsn. also contains 2-7 wt. % of a partly esterified acidic wax from montan wac refining.

The wax ensures that the cheese is matured under the required conditions and prevents drying-out and growth of surface microflora. It is physiologically tolerable and has sufficient plasticity for it to be peeled off without loss of cheese. 29.6.78 as 206373 (5pp1251)

AK ★ D13 87626B/49 ★DL-137-399
 Recovering proteins by isoelectric pptn. with acid - then addn. of aluminium salt, useful in human or animal nutrition
 AKAD WISSENSCHAFT DDR 29.06.78-DL-206371
 (C03) (05.09.79) A23j-01/14

Method for recovering protein from animal, vegetable or microbial raw materials comprises adding to the material, before, after or simultaneously with addn of a reagent which adjusts the pH to within the isoelectric pptn. range of the major protein fraction, a soluble Al salt.
 Then for adsorptive fixation of protein, pptn. of Al poly acids or aquo-acids is undertaken. The resulting protein isolate or concentrate is then conventionally pptd. or extracted and opt. purified by washing, reprecipitation or conversion. Opt. the pptd. protein is sepd. before adding Al salt.
 The method is generally applicable and gives quantitative recovery of both low and high mol. wt. proteins without adverse effect on their nutritional or other qualities. Only small amts. of precipitant are needed and prods. are recovered in conc. form. 29.6.78 as 206371 (13pp1251)

AK ★ D13 87627B/49 ★DL-137-400
 Lengthening structured protein articles, esp. fibres - by treating with aluminium salt soln. then soln. of neutral salt and alkali
 AKAD WISSENSCHAFT DDR 29.06.78-DL-206372
 (D12) (05.09.79) A23j-03

Method for increasing the strength of structured protein articles, esp. fibres of animal, vegetable or microbial protein, comprises (a) standard treatment with aq. Al salt when (b) treatment with a soln. contg. a neutral salt (esp. NaCl, Na₂SO₄ or CaCl₂) and an alkaline cpd. (pref. alkali (ne earth) hydroxide, (bi) carbonate, sulphite or phosphate). The pH during stage (b) is 7-11.
 Pref. the second soln. contains 9.1% saturation concn. of neutral salt, esp. 5-12% NaCl, and treatment is carried out at 10 to 100 (20-40)°C for 30-300 sec.
 Used esp. for material used to make meat substitutes. Strength in pH range 4-6 is improved and the improvement is not lost by washing with salt free water. Very little protein is lost during washing, the prod. can be processed at high speed with reduced demands for alkali and the range of textures which can be achieved in the final prod. is extended. 29.6.78 as 206372 (17pp1251)

RG/ ★ D13 87700B/49 ★DL-137-662
 Feed prodn. from ground straw - by treating with conc. acid, heating, boiling then neutralising
 BERGNER H 10.07.78-DL-206595
 (C03) (19.09.79) A23k-01/12

Prepn. of pig feed from straw comprises first wetting conventionally-prepd. straw meal (min. dry matter content 70%, sieved to pass a 0.3 - 1mm screen) with conc. HCl in wt. ratio 10:1. After 30-60min reaction at room temp. the acid was diluted with water in ratio 1:3, and the ext. hydrolysed on a water bath at 100°C for 30-60 min. The acid was then neutralised with Ca(OH)₂ and dried. The HCl can be replaced by other acids, pref. 50% H₂SO₄, and Ca(OH)₂ by other alkali and/or alkaline earth hydroxides, pref. to give pH 5-7, esp. 6. Hydrolysis is pref. carried out in a flow of steam.
 The prod. is added to standard basic pig rations e.g. at 10g/kg of body wt. The method is a simple and inexpensive partial saccharification of straw requiring only small amts. of acid and no special (high pressure) appts. 10.7.78 as 206595 (5pp1251)

AK ★ D13 87741B/49 ★DL-137-783
 Enzymatic carrot juice prodn. - by incubating carrot pulp with fungal pectinolytic enzyme complex
 AKAD WISSENSCHAFT DDR 15.09.75-DL-188339
 (D16) (26.09.79) A23l-02/04

Enzymatic recovery of carrot juice comprises first thermally pretreating the carrot pulp, then cooling to a temp. between 60 and 80°C which is above the optimum temp. for pectin- and protopectin-degrading enzyme in the carrots. A fungal enzyme complex contg. endo-type pectindepolymerase and pectin esterase components is added.
 The mixt. is incubated for > 1 hr, then the juice sepd.

conversionally from the residue and sterilised. Treatment is at an acidic pH and opt. cellulose- and hemicellulose-decomposing enzymes of microbial origin are present.

Higher yields of juice without the need for multiple temp. changes, so energy utilisation is improved, process is quicker and quality of the prod. is at least equal to that made by other methods (esp. it has a low methanol content). 15.9.75 as 188339 (9pp1251)

UNIL D13 61680Z/00 =DS 1692-388
 Frozen dessert prodn.

UNILEVER NV 30.03.66-GB-014121
 (29.11.79) *GB1158-103 A23g-09

Icecream or frozen foamed desserts are prepd. from fatty acid triglyceride oil, water, casein and > 1 protein (I) with a surface breakdown pressure at an air-water interface less than that of casein. An aq. mixt. contg. 5-25 wt. % triglyceride and 1-6 wt. % casein and protein (I) is homogenised with the ratio of (I) to casein being > 0.25:1 and not so high that sepn. and coalescence occurs in later stages. The remaining casein is then added to the homogenised oil-in-water emulsion which is then frozen and beaten. The remaining casein is added as material contg. > 3 wt. % casein, e.g. as a dispersion of powdered milk. (I) may be α-lactalbumin, β-lactoglobulin and/or gelatin.

The icecream or dessert keeps its shape and texture during storage. 30.3.67 as 692388 (10pp068)

RITP D13 22821U/17 =DS 2123-375
 Gas content of liquid determination - by pressure measurement of agitated liquid in closed space

SYBRON CORP 11.05.70-US-036305

+R16 (D16) (29.11.79) *CA-924-125 G01n + G01n-33/14

The chamber to which a pressure meter is connected for determining the gaseous content of a liq. such as a beverage contg. CO₂ is formed by the pressure chamber of a circulating pump which stirs the liq. as it propels it forward. Pref. a centrifugal pump is used. The vapour chamber is limited by a cylinder having a flow passage into the measuring chamber and a piston which determines the volume of the vapour.

The device dispenses both with complicated adjustments and the loss of time and money involved in the running off to waste of the contents of the test chamber, so that checks can be undertaken continuously and in rapid succession. 11.5.71 as 123375 (10pp1045)

FARH D13 88133V/51 =DS 2327-804
 3,4-Dihydro-1,2,3-oxa-thiazin-4-ones prepn - from chloro-sulphonyl isocyanate and beta-keto ester in 3 stages, used as sweeteners

HOECHST AG 01.06.73-DT-327804

B03 E13 (29.11.79) *NL7407-076 C07d-291/06

3,4-Dihydro-1,2,3-oxathiazin-4-ones (I) and/or their salts (where R₁ is H or 1-4C alkyl; R₂ is 1-4C alkyl) are prepd.

by reacting chlorosulphonylisocyanate and β-keto carboxylic acid tert. alkyl ester R₂COCH(R₁)COOR₃ (where R₃ is 4-10C alkyl) in an aprotic solvent. The prod. is converted to β-ketocarboxamide-N-sulphochloride by cleaning CO₂ and alkylene at 40-100°C. This is then cyclised by cleaning HCl-either by heating to > 50°C or in the presence of an acid binder - and the prod. converted to the salts or free oxathiazone.

Pref. (I) where R₁ is H and R₂ is methyl can be obtd. in 65-70% yield compared with ca. 40% in prior art. No fluoride ions are formed (as with prior method using fluoro-sulphonylisocyanate) so that the prod. can be used directly in food and confectionery. 1.6.73 as 327804 (7pp913)

HAIM ★ D13 87825B/49 ★DT 2822-513
 Reversible moulds esp. for large area cheese blocks - have arrangements lifting and locking cheese against mould cover

ALPMA ALPENLAND-MAS 23.05.78-DT-822513

P13 (29.11.79) A01j-25/12

Cheese mouldings, esp. those having a large surface area, and which are supported in moulds whilst the whey is draining off, are turned over after the open mould has been covered. Before the first turning operation is carried out, the moulding is lifted in the mould into contact with the mould cover, and during turning they are held

in this position.

Provides a cheese mould in which the moulding cavity can be reduced according to the shrinkage as the whey drains off. The design may also allow for secure stacking of the moulds one upon the other. 23.5.78 as 822513 (14pp)

AHLB- ★ D13 87836B/49 ★DT 2822-628
Aromatic, sour butter prepn. by continuously churning sweet cream - with addn. of acidified culture raised on buttermilk during densifying

AHLBORNE GMBH 24.05.78-DT 822628
(29.11.79) A23c-15/02

A continuously working churn consisting of a rotating cylinder in which beaters are arranged, followed by a secondary buttering drum and a screen for draining off the buttermilk, form the first stage of a plant for the production of aromatic, sour butter from sweet cream. At the delivery end of the screen a kneading trough is fitted and from this the particles of butter floating on the buttermilk are extracted by a worm conveyor, densified and delivered to a mixer. In the kneading trough, an acid culture is added in an amount which is greater than that of the sweet buttermilk bringing the separate particles of butter from the screen into the trough.

Used to convert butter particles from sweet cream by a simple acid culture into sour cream butter and to remedy the failings of existing methods which are not only expensive in themselves but also yield a product lacking in taste and aroma. Provides a continuous prodn. process ensuring the maximal permissible water content and content of matter contg. no fat. 24.5.78 as 822628 (12pp1045).

CALI- ★ D13 87999B/49 ★FR 2417-949
Mechanised de-stoning of fruit, partic. peaches and apricots - with selective scooping of centre only when stone is broken

CALIF PROCESS MACH 05.07.78-US-922183 (22.02.78-US-880229)
(26.10.79) A23n-04/04

The machine is of the type in which a fruit is presented between relatively displaceable blades which cut the fruit on a median plane. The blades grip the stone while the cut halves of fruit are detached by being twisted about an axis at right angles to the median plane. If the stone is broken, this is now detected by reduced resistance to advance of the blades, which continue to close towards each other. This extended motion mechanically triggers a cam-actuated sequence to remove the complete centre of the fruit, including peices of broken stone.

The sequence includes:- (a) retraction of the blades, (b) insertion of a spoon, (c) rotation of the spoon about the axis of its shaft 'handle' thus scooping out the centre of the fruit and (d) retraction of the spoon during cutting and scooping. The fruit is held between opposed grippers, pref. by means of fluid-inflatable diaphragms.

The stone is eliminated from the prod. whether the stone is whole or broken. This is achieved at a single machine station which selectively scoops the centre of the fruit only when a broken stone is detected. It is quicker than previous two-station selective scooping, and gives a higher yield than single-station non-selective scooping of all fruit. 22.2.79 as 004567 (46pp448)

ABDA/ ★ D13 88005B/49 ★FR 2418-005
Conversion of vegetable waste to combustible fuel blocks - opt. involving use of binder resins

BEN ABDALLAH A 28.02.78-FR-005642
A95 C03 H09 (26.10.79) A23k-03 C101-05/46

A combustible fuel is made from vegetable matter recovered from rubbish after isolation from other materials such as metals, rubbers, plastics, glass or any painted or varnished material. The vegetable matter is minced, hydrolised by boiling water, filtered off, placed in moulds and dried using hot air. Opt. a binder is added between the filtering and moulding stages: the binder may be resin, plaster or cement based.

Typically blocks of 400 x 400 x 30 mm size are moulded from treated waste grass or wood with approx. 25-90% efficiency respectively.

Process is also claimed for preserving vegetable materials for animal feedstuffs by cleaning, paring, boiling; crushing; placing in mould; and drying. 29.2.78 as 005642

(3pp515)

MORG D13 43209A/24 =GB 1556-
Stable milk-based beverage contg. Lactobacillus microorganism by adding sweetening soln. to fermented milk and homogenising
MORINAGA MILK KK 08.10.76-JA-120408
(D16) (05.12.79) *J53050-366 A23c-09/12

A stabilised sour milk beverage is mfd. contg. 1.5-4.6 wt.% of non-fat milk solids, and is prevented from coagulation, sepn. or pptn. of the milk protein without using a stabilising agent.

A liq. mixt is prepd. by either blending a pasteurised and cooled aq. soln. conyng. a sugar sweetener and cultured milk obtd. by lactic acid fermentation of skim milk, constituted skim milk or their concentrates; or by blending a pasteurised and cooled aq. soln. contg. a sugar sweetener in combination with skim milk or reconstituted skim milk, in amt. to increase the content of non-fat milk solids in the prod. to fall to 1.5-4.6 wt.%. The pH is adjusted to <3.8 by adding an aq. soln. of an organic acid; the soln. is mixed, then homogenised.

Stabilised and good flavoured sour milk beverages are prepd. which may be stored without deterioration. 7.10.77 as 041867 (11pp931)

MEAT= ★ D13 B/49 ★IT 1033-
Liquid smoking agent prodn.

MEAT IND RES INST 13.01.68-IT-011534
(10.07.79) A23i

BUZZ- ★ D13 B/49 ★IT 1033-
Chestnut dough glazing method

BUZZI P SAS 14.01.72-IT-019373
(10.07.79) A23g

TEIJ ★ D13 88197B/49 ★J5 4137-
Oxygen collecting compsn. for preventing oxidn. of foods comprises sodium sulphite and silica and/or alumina

TEIJIN KK 19.04.78-JA-045283
E36 G04 (25.10.79) A231-03/34 B01j-01/22 C01b-13

The compsn. (I) contains (1) sodium sulphite (II) and (2) silica (III) and/or alumina (IV). Pref. both $\text{Na}_2\text{SO}_3 \cdot 7\text{H}_2\text{O}$ and Na_2SO_3 are used as (II) and $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$, $\text{Na}_2\text{Al}_2(\text{SO}_4)_4 \cdot 24\text{H}_2\text{O}$ or $\text{Na}_2\text{HPO}_4 \cdot 12\text{H}_2\text{O}$ is pref. mixed with (II). As (III) and (IV), α -, β - and γ -alumina, silica, silica-alumina are used. 0.01-100 Wt.% on (II), e.g. (0.05-50 wt. on (II)), of (III) and/or (IV) is/are mixed with (II). Oxygen-adsorbing velocity increases according to increase the ratio, (III) and/or (IV)/(II).

(I) is used for prevention of oxidn. of foods, such as peanuts, chocolate, rice bran, milk prods., etc. and for prevention of change in taste of foods, such as tea, dried vegetables, coffee etc. It may also be used for prevention of germ breeding, prevention of metal-corrosion, etc. 19.4.78 as 045283 (5pp42)

KIBU- ★ D13 88284B/49 ★J5 4138-
Treating coagulated salt of arginine acid - by contacting it with mixed with rice powder, fish, egg and dry fish meat, with various salts, sugars, alcohol and condiments

KIBUN KK 18.04.78-JA-044824
E12 (26.10.79) C08b-37/04

Treating coagulated salt of arginine acid (i.e. coagulated salt of 2-amino-5-guanidino-valeric acid) is claimed in which a coagulated sodium salt of arginine acid opt. mixed with powdery material involving rice powder, fish egg and fish dry meat is contacted with "edible salt or condiment contg. edible salt" or "alcohol or condiment contg. alcohol" or "sugar or condiment contg. sugar" or "condiment contg. amino acid" or their mixt(s). in its solid state or semi-solid state or its liq. state and thereby, the coagulated degree of the salt of arginine acid or the mixt. is opt. adjusted according to its use.

The condiment contg. edible salt is suitably a mixt. of purified sodium chloride and glutamic acid. The alcohol is ethyl alcohol and the condiment contg. alcohol is a mixt. of Japanese Sake alcohol liquor, whisky, citric acid and tartaric acid. The condiment contg. sugar is a mixt. of sugar, grape sugar, fruit sugar, honey, molasses, fruit juice and ketchup. The condiment contg. amino acid is a mixt. of Japanese Miso, Japanese Soy Sauce, sodium g

mate and inosine mono- or di-phosphate. Further, salt arginine acid comprises calcium salt of arginine acid addn. to Na salt of arginine acid.

Treated salt of arginine acid is used as additive to various kinds of Japanese foods. 18.4.78 as 044824 (9pp15)

BU- ★ D13 88285B/49 ★ J5 4138-086
Producing coagulated salt of arginine acid - by mixing aq. soln. contg. sodium salt of arginine acid with insoluble salt of arginine as coagulant

KIBUN KK 18.04.78-JA-044825
E12 (26.10.79) C08b-37/04

Prod. of coagulated salt of arginine acid is claimed in which an aq. soln. contg. Na salt of arginine acid in concn. ≥ 5 wt. % is mixed with an aq. insoluble salt of arginine acid as a coagulating agent; i. e. powdery calcium salt of arginine acid and the resulting mixt. is homogeneously mixed and then, additional water as required is added to it and thus, the coagulated salt of arginine acid is produced.

Typically, 500 c. c. aq. soln. contg. 3 wt. % sodium salt of arginine acid is mixed with 25 g powdery calcium salt of arginine acid having a granular size of ≥ 50 mesh and the resulting mixt. is homogeneously mixed with an agitating step and in the course of about 15 mins., a jelly-like, coagulated salt of arginine acid is obtd. As another example, an aq. soln. contg. 3 wt. % of sodium salt of arginine acid is coated on and permeated in a surface of sliced meat piece. Then, a film of calcium salt of arginine acid is adhered on the resulting coated surface of the sliced meat piece and thereby, a coagulated layer of calcium salt of arginine acid is produced on the sliced meat piece.

The coagulated salt of arginine acid is used as additive in various kinds of Japanese foods. 18.4.78 as 044825 (6pp)

ARK ★ D13 88298B/49 ★ J5 4138-119
Coloured gelatin capsules prodn. - by dispersing the natural pigment carminic acid, laccaic acid, cacao pigment or carminic acid lake and opt. titanium dioxide in gelatin mat

PARKE DAVIS & CO 17.04.78-JA-044285
B07 P33 (26.10.79) A61j-03/07

Gelatin capsules are coloured by dispersing uniformly in gelatin material 0.01-5.0 w/w% natural pigment selected from carminic acid, laccaic acid, cacao pigment and carminic acid lake and if necessary, 0.1-3.0 w/w% titanium dioxide.

Safe, beautifully coloured glossy gelatin capsules which are stable to heat and light, can then be obtd. The capsules are coloured violet or purple with carminic acid or laccaic acid, chocolate with cacao pigment and red with carminic acid lake. 17.4.78 as 044285 (6pp5)

BU- ★ D13 88311B/49 ★ J5 4138-135
Vegetable protein compsn. prepn. - by heat treating nuts to decrease lipoxidase activity and mashing in presence of hot water aq. alkaline soln.

KIBUN KK 18.04.78-JA-044837
(26.10.79) A23c-09/12 A23c-19 A23j-01/14 A23l-01/36 A23l-02/38

The method comprises heat-treating ≥ 1 kind of seeds selected from almond, cashew nut, pine nut, peanut, etc. at 70°C to decrease the activity of lipoxidase present in the upper layer of the seeds, and mashing them in the presence of hot water or hot alkaline water to obtain a slurry.

Compsn. is free of grassy smell and astringency can be prepd. and it can be used as the material for vegetable protein drink, vegetable protein fermentative foods such as cheese, yoghurt etc. When seeds such as peanut, almond, cashew nut, etc. are used with soy bean, excellent bean milk can be obtd. 18.4.78 as 044837 (4pp5)

AW/ ★ D13 88312B/49 ★ J5 4138-136
Preventing putrefaction of foods, esp. fish - using a salt of an amine and esp. sodium glutamate, and opt. and inorganic gas e.g. carbon dioxide

IZAWA T 20.04.78-JA-045913
E19 (D12) (26.10.79) A23l-03/34
The putrefaction of foods partic. fish can be prevented by sprinkling a salt of amino cpd. and that for the object sodium glutamate which is available inexpensively in large quantities, can be used.

It is considered that the sodium glutamate is gradually dissolved and fixes amino acid partic. free amino acids present in foods and that it suppresses the invasion of oxygen in foods through sodium glutamate layer. When inorganic gas such as CO_2 is added with sodium glutamate, the bacteriostatic effect of CO_2 and the antiseptic effect of sodium glutamate act synergistically. 20.4.78 as 045913 (2pp)

DAII- ★ D13 88313B/49 ★ J5 4138-146
Preservative for vegetables, fruit and flowers - is prepd. by adsorbing potassium permanganate on zeolite to decompose ethylene released

DAIICHI NOZAI KK 18.04.78-JA-045664
E31 (26.10.79) A01n-03/02 A23b-07

The preservative is prepd. by adsorbing KMnO_4 on zeolite. The preservative is packaged in proper gas-permeable vessel and is packaged in parcels with vegetables, fruits and flowers to be stored or transported.

Ethylene gas released from vegetables, fruits and flowers which promotes over-maturing, is decomposed. The activity of the KMnO_4 lasts for long time. The ethylene gas is not released. 18.4.78 as 045664 (3pp5)

ASAH ★ D13 88314B/49 ★ J5 4138-153
Smooth, storage stable, creamy food compsn. for coffee cream etc. - contains cellulose based water dispersible complex, milk and/or vegetable fats, emulsifier and water

ASAHI CHEMICAL IND KK 18.04.78-JA-044805
(26.10.79) A23l-01/19

The food compsn. is composed of (a) a water dispersible complex which is prepd. by either mash-kneading 50-95 w/w% of fine crystalline cellulose and 50-5 w/w% of dispersing agent and drying the mixt. or mash-kneading 50-95 w/w% of fine crystalline cellulose and 50-5 w/w% of the mixt. composed of dispersing agent and integrating agent with the wt. proportion 9-1:1-9 in the presence of water and drying the mixt., (b) milk fat and/or vegetable fat, (c) emulsifier and (d) water.

The compsn. is smooth, fine in texture, non-adhesive stable and excellent in form-holding property. It is added to coffee cream to impart stability, smoothness and heavy touch, prevent feathering phenomenon, and improve dispersibility. It is also combined in whipped cream to impart smoothness, heavy and non-adhesive touch, form-holding property and stability. 18.4.78 as 044805 (6pp5)

KIBU- ★ D13 88315B/49 ★ J5 4138-154
Mfg. pressure-resistant watery food prods. - by coagulating powders, lumps etc. and water soluble high molecular substance using salt-type coagulating agent

KIBUN KK 18.04.78-JA-044823
A97 (26.10.79) A23l-01/04 C09k-03

The method is to prepare high pressure-resistible watery solidified prod. using water soluble high molecular substance by coagulating or bonding various powders, granules, lumps or their mixt. The coagulation is effected using one of three methods.

(1) The material is mixed with powdery, granular, flaky, or filmy water soluble high molecular substance and the mixt. is stood to get the mixt. together. Then the mixt. is coagulated by adding a coagulating agent for the water soluble high molecular substance consisting of organic or inorganic salt of di- or more-valent metal. Alternatively (2) the mixt. is coagulated by immersing it in an aq. soln. of the coagulating agent, or (3) the mixt. is coagulated by adding the coagulating agent to the mixt. and immersing the mixt. in the aq. soln. of the coagulating agent.

A coagulated prod. having a pressure resistance as high as $30 \text{ kg}/4\text{cm}^2$, can be obtd. using alginate, CMC or sodium polyacrylate. The method can be adapted not only for foods having excellent hard texture, but also for various industrial uses. Water soluble high molecular substance is not used in the form of aq. soln. and the process is advantageous from the view points of hygiene, waste water problem, labour, electric power consumption, etc. Further water soluble high molecular substance is water absorptive and the safety factor of the foods can be improved. 18.4.78 as 044823 (7pp5)

LOTT ★ D13 88316B/49 ★J5 4138-156
Blue chewing gum, coloured by phycocyanine - obtd. by extn. of Spirulina

LOTTE KK (DNIN) 17.04.78-JA-044140
E23 (26.10.79) A23g-03/30 A23l-01/27

Phyceryanine or phycocyanin compsn. is incorporated into chewing gum (base) to colour it clear blue.

The phycosianin can be obtd. by extn. of spirulina, e.g. Spirulina plastensis, Spirulina maxima, Spirulina geitleri, Spirulina mafer, Spirulina princeps, Spirulina laxissima, Spirulina aubtilissima, Spirulina caldaria, Spirulina cufta, Spirulina spirulinoides, etc. The amt. of the colouring agent used is 2-5 g per kg of the gum base. The colouring agent may be used in powder or soln. of concn. 30-60%.

Glucose or other sugar, sodium citrate, sodium dihydro-gen phosphate or other alkali salt, may also be incorporated in the base. 17.3.78 as 044140 (5pp22)

ASAH ★ D13 88317B/49 ★J5 4138-157
Soft cream compsn. - comprising fine crystalline cellulose and dispersion aid blended with water, dried, mixed with milk solids, vegetable fat, sweetener etc.

ASAHI CHEMICAL IND KK 18.04.78-JA-044806
(26.10.79) A23g-09

50-95 wt.% of fine crystalline cellulose and 50-5 wt.% of dispersion aid are blended in the presence of water and dried. The resultant is mixed with milk solid components, vegetable fat, sweetening agent, emulsion aid and water. The resulting mixt. is soft cream having good taste and touch and has homogeneous structure.

The dispersing agent includes various kinds of natural gum substances. The solid components of milk and vegetable fat may be any of conventional ones. The emulsion aid includes phospho-lipid, glycerin fatty acid ester, sugar ester of fatty acid, sorbitan fatty acid ester, propylene glycol fatty acid ester, etc. An amt. of the emulsion aid to be used is 0.15-0.4 wt.%. The mixt. of the crystalline cellulose and dispersion aid is used in an amt. of 0.05-2 wt.% pref. 0.2-1 wt.%. In the present compsn., there may be incorporated colouring agent, thickener, gelling agent, perfume etc. 18.4.78 as 044806 (6pp92)

DIAC- ★ D13 88332B/49 ★J5 4138-489
Deoxidation indicator for checking activity of oxygen adsorbent - contains saccharide, ascorbic acid or erythorbic acid or salt, alkaline substrate, methylene blue and water

DIA CHEMIPHAR KK 19.04.78-JA-046257

E36 G04 R16 (26.10.79) A23l-03/34 C09k-03 G01n-31/22

Deoxidation indicator, contains (a) saccharides (including monosaccharides such as glucose, oligosaccharides such as sucrose, and polysaccharides such as dextrin), ascorbic acid or salts, an erythorbic acid (isoascorbic acid) or salts, (b) alkaline substance, (c) methylene blue and (d) water. The indicator may further contain (e) lead sulphate as the stabiliser and (f) phosphoric acid or phosphate salt as the buffering agent.

The indicator is used for visual checking of activity of oxygen-absorb agent packed in a tightly sealed container together with perishable prods. The indicator reversible indications by oxidation and reduction of methylene blue, and is stable for a long period.

In an example, 100 pts. wt. aq. soln. contg. 2 wt.% glucose, 4 wt.% of NaOH, 1.6 wt.% of phosphoric acid and 0.1 wt.% of PbSO₄, 1 pt. wt. of 0.01 wt.% methylene blue soln., and 303 pts. wt. of diatomaceous earth were kneaded and press-formed to prepare tablets, each weighing 2 g. 19.4.78 as 046257 (3pp173)

KIKK ★ D13 88497B/49 ★J5 4139-613
Solid, oily foodstuff - prepd. by coating oily material with nitrogen soluble sugars and water-soluble surface-active protein

KIKKOMAN SHOYU KK 22.04.78-JA-047204

(30.10.79) A22c-11 A23d-05 A23l-01/19 A23l-02 C11b-05 C11b-15

Solid oily material is prepd. by coating an oily material with a N-contg. material consisting of water-soluble sugars, and water-soluble surface active protein, or peptide.

The material is prepd. by dispersing an oily material uniformly in a mixt. of aq. soln. contg. >30 wt.% water-soluble sugars, and >0.8 wt.% (expressed in terms of water-soluble N) N-contg. material consisting of water-

soluble protein or peptide under stirring; drying the dispersion by heating, by evacuation, or after dehydrating using a solvent, to obtain dry prod. The prod. is finally disintegrated. Pref. the oily substance stuck to the surface is removed after disintegrating the dry prod.

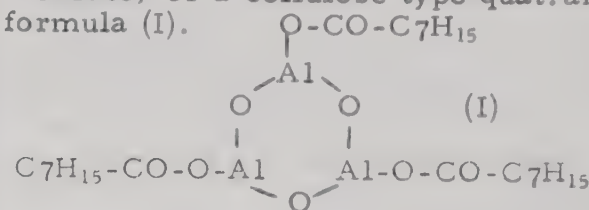
Several oily materials, such as oil-soluble perfumes or pigments, several oleoresins useful as spices, or β-carotene, are transformed to the powder form or particle form. Oily substances are coated with sugars or proteins or peptides, and are dispersed uniformly in water. The dispersion is dried to prepare particulated oily substance and the quality of the oily substance is preserved for a long time. 22.4.78 as 047204 (8pp126)

TOAE- ★ D13 88598B/49 ★J5 4139-894
Cooling agent for bruises, foods or medicines - obtd. by mixing gelling agent, e.g. aluminium oxide stearate, with liquefied gas, e.g. LPG

TOYO AEROSOL KOGYO 24.04.78-JA-048546

B03 E12 G04 (D17) (30.10.79) C09k-05

The cooling agent is produced by mixing a gelling agent with a liquefied gas to obtain a gelled substance. The gelling agent is aluminium oxide acetate, aluminium oxide stearate, or a cellulose type quat. ammonium salt e.g. of formula (I).



In an example, 6 wt % of aluminium oxide stearate, 70 wt % of chloromethylen and 24 wt % of liquefied petroleum gas were mixed to obtain

a gelled substance. The substance was poured into a bag made of a porous material, such as sponge or cloth. When the bag was contacted with a human body to be cooled, the liquefied gas was evaporated to the cool the body. 24.4.78 as 048546 (5pp51)

HAYA- D13 35968A/20 = J7 9036-213
Sterilising and packaging food materials - involves promoting germination of anaerobic and pref. aerobic bacteria spores before heat treatment

HAYASHKANE SANGYO 22.09.76-JA-112915

(08.11.79) *J53038-643 A23l-03/34

The method comprises adding a germination-promoting substance for anaerobic bacteria spores selected from lactic acid, thioglycolic acid, carbonic acid, their salts and bicarbonates, to the food material, packaging it in air-tight vessels, heating at 75-95°C to active spores of anaerobic bacteria, germinating the spores by keeping them at 30-50°C for longer than half an hour and destroying the spores by heating them at 80-100°C. Pref. a germination-promoting substance for aerobic bacteria selected from aromatic amino acids and purinenucleosides in added together with the germination-promoting substance for spores of anaerobic bacteria.

Heat-resistant spore-forming anaerobic bacteria (e.g. botulism bacillus, Welch bacillus, etc.) in closely sealed foods, which cause bacterial food poisoning and can survive normal sterilisation, can be destroyed completely without using very high sterilising temp., applying synthetic antiseptic or deteriorating the quality of foods such as taste, flavour, texture, etc.

As aromatic amino acid alanine, phenylalanine, tyrosine, tryptophane, etc. and as purinenucleoside inosine, adenosine, etc. can be used. 22.9.76 as 112915 A23l-3/34 (8.11.79) HAYASHIKANE SANGYO (3pp)(J53038643)

EZAK D13 05679A/03 = J7 9036-216
Sugar-coated fried nuts prepn. - by boiling nuts in aq. (poly)metaphosphate soln., immersing in sugar soln. then frying

EZAKI GLICO (EZAK-) 26.05.76-JA-060936

(08.11.79) *J52145-542 A23l-01/36

The method comprises boiling nuts in aq. soln. of metaphosphate or polymetaphosphate or immersing nuts in its aq. hot soln. then immersing in sugar soln. of bx ca. 20% and frying. If required fried nuts obtd. are further immersed in edible oil contg. antioxidant.

Film does not peel and obtd. nuts have excellent in appearance. Nuts are previously coated with sugar soln. do not absorb oil excessively on frying. The flavour of the

units can be kept for extended period. Suitable concn. of metaphosphate or polymetaphosphate is 0.05-5% and for the subject polymetaphosphate having polymerisation degree <50 can be used as Na or Ca salt. 26.5.76 as 060936 A231-1/36 (8.11.79) EZAKI GLICO KK (2pp)(J52145542)

ASAE D13 01155Y/01 = J7 9036-662
Spray oil for transparent thin film prodn. - comprises ethanol, fat, oil and lecithin in which water absorption and hence pptes. are minimal

ASAHI DENKA KOGYO 13.05.75-JA-056499
(10.11.79) *J51133-459 A21d-15/08 + A21d-08/08

Prod. of spray oil which is able to form superior thin films without the occurrence of solids or ppte. is claimed.

The spray oil is produced by adding ethyl alcohol to a mixt. comprising liq fat and oil and lecithin. The additive amt. of ethyl alcohol is five times the amt. of water contained in the mixt.

Generally, lecithin contained in spray oil absorbs moisture and forms ppts. By this invention, spray oil in which ppts. are not formed is obtd. The spray oil maintains transparent conditions for long periods. 13.5.75 as 556499 A21d-8/08 15/08 (10.11.79) ASAHI DENKA KOGYO KK (4pp)(J50056499)

NORQ ★ D13 88703B/49 ★ J7 9036-664
Soya protein food prodn. - by heating aq. soln. of soya protein, cooling, coagulating, moulding and heating in aq. salt soln.
NORIINSHO KK 29.03.73-JA-035087
(10.11.79) A23j-03

Method comprises heating an aq. soln. of soya protein to 90°C, cooling the soln. to 70°C, adding a Ca or Mg salt to coagulate the protein, moulding the protein and heating the protein at 100 to 135°C in an aq. soln. of a water-soluble salt kept at pH of 7.5 to 8.5 or 2 to 3.
29.3.73 as 035087 A23j-3/00 (10.11.79) NORIINSHO (5pp83)(J49118852)

TAKE D13 06047V/04 = J7 9037-217
Gelled foodstuff prodn - using polysaccharides consisting mainly of beta 1,3-glucose units as gelling agents
TAKEDA CHEMICAL IND KK 05.07.72-JA-067720
(14.11.79) *DT2333-701 A231-01/04

Fruit and milk jellies, puddings, etc. of the 'instant jelly' type are produced by using 0.5-5 wt.% of a gelling agent consisting of a polysaccharide pref. produced by *Alcaligenes faecalis* var. *mixogenes* or *Agrobacterium*.
The gelling is carried out at 55-80°C, whereby volatilisation of aroma substances is reduced. The gel once formed on cooling (at about 35°C) does not melt and retains its form even when heated to 70-120°C. 5.7.72 as 067720 A231-1/04 (14.11.79) TAKEDA CHEMICAL INDS LTD (11pp)(J49026465)

SNOW ★ D13 88743B/49 ★ J7 9037-218
Multilayer pudding mfr. - where methoxylated pectin is added to layers of high sugar content
SNOW BRAND MILK PRODUCTS 10.11.73-JA-125909
A97 (14.11.79) A231-01/04
In producing multi-layer pudding, improvement comprises adding methoxylated pectin (I) to layers of high sugar content (II). (I) prevents water separation in layers of low sugar content (III). (II) is e.g. fruit jelly, jam, etc. (III) is e.g. yoghurt, etc. 10.11.73 as 125909 A231-1/04 (14.11.79) SNOW BRAND MILK PRODUCTS (3pp83) (J50076249)

KANE D13 29828A/16 = J7 9037-220
Prepn. of storage stable porous hard chewing gum - by mixing gum base and hard candy material, foaming and solidifying
KANEBO KK 23.08.76-JA-100997
(14.11.79) *J53026-355 A23g-03/30

Prepn. of chewing gum (I) comprises (1) mixing 20-40 wt.% gum base (II) and 60-80 wt.% material (III) for hard candy in melted state at an elevated temp. (2) foaming the mixt. in kneading or agitation at 55-100°C and (3) solidification by cooling the mixt. after expansion at reduced pressure and at elevated temp. (II) should be miscible with (III) and has a proper viscoelasticity at >115°C.
(III) is composed of 40-80 wt.% sugar, 20-60 wt.% starch syrup (or sugar alcohol consisting of 7-18 glucose

units) and 1.5-4 wt.% water. (II) is composed of gum resin (IV), wax, emulsifier and inorganic additive for chewing gum. (IV) is composed of one or both of vinyl acetate and natural chicle and one of glycerin ester of polyisobutylene-rosin and polybutene. The mixt. obtd. in step (I) may be foamed by bubbling air into the mixt. under agitation. The apparent density of the foamed prod. of (2) is 1.25-1.35. The foamed mixt. is expanded to a vol. of 120-400%. The expanded prod. has apparent density of 0.31-1.13. 23.8.76 as 100997 A23g 03/30 (14.11.79) KANEBO KK (J53026355)

KANE D13 35977A/20 = J7 9037-221
Bubble-contg. hard chewing gum mfr. - by mixing hard candy material with gum base, kneading and stirring to introduce bubbles
KANEBO KK 21.09.76-JA-114207
A97 (14.11.79) *J53038-666 A23g-03/30

Method comprises mixing the gum base with the hard candy material. The mixt. has such visco-elastic properties that they are mutually soluble at a high temp. and the mixing occurs during heat-melting. The mixt. is kneaded and stirred so that fine bubbles are formed in the hard chewing gum.

The hard candy material comprises 40-80 w/w% of sucrose and 20-60 w/w% of millet jelly or sugar alcohol having on average 7-18 glucose units mixed with 4-15 w/w% of water. The gum base is obtd. by combining wax, emulsifier and inorganic filler to the base gum resin, which is obtd. by combining polyisobutylene, rosin glycerin ester or polybutene to vinylacetate resin and/or natural chicle. The components are mixed in the wt. ratio 60-80:20-40 at >115°C. The kneading and the stirring are carried out at 55-100°C. The hard chewing gum has a low apparent density of 1.25-1.35.

The hard chewing gum is stable and has good taste and flavour. It is crisp but is easily softened in mouth to the state like common chewing gum. 21.9.76 as 114207 A23g-3/30 (14.11.79) KANEBO KK (8pp)(J53038666)

VLEU- ★ D13 88753B/49 ★ NL 7805-360
Confectionery prods. for diabetics - contg. soya flour and powdered egg white, have low carbohydrate and fat content
VAN DE LEUR BANKET 18.05.78-NL-005360
(20.11.79) A21d-02/24

Confectionery prods. for diabetics are made from a mixt. of standard ingredients such as flour, butter and protein-contg. materials, together with 3-30 wt.% soya flour and/or 0.1-15 wt.% powdered egg white. The mixt. contains as little carbohydrate and fat as possible.

The prods. may be in the form of cakes, meringues, pie crust, biscuits, etc. The prods. are free from sugar and have a low sugar and fat content, so that they can be eaten by diabetics without upsetting the diet. 18.5.78 as 005360 (5pp513)

FRID/ ★ D13 88907B/49 ★ SU -653-215
Cooking salt from sea water extn. - includes mixing with soda prodn. liquor to ppte. calcium chloride followed by evapn. in multichamber appts.

FRIDMAN SG 07.07.75-SU-154132
E34 (28.03.79) C01d-03/06

Sea water, contg. chlorides and sulphates of sodium and magnesium can be processed to give cooking salt by evapn. in a multichamber appts. in vacuo.

The degree of extn. of salt can be increased from 36 to 90-93% if distillation liquor from soda prodn. contg. Ca and Na chlorides is mixed with the sea water in an amt. giving a ratio of CaCl₂ : MgSO₄ of 0.2-0.5:1. The ppte. of calcium sulphate formed is sepd. and the liquor evapd. to give salt and a conc. mother liquor contg. MgCl₂ 24-26% and MgBr₂ 0.4-0.5%.

Losses of salt were reduced and the use of the prodn. liquor from the soda process reduced the vol. of this waste by 10%.

Fridman S.G., Shakhova A.F., Bul.11/25.3.79 7.7.75 as 154132 (2pp815)

REFR = ★ D13 89041B/49 ★ SU -654-238
Liquid prod. e.g. milk, blood, serum etc. concentration - includes partial freeze-drying centrifugation at specified temp. and pressure
REFRIG IND RES INST 13.08.76-SU-399881
J01 (30.03.79) A231-02-08 B01d-09-04

Method for thickening liquid prods., and appts. therefor, e.g. in the food industry for prod. such as milk, skimmed milk, blood, blood serum, etc. by freezing the liquid in a vacuum and subsequently sepg. the thickened phase from the moisture crystals by centrifuging.

The process is intensified and the quality of the prod. increased by subjecting the liquid at 2-70 °C to finely-dispersed spraying in a vacuum, with a residual pressure of 560-173 Pa. The vapours which form are condensed by spraying a cooling agent at -10 to -25 °C and sepg. the uncondensed gases. The equipment used includes a vacuum freezing crystalliser and centrifuge. There is a concentrator for the cooling agent. The crystalliser is a container with crystallising chamber contg. the sprays for the liquid prod. and condensation chamber with the sprays for the cooling agent. Between the two is a louvred screen.
Anufriev V.V., Kurako O.N., Bul. 12/30.3.79 13.8.76 as 399881 (3pp29)

AVDO/ ★ D13 89045B/49 ★ SU -654-261
Thick tomato paste concentrator - has body with walls heated by jacket and telescopic blades worked by liquid in hollow shaft to adjust gap with walls
AVDONKIN A F 04.11.76-SU-418059
(30.03.79) B01d-01/22

The concentrator has a body with an outer jacket, contg. a bladed shaft, liquid drops deflector, distribution ring, and inlet and outlet pipes.

High conc. paste is obtd. more quickly by making the shaft hollow for filling with an incompressible liquid and the blades are mounted on telescopic guides contained inside corrugated shells. The parts of the telescopic guides nearest the shaft are linked to the cavity inside the latter and have holes in their side surfaces to allow the incompressible liquid to pass through. The pressure of the liquid is regulated by placing a nut at the top end of the shaft, inside which is a bellows rigidly connected to the shaft.

Avdonkin A.F., Davidovich I.Yu., Bul. 12/30.3.79 4.11.76 as 418059 (3pp29)

STEF/ ★ D13 89138B/49 ★ US 4175-418
Establishing predetermined temp. through wet stored grain - by connecting electrical thermometers to comparator driving heat regulator

STEFFEN S L 08.05.78-US-903815

R14 (27.11.79) G01k-01

A temp. controller receives signals from a pair of electrical thermometers sensing respectively the inlet and exhaust temps. of a barn pref. holding wet stored grain. The controller compares the temp. differential with a pre-set target value and activates a temp. regulator e.g. a heater, in accordance with the error signal.

The controller includes operational amplifiers which drive a hysteresis type switch. In addn., a digital display may be switched to show the temp. of either of the sensors or alternatively the temp. differential between the sensors.

The appts. maintains a predetermined temp. differential across a bar of wet stored grain during its curing.
8.5.78 as 903815 (14pp295)

CAMP- D13 58675A/32 = US 4175-486
Protein extrusion and surface texturisation - by application of heat to both surfaces of sheet followed by exposure to heated gaseous stream

CAMPBELL SOUP CO 31.12.75-US-645613 (10.01.78-US-868451)
(27.11.79) *US4095-001 +A23c-03/02

Protein is texturised in appts. which includes a die for extruding a thin sheet of protein, a heater to texturise the surfaces of the sheet, a confined treating zone connected to the die, a device to supply a heated gaseous stream to the zone to break off the leading segment of the sheet, and a device to recover the texturised protein.

A low-work screw feed pref. supplies protein to the die. The die pref. has a tubular orifice and the extrudate is

slit into arcuate sheets. The heated gas supply is pref. concentric with the tubular orifice.

Parent patent relates to the method of texturising.
10.1.78 as 868451 Div.ex. 4095001 (14pp1376)

UNIL ★ D13 89330B/49 ★ US 4176-20
Reducing surface discolouration of food spreads on drying - b addn. of food grade white pigment

LEVER BROTHERS CO 19.09.77-US-834604

(27.11.79) A23d-05/04 A231-01/27

Discolouration of a margarine-like water-in-oil emulsion food spread contg. $\geq 40\%$ fat or oil, caused by evapn. of water, is prevented by adding sufficient food grade white pigment to the compsn. so that the optical properties of the spread when it is dehydrated are comparable to those of the freshly prepared material.

The white pigment is pref. TiO_2 . Pref. 0.05-1 wt.% of pigment is added. Oil dispersible pigment may be incorporated directly in the oil or fat phase. Water dispersible pigments may be added directly to the aqueous phase. Pref. in this case, the pigment is added to a portion of the aqueous phase having a salt concentration below that which would cause coagulation of the pigment, then this portion is blended with the rest of the aqueous phase and with the oil phase. 19.9.77 as 834604 (5pp955)

MACA- D13 42700B/23 = US 4176-20
Low calorie food sweetener compsn. - contains lactose and/or sorbitol, cream of tartar, ammonium glycyrrhizin and a nucleotide
MACANDREWS & FORBES 25.11.77-US-854604

B05 E19 (27.11.79) *DT2851-082 A231-01/23

Sweetening compsn. consists of 85-95 (89.5) wt.% sorbitol 2.5-7.5 (pref. 5) wt.% K bitartrate, 2.5-7.5 (pref. 5) wt.% ammoniated glycyrrhizin and 0.025-0.075 (pref. 0.05) wt.% of a 5'-nucleotide.

The compsn. is used instead of sucrose, etc. in food prods. such as cakes, pies and confections. Compsn. is low in calories, and is quite soluble in water and water base liquids. Compsn. has no unpleasant flavour. 25.11.77 as 854604 (4pp982)

RALS ★ D13 89331B/49 ★ US 4176-202
Replacement for fish in kamaboko - comprises vegetable protein and fat emulsion

RALSTON PURINA CO 04.10.78-US-948596 (22.08.77-US-826510)

(D12) (27.11.79) A231-01/32

A kamaboko-type gelled fish prod. contains comminuted fish flesh obtd. from fresh fish or frozen surimi, and ≤ 90 (pref. ≤ 30) wt.% based on wt. of fish, of a compsn. contg. 60-90 wt.% vegetable protein isolate (e.g. a soy isolate) and 10-40 wt.% of a fat emulsion having a fat content above 20 wt.%.

The compsn. can replace a portion of the expensive fish in the dish without adversely affecting the colour or texture. 4.10.78 as 948596 (5pp955)

BOLI D13 63339Y/36 = US 4176-203
Alkali treatment of lignocellulosic materials - followed by gradual neutralisation to render them (more) suitable as feedstuffs (NL 3.8.77)

BOLIDEN AB 27.02.76-SW-002799

C03 (27.11.79) *DT2707-785 A23k-01/12

Feed value of lignocellulosic materials is improved by treatment with a soln. of a base and subsequent enutralisation with acid. The alkaline soln. is applied on top of a mass of lignocellulosic material in a limited zone and travelling the zone across whole upper surface of mass. The alkali is applied at a rate corresp. to rate of uptake by the straw and residual alkali is recirculated after draining.

Pref. a curtain of spray is travelled across the whole upper surface of baled straw at 1.26 m./min. at least once. The whole upper surface is ca. $7 \times 10^3 \text{ cm}^2$ and soln. is applied at 83 l./min. for 2 hr.

Treatment partially breaks down lignin of straw to expose cellulose to enzymes in the rumen of an animal.
25.2.77 as 772073 (6pp963)

CA-★ D13 89343B/49 ★US 4176-228
 potassium-magnesium-calcium glycyrrhizin - useful as sweetening
 flavouring agent

MACANDREWS & FORBES 14.09.78-US-942313

03 E12 (27.11.79) C07h-15/20

potassium-magnesium-calcium glycyrrhizin (I) of formula
 Mg_yCa_zG (where G is glycyrrhizic acid, and the sum of
 y and z is 2) is recovered from licorice roots by ex-
 tracting it with water at 20-150°C., separating the insol-
 uable residue, treating the aq. extract with sufficient acid to
 acidify to a pH of 1-2.5, forming an acid soluble fraction
 and an acid insoluble ppt. of glycyrrhizic acid which is
 dried, treated with a mixt. of alkali having K, Mg and Ca
 ions to solubilise and alkalify it to a pH of 5-6.5, and
 the product is recovered. (I) is also claimed as new.

(I) is useful as a sweetener and flavouring agent, it has
 sweetness and flavour characteristics comparable to
 that of ammoniated glycyrrhizin or monoammoniated gly-
 cyrrhizin, but is free of the disadvantages associated with
 the low solubility in water, ammonia taste, gas prodn.
 14.9.78 as 942313 (4pp957)

NN/★ D13 89362B/49 ★WP 7900-982
 protein food product made from grain - formed into wet mass,
 heated by microwave energy, dehusked and deoiled

GANNON JJ 24.04.78-US-899171

241 Q76 (29.11.79) A23j-01/12 A23l-01/20 B02b-01/08 B02b-
 03/04 F26b-03/22

ES: N(JA) + E(CH, DT, FR, GB, LU, OE, SW).

Food product is made of grain and contains more than
 7% protein also being free of fibres, fats and oils.

The food is made by mixing malted, partially crushed
 grain with water. The mixt. is heated and the resulting
 liquid is drawn off. The remaining granular material is
 removed in soggy form. Microwave radiation is applied
 to the soggy mixt. to drive off the moisture.

The resulting granular material is next subjected to a
 comp. sufficiently low to embrittle it prior to applying
 mechanical pressure to fracture the husks. The husks
 and remaining granular material are separated and
 finally the fats and oils are dissolved from the granular
 material by a volatile solvent.

The method is used to prepare a high-protein food pro-
 duct fit for human consumption. The pref. starting
 grain is barley.

24.4.79 as US0269 (27pp295).

(E) ISR: US2225428; US3212902; US3682651;
 US3831288; US1020091; US3545093; US4073951;
 US2263608; US3528179; GB-195911; GB-977387;
 US3947599; US3939281; US3914454; DT2627137;
 US3615655; US4053653; US3404989; US2833652.

BSNG-★ D13 89365B/49 ★WP 7900-993
 Cytochrome C and protein prodn. from yeast - by lysis followed by
 ion exchange chromatography

BSN-GERVAIS DANONE (VINC/) 27.04.78-FR-012563 (27.04.78-
 FR-012562)

B04 C03 (29.11.79) A23j-01/18 C12d-05 C12d-13/06

D/S: N(BR, CH, DT, DK, GB, JA, OE, SW, SU, US).

Prodn. of haemoproteins (esp. cytochrome C) and prot-
 eins from yeasts comprises (a) subjecting the yeast to
 cellular lysis in a liq. medium under pressure; (b) purify-
 ing the lysate by precipitating nucleic acids (e.g. with
 $MnCl_2$) and salting out cell residues (e.g. with NH_4 sul-
 phate); (c) adjusting the purified lysate to pH 8-8.5 and
 passing it over an ion-exchange resin to adsorb the cyto-
 chrome; (d) adjusting the effluent to pH 3.3-4 and pre-
 cipitating proteins with $(NH_4)_2SO_4$; (e) washing the resin
 with an aq. alkaline soln. with a pH of 8-8.25; and (f)
 eluting the cytochrome with an aq. soln. of $(NH_4)_2SO_4$.

The process gives high yields (e.g. 250 g/tonne) of
 high-purity cytochrome C and high yields (e.g. 340 g/
 tonne) of high-purity proteins suitable for use in human
 and animal nutrition.

25.4.79 as FR0036 (15pp367)

(F) ISR: US3371081; J48018825; J41007827; 2 Journal
 References.

See Also

D16 DT 2823123
 D16 FR 2417979
 D16 SU 652901
 D23 US 4175569

D16 DT 2901542
 D16 GB 1557340
 D17 SU 652219

D16 FR 2418462
 D16 J7 9036235
 D21 DT 2822907

D14: FOODSTUFF MACHINERY

OLD- D14 20158B/11 =DS 2738-696
 refrigerator and fan for preserving granular foodstuffs - works
 efficiently and is quickly changed over from suction to blowing

GOLDSAAFT DORING 27.08.77-DT-738698

Q75 Q78 (29.11.79) *DT2738-698 F25d-17/06 F28c-03/10

Granular bulk goods such as wheat, maize, oil seeds, etc.
 are preserved in a cooling appts. The appts. comprises a
 chamber joined by an adjustable coupling to a pump which
 acts alternately as a suction and a pressure pump. As a
 suction pump fresh air is passed through the bulk goods.

The fresh air is cooled and then pumped back under
 pressure through the bulk goods. 27.8.77 as 738698 (6pp)

WEISS/★ D14 87812B/49 ★DT 2822-252
 rapid food smoking cabinet - with withdrawable hot plate for
 dust and cooling ribs in ceiling

WEISS G 22.05.78-DT-822252

(29.11.79) A23b-04/04

Food smoking cabinet consists of an enclosed chamber
 with a hot plate which can be drawn out and holds the
 food for the smoke production. Air is admitted through
 the sides and the smoke is extracted through an outlet
 at the top. The cabinet is equipped, in addition, with
 cooling ribs at the ceiling which are a part of a refrigerat-
 ing system.

Such a cabinet can be used as a high-speed smoking
 chamber and also as a refrigerator for storing food.
 2.5.78 as 822252 (4pp39).

ASAG ★ D14 88261B/49 ★J5 4138-052
 Food processing machine with diaphragm - which is of fluorine
 rubber obtd. from fluorine elastomer, organic peroxide, organic
 polyallyl cpd. and basic metal (hydr)oxide

ASAHI GLASS KK 18.04.78-JA-044848

A88 (A18 A97) (26.10.79) A23l-03 C08k-05/14 C08l-27/12

Diaphragm to be contacted with steam, strong acid, strong
 alkali, oxidising agent, food materials etc. at high temps.
 is made of a fluorine rubber (I) having a number average
 crosslinking degree of ≥ 1.86 and JIS hardness A of ≤ 75 .
 (I) is obtd. by (a) blending a peroxide-vulcanisable F-contg.
 elastomer with an organic peroxide, ≤ 10 PHR organic
 polyallyl cpd. and 0-5 PHR basic metal oxide or hydroxide
 and (b) subjecting to a first vulcanisation and then to a sec-
 ond vulcanisation at $\geq 150^\circ C$ for ≥ 30 min.

Pref. the elastomer is propylene-TFE copolymer, vin-
 ylidene fluoride-propylene hexafluoride copolymer etc.
 The peroxide is pref. α, α' -bis-(t-butylperoxy)-p-diiso-
 propylbenzene, 2, 5-dimethyl-2, 5-di-(benzoylperoxy)-hex-
 ane, etc. and its amt. is 0.5-10 PHR. The allyl cpd. is
 pref. triallyl (iso)cyanurate. Pref. first vulcanisation is
 effected at $100-230^\circ C$.

Prod. has excellent resistances to hot water, steam,
 chemicals, food, etc. non-toxicity, no smell, no taste,
 excellent sealing properties and high mechanical strength.
 18.4.78 as 044848 (10pp119)

FREN ★ D14 88442B/49 ★ J5 4138-871
Appis. for prodn. of granules e.g. pharmaceutical tablets - allows raw material granules to pass up lower container to be coated with atomised soln.

FREUND INDUSTRY LTD 21.04.78-JA-047228

B04 J04 (27.10.79) B01j-02/16

Appts. for producing granules such as food or pharmaceutical tablets passes granules of raw material up a lower container using an intake gas flow while specified soln. is atomised to coat the granules. A bag filter container is connected to an upper opening of the container for trapping the atomised granules..

Bag filters disposed in the container are cylindrical, projecting downwards, with frames for maintaining the shape of each filter. Each filter has a nozzle for spraying a compressed air upwards into the filter. A cover plate above the container has openings with safety caps against explosion.

Explosion of granules and clogging of the filter are prevented. 21.4.78 as 047228 (4pp26)

ISOM- ★ D14 B/49 ★ PT --69-404
Conveyor system for cleaning and freezing food products - has water spray nozzles above and below endless belt conveyor and cleaning fluid recovery and recirculation system
ISOMECANICA CONSTR 29.03.79-PT-069404
P42 (15.11.79) A23b B05b

MOFO= ★ D14 88769B/49 ★ SU -651-844
Viscous coagulating material crusher - has working chamber made as upper and lower cowlings
MOSC FOOD IND TECHN 11.07.77-SU-509760
J02 P41 (19.03.79) B02c-18/12

The viscous coagulating material crusher described in Parent Certificate No. 466909 can be used in food and other inds. The unit contains vertical working chamber with unloading opening, replaceable mesh which covers the unloading opening and guide. The latter is placed on chamber wall inner surface at an angle.

In order to increase crusher efficiency, the working chamber is made as upper and lower cowlings connected to each other.

Ginzburg A.G., Goldenberg V.L., Bul. 10/15. 3. 79
11.7.77 as 509760 Add to 466909 (2pp110)

BASH= ★ D14 89040B/49 ★ SU -654-236
Milk cooler for use under field conditions - has flask for milk, fed with liquid nitrogen from tank fitted with means to compress air to force it through

BASHKIR AGRIC INST 28.12.76-SU-436534
(30.03.79) A23c-03/04

Device for cooling milk, under field conditions, comprising a container for the milk and a storage tank filled with compressed cooling liquid.

The labour required during the cooling is reduced and field cooling is guaranteed, by fitting the cooling liquid container with a capsule with a hole and a valve, two pipelines, a two-way tap and a source of compressed gas. Inside the milk container is a hollow rod with spray head. The capsule is fastened to the outside parts of the pipelines one of which is located in the top part of the capsule and connected to the compressed gas source. The other pipe is connected to the hollow rod and located in the bottom part of the capsule. The rod has a circular manifold and can be moved vertically by a support bracket fastened on the storage tank contg. the coolant.

Prokopov O.I., Almaev R.A., Kuydusov N.Ya. Bul. 12/30.3.79 28.12.76 as 436534 (3pp29)

KHFA= ★ D14 89042B/49 ★ SU -654-239
Device for breaking open sunflower seeds for vegetable oil prodn. - has feed hopper and pipe with rotating discs to throw seeds against surrounding surface

KHARK FATS RES INST 02.02.77-SU-449294
(D23) (30.03.79) A23n-05

Device for causing seeds pref. sunflower seeds from which the oil is to be extrd., to break open, comprising a vertical cylindrical container, inside which is a circular deck discs mounted one underneath another on a vertical shaft, to form two working zones (upper and lower) with

radial channels to direct the seed towards the deck.

A seed distributor comprises concentric receiving chambers and hopper, plus a cylindrical pipe with top conical attachment, having holes to allow the seed to pass through into the lower working zone. Productivity is increased by including extra discs of similar arrangement, forming an extra upper working zone. In the seed distributor radial partitions are fixed into the annular spaces between the chamber and the pipe, forming vertical feeding channels, the number of which is a multiple of the number of upper working zones. The distributor also has guiding deflectors between the partitions, each of which is positioned at the inlet to one of the zones.

Kovalenko V.N., Bul. 12/30.3.79 2.2.77 as 449294 (4pp29)

ODPR= ★ D14 89043B/49 ★ SU -654-240
Converting root vegetables into food products - e.g. white roots and carrots and onions by grading, washing, weighing, cutting, blanching cooking etc.

ODESS PROVIS EQUIP 22.11.76-SU-422156
(30.03.79) A23n-15

Processing line for converting root vegetables into preserves, comprises a container-inverting mechanism, washing machine, calibrator, machine for cutting off the ends of the roots, inspection conveyor, "gooseneck" elevator, steam blancher, inspection and cleaning conveyor, cutting-up machine, washing-shaking machine, proportionator, mixer, cooking oven, cooler and pump. More complete mechanisation is achieved by fitting hoppers with driven screws, located in front of the blancher, plus weighing means, the first of which is disposed in the hoppers with the driven screws, and the other after the inspection and cleaner conveyor. These weighing means have contact sensors and executive mechanisms, the first being linked through the executive mechanism to the screws, and the second to the proportionator.

Dondysh Zh. Ya., Kukin O.N., Rotenberg I.Kh. et al.
Bul. 12/30.3.79 22.11.76 as 422156 (3pp29)

ASAH- D14 08059B/05 = US 4175-482
prodn. of clean peeled soya beans etc. - by flotation sepn. of mixed beans and waste discharged from a bean peeling machine

ASAHIMATSU KORIDOFU 22.09.77-JA-114059
+P28 (27.11.79) *BE-870-644 +A47j-27/04

Automatic high-pressure flash cooker has a cylindrical steaming chamber set in a slanted position and open at its open end, a drain collector having a perforated plate connectable to the open end of the chamber, and a feed hopper for supplying water and beans connected to the chamber. The drain plate is connected to a vapour source and has an opening for exhausting water.

The collector is pref. movable by a hydraulic cylinder into a position where it is tightly sealed against the open end of the chamber. Cooking cycles of 10 secs to 1 min. are possible. 12.9.78 as 941792 (4pp1376)

TOBE/ ★ D14 89151B/49 ★ US 4175-484
Domestic food smoking appts. with automatic wood feed - passes pieces of wood along heated guide retort

TOBEY FS 23.06.78-US-918461
(27.11.79) A23b-04/04

A smoking appts. includes a container for a stack of wood and a guide retort. The guide retort receives successive pieces of wood from the stack between a pair of vertically spaced guide surfaces. Charcoal produced in the guide retort is expelled from the appts. The upper guide surface has a series of holes permitting the smoke to leave the retort.

Successive pieces of wood are driven into the guide retort. A heating element is positioned adjacent the guide retort and a food enclosure receives the smoke passing through the holes in the upper guide surface.

No attention is required from the user during the smoking process. Also whenever the switch for the electric heating element is turned off any smouldering wood is self extinguished. 23.6.78 as 918461 (7pp295)

MA/ ★ D14 89152B/49 ★ US 4175-485
 Portable food smoker - with removable lid resting on annular trough collecting drips from lid
 VOJAHN HF 27.10.78-US-955191
 (27.11.79) A23b-04/04
 Lid of a portable food smoker rests on a bottom panel. Outer section of this panel includes an annular trough collect drips formed by condensation on the lid. The central section of the base panel is formed of radial ribs beneath which a heater is placed.
 Food is placed on a grid which overlies a drip pan which in turn rests on the ribbed portion of the base panel. Pref. smoker rests on a shield which surrounds the heat source.
 The appts. is a portable smoker e.g. used by a fisherman to cook freshly caught fish. 27.10.78 as 955191 (5pp295)

MA/ ★ D14 89178B/49 ★ US 4175-690
 Slicing fruit, esp. water-melon, into wedge shaped portions - by first slicing into circular slices then segmenting
 BOVAM L 31.07.78-US-929809
 (27.11.79) B23q-07/10
 Fruit, e.g. water melon, is cut into circular slices by slicing it through a set of parallel knives. The slices are then transported to a destacker which feeds individual slices onto a rotating turret. The turret includes sets of segmenting knives which are pushed through the slices as the turret is indexed. Wedge-shaped segments are discharged by the turret and may be wrapped or frozen.
 The appts. is partic. used to slice water melons. Slices may be inserted into the water melon slices.
 31.07.78 as 929809 (14pp295)

ST/ D14 84349A/47 = US 4176-082
 Used-circuit smoke generator for smoking food - with collection chamber above screw conveyor tube for destructive distn. of wood
 WEST C W 13.05.77-US-796629
 (27.11.79) *DT2744-081 A23b-04/04
 Used smoke generator for smoking food has a pair of tangate housings on top of each other and connected by a conduit. A feeding device feeds organic material to one end

of the lower housing without air leakage into the housing, and a feed auger moves the material from the fed end of the housing to the other.

A heat source surrounds part of the housing for generating smoke by destructive distillation. There is discharge for residual matter at the other end of the lower housing, and an inlet and outlet in the upper housing to allow a carrier gas to entrain the smoke.

The conduit is pref. heated to prevent condensation of byproducts. 13.5.77 as 796629 (5pp1376)

FIND- D14 86247B/48 = WP 7901-038
 Meat and cheese block mincing machine - steps horizontal block towards horizontal screw at right angles, travelling downwards
 PRODUITS FINDUS SA (SVEN/) 08.05.78-CH-004990
 P41 P62 (29.11.79) *EP---5-445 B02c-18/26 B02c-19/20
 D/S: N(BR, DK, JA, US).

The mincing machine has a frame with a horizontal part with horizontal guides (4) between which the block of edible substance (3) is fed towards the cutter (9). This cutter is a horizontal screw at right angles to the direction of advance of the block.

This screw is positioned inside a vertical frame part (1) with the control panel (18) on top with the drive motor (17) behind it. This drive motor is pref. pneumatic, but under suitable conditions could be electric or hydraulic. The screw is raised and lowered against the face of the block as it rotates to make its cut.

The machine may be used for mincing large blocks of compressed meat for mass production of food portions in food preparation plant, but more particularly for mincing blocks of cheese, for the manufacture of pizzas (21).

The design of the cutter ensures an even spread of granulated cheese over the surface of each pizza. The tendency of cheese to stick to the cutter is avoided, and the cutter suits a variety of meat products.
 26.4.79 as CH0058 (18pp349).
 (F) ISR: FR1402161; US3831866; US3811627; US4002298; US3980235.

See Also
 D16 PT 69393

D15: WATER TREATMENT

HU/ ★ D15 87639B/49 ★ DL-137-436
 Reduction of chromic ions in waste waters - with sulphite waste liquor, esp. for electroplating waste
 SCHUTZER 30.06.78-DL-206388
 (05.09.79) C02c-05/02
 Redn. of Cr⁶⁺ contg. solns. comprises treating the soln. with pH 2-3, slowly and with stirring, with sufficient sulphite waste liquor (dry matter content 7-15%) until the soln. is brownish-red and no longer directly changes starch paper blue.
 Used esp. for treating industrial waste waters, partic. from electroplating. The method minimises contamination of the water with salts or organic residues, and the sulphite liquor is a cheap waste prodn. which is converted to harmless cpds. during the process and requires no additional energy for its prepn. 30.6.78 as 206388 (5pp1251)

LL- ★ D15 87655B/49 ★ DL-137-456
 Sand trap for clarifying plant e.g. for sewage - has sand compacted between inner and outer shells with fastening members and cover
 VEB STRASSEN HALLE 30.06.78-DL-206405
 (05.09.79) E03f-05/14
 Steel outer shell is mounted on a concrete base and there is an inner shell of the required shape. The space between is filled with the sand and compacted. After hardening of the sand, these two shells are in inverted position for the next forming stage.
 The inner shell has an opening for delivery the sand

to the space between the shells. This can be closed for compacting. This shell is connected by internal securing members and supports a top cover. The outer shell also carries securing members. 30.6.78 as 206405 (8pp349)

ROSC/ ★ D15 87709B/49 ★ DL-137-699
 Deodorisation and nitrification of waste waters - in a single high load biological decomposition stage, esp. for cattle excrement
 ROSCHKE M 20.06.78-DL-206125
 (19.09.79) C02c-01/06 C02c-05/10

Method comprises partial biological decomposition in a high-load biological decomposition in a high-load biological stage at 30-36°C and dilution rate 0.067-0.029 h⁻¹. The highly polluted material, which may be viscous or thixotropic, is deodorised and nitrified to NO₂⁻ and/or NO₃⁻ without the need for sludge sepn. or recycle of microorganisms.

Opt. the treated material is denitrified while held in a storage basin and then used as an N-source in agriculture, opt. after a mechanical-physical processing step. The material may be mixed with untreated waste at ratio 1:0.4 in the denitrification basin.

Deodorisation is achieved in a single stage and the treated prod. may be stored. 20.6.78 as 206125 (6pp1251)

DAVY D15 07481V/05 = DS 2233-377
Industrial effluent purificn - for waste water contg diisopropylamine

DAVY INT AG (ZIMV) 07.07.72-DT-233377

E16 (29.11.79) *DT2233-377 C02c-05

Industrial waste water, contg. diisopropylamine as impurity is purified by finely dividing it in a liq. jet gas washer and bringing it into contact with a continuously renewed gas stream. The gas stream is then sepd. from the liq. stream.

The waste water contg. diisopropylamine is obtd. in the prepn. of polyester resins by splitting off a glycol. A suitable appts. comprises a container for the waste water, liq. jet gas washer(s) connected to the container, a pump to circulate the waste water and a means to supply the gas washer with a gas. 7.7.72 as 233377 (5pp068)

CHIY D15 71026U/47 = DS 2306-626
Purificn of water - by activated carbon

CHIYODA KAKO KENSET 06.09.72-JA-088738 (28.06.72-JA-064678)

(29.11.79) *FR2169-136 C01b-31/10

A desorption stage is used for the regeneration of used active carbon, in which the carbon together with a combustible gas is heated to 100-700°C during a dwelling period of 5-180 mins. Thereafter, in an activating stage, the carbon is heated with a combustible gas to 500-1000°C, as well as with steam or a gas contg. steam, and reactivated in a fluidised bed; a dwelling time of 1-180 mins. being used.

The active carbon is intended for the purificn. of water and the process reduces the very heavy losses of active carbon prevailing in other modes of operation, to within tolerable limits. 10.2.73 as 306626 (8pp1045)

WASS/ D15 67909V/39 = DS 2323-004
Effluent aeration tank comprising vertical adjacent tubes - for activated sludge effluent purificn. plant

WASSMANN K 08.05.73-DT-323004

(29.11.79) *BE-814-755 C02c-01/06

The vertical tubes forming the activating tanks in a single stage, biological, water purificn. plant, each have at their upper end, a raw water connection which can be joined via a distributing line, to a common distributor vessel. Beneath the raw water connection drain pipes open into the tubes which can be joined to a common collector for the mixt. of water and activated sludge.

The distributor for the raw water and the collector for the sludge-water mixt. are arranged coaxially in a tube similarly standing vertically, and the design of the plant makes it possible to adapt its capacity to different loadings at low cost. 8.5.73 as 323004 (4pp1045)

HITA D15 26774X/15 = DS 2541-902
Collection and sepn of solid bodies - from flowing liqs., esp of balls used for descaling condenser tubes

HITACHI KK 20.09.74-JA-107725

J01 Q78 (29.11.79) *DT2541-902 B01d-35/28 F28g-01/12

The grid elements in a plant for removing collected solid matter from a liq. flowing through it, are in the form of rings and are assembled on a shaft which is rotated. In the passage through which the liq. flows, a row of tines is arranged, each of which projects between a pair of grid elements. As the grid rotates the tines strip the collected solid matter from the grid elements.

Close to the row of tines an outlet for the solid matter is joined on to the passage for the liq., and the liq. can be cleaned continuously without it being necessary to stop the process for the cleaning of the grid. 19.9.75 as 541902 (9pp1045)

ANIS D15 02088A/02 = DS 2729-891
Agglomerating mercury particles esp. in aq. effluent - by subjecting the liquor to the action of a magnetic field

ANIC SPA 02.07.76-IT-024984

J01 P41 (29.11.79) *BE-856-388 C02c-05

Mercury particles, no matter how small, are removed, e.g. from industrial waste water by subjecting the particles to a magnetic field, pref. of strength ≥ 6000 gauss. The particles form larger droplets which can be removed, e.g. by decanting.

The examples relate to the recovery of mercury used as a catalyst of FeSO_4 , Hg and HNO_3 which has been used for the prepn. of acetaldehyde from acetylene. 1.7.77 as 729891 (3pp068)

MONS D15 49687A/28 = DS 2800-4
Diethylene-tri:amine penta:methylene phosphonic acid compsn contg. amino tri:methylene phosphonic acid as tartar inhibitor agent and used for cleaning and inhibiting corrosion

MONSANTO EUROPE SA 10.01.77-GB-000739

E11 M14 (29.11.79) *BE-862-646 C01d-01/04

Alkali liquor contains (a) diethylene triaminopenta(methylenephosphonic acid) or its alkali metal salt and (b) amino tri(methylenephosphoric acid) to reduce deposit formation. The amt. of cpd. (b) is 5-70 (10-40)% of the total wt. of (a) and (b). A surface active agent is pref. also present.

A typical soln. contains 1.5% NaOH and 50-300 ppm inhibitor mixt. The soln. may be used to clean glassware dairies, lemonade factories and breweries. 5.1.78 as 800457 (4pp068)

SCHU/★ D15 87818B/49 ★DT 2822-3
Filter with self-cleaning action - has mesh cage with internal valve to provide both element flushing and backflushing when head fouling occurs

SCHULTZ J 23.05.78-DT-822361 (00.00.77-DT-754594)

J01 (29.11.79) B01d-37/04

In-line filter with mesh element on support cage has central rotating cylinder with sealing devices. This projects a stream of water down the inner surface of the element to flush off deposits which run out through an opening in the base.

As the spindle operating the cylinder is rotated and raised, the cylinder is raised and seals the inlet port to the element. This causes a backflush of liq. through the element and out from the outlet at the base. This is a second cleaning action.

Used for in-line filtration of liquids esp. water. Allows a cleaning action even if the element has become filled with deposits such as sand. 23.5.78 as 822361 Add to 2754594 (24pp1053).

FARB★ D15 87868B/49 ★DT 2823-0
Semipermeable membrane unit - having set of spacers and membrane with appropriate holes which can be combined in modular form

BAYER AG 26.05.78-DT-823057

J01 (29.11.79) B01d-13

Semi-permeable membrane to separate components in a liq. mixt. is of flat modular construction held together in compression, by sticking or welding. It has branches for introducing the liq. and recovering the concentrate and permeate. A permeate collection chamber is formed by spacers covered by the membrane.

These chambers are kept gas and liq. tight. Connections are built into the spacers so that liq. can enter and drain from the chambers. Holes are bored around the edge to form symmetrical flow passages when the unit is assembled parallel to its axis. These serve for introducing the fluid and draining off the permeate.

For separation processes such as ultrafiltration and reverse osmosis. Gives a system which is cheap to produce and assemble, and which can be rapidly dismantled. 26.5.78 as 823057 (20pp1053).

KLOC★ D15 87895B/49 ★DT 2823-2
Sewage purificn. tank with combined activation of effluent and sludge - has propeller directed into tube contg. air bubble generator

KLOCKNER WERKE AG 27.05.78-DT-823237

(29.11.79) C02c-01/06

A sewage clarification device comprises an activation tank for the aerobic stabilisation of the sewage effluent and sludge in one operation, the energy being supplied separately from the aeration process. The energy is supplied by a propeller directed towards a nozzle tube, containing an aeration device, more specifically a porous ceramic tube coaxially mounted in the nozzle.

Uniform, intensive distribution of oxygen into the effluent and sludge is obtd.. 27.5.78 as 2823237 (7pp23)

PROV ★ D15 87900B/49 ★DT 2825-125
Regeneration of activated carbon used for water treatment - for water treatment by taking stream and irradiating with X-rays to form hydroxyl ions in the water (NL 27.11.79)

BBC BROWN BOVERI AG 23.05.78-CH-005626
E36 J01 (29.11.79) B01d-15/06 C01b-31/08

Regeneration of activated carbon involves destruction of adsorbent, organic chemical materials in the presence of water and O₂ by irradiation. Sufficient energy is introduced into the system to form additional OH radicals.

This energy input is achieved by the use of X rays in the energy range of 50 ke V to 800 ke V esp. 100 ke V to 300 ke V. The radiant doses used are in the range 5 Gy to 15 k Gy. Ultrasonic energy can also be applied.

For use in purifying effluent or preparing drinking water. Reduces the carbon loss on regeneration, being more easily operated and maintained. 8.6.78 as 925125 (18pp1053).

ALFA ★ D15 87950B/49 ★DT 2920-540
Liquid stable manure processing - by circulation and air injection with controlled cooler preventing ammonia release

ALFA-LAVAL STALLTEC 22.05.78-OE-003721
C04 (29.11.79) C05f-03

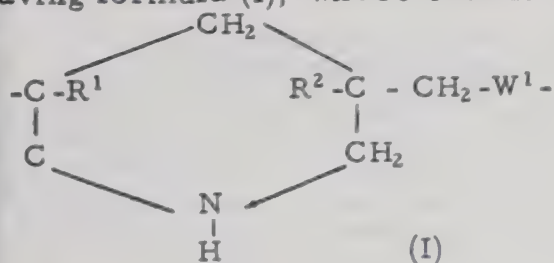
In a treatment of liquid stable manure, an adequate amount of oxygen is continuously injected to foster the activities of microorganisms. To prevent the temperature from rising above the max. figure of 38°C, a cooler in the manure tank has a flow rate which is controlled as a function of the temperature.

This prevents the escape of nitrogen in the form of ammonia gas at a higher temperature so that the quality of the product as fertiliser is not diminished. It also avoids any anaerobic digestion of the liquid manure. 21.5.79 as 920540 (9pp39).

TEIJ ★ D15 87961B/49 ★DT 2920-772
Semipermeable water-desalination membrane - contg. microporous substrate coated with piperidine ring-contg. polymer crosslinked at boundary surface (NL 26.11.79)

TEIJIN KK 22.05.78-JA-059881
A88 J01 (29.11.79) B01d-13/04

Semi-permeable composite membrane comprises a microporous substrate coated, on one side, with a thin, semi-permeable film of polymer material obtd. by boundary surface crosslinking of a polymer contg. a repeat unit having formula (I), where each R¹ and R² is H (prefd.) or Me and W¹ is a



a covalent bond or -SO₂- with a polyfunctional cpd. contg. ≥ 2 functional gps. such as acid halide-, sulphonyl halide-, NCO-, N-haloformyl-, haloform-

mate- and acid anhydride gps..

The membrane is pref. used for salt- or brackish water desalination by reversed osmosis, by contacting the water, under pressure, with the membrane. Food industry waste waters can also be treated. The membrane has high selective permeability and salt-retention, and resists heat, hydrolysis, oxidn., Cl₂, acids and alkalis, and biological degradation. 22.5.79 as 920772 (114pp200).

DUVE/ ★ D15 88025B/49 ★FR 2418-205
Solidifying mud etc. for infilling building foundations - by pumping mud to mixer which is dosed with hardening agent

DUVERNE J C M 22.02.78-FR-005007
(26.10.79) C02x

The plant comprises means for lifting mud from the bed of a pond, base of a settling tank or from a bog; a mechanical excavating shovel is pref. This mud is dumped in the intake tank of a pump, e.g. of the type used for sewage

The pump delivers into a mixer, pref. a concrete mixer, into which is dosed a reagent to solidify the mixt. The reagent can be a commercial prod. such as "Petrifix" (RTM). The mixt. is discharged from the mixer for dis-

tribution to construction site(s). Distribution can be by: road transport tankers or by pumping directly to an adjacent site.

Used for mfg. a bulk material for infilling foundations of building structures, roadways and railways constructions etc. In suitable areas the prod. can be made very cheaply, frequently alongside the construction site. Only conventional, easily operated equipment is used. 22.2.78 as 005007 (6pp448)

ICIL ★ D15 88029B/49 ★FR 2418-252
Amphoteric ion-exchange resin capable of thermal regeneration - prepd. from acidic and basic monomers in presence of inhibitor (J5 5.10.79)

ICI AUSTRALIA LTD (CSIR) 27.02.78-AU-003526
A91 (26.10.79) C08j-05/20

An amphoteric ion-exchange resin is prepd. by suspending particles of an ion-exchange polymer in a liq. phase based on a precurator capable of being transformed into an ion-exchange polymer matrix of opposite type. The matrix encapsulates the polymeric particles. Matrix formation is effected in presence of an inhibitor.

The resins are used esp. for demineralation of saline solns. over prolonged periods, with intermittent thermal regeneration. Classical procedures are not always satisfactory for the prodn. of resins of this type, probably because of internal salt formation. Use of inhibiting agent gives a resin which, after sepn. of the inhibitor, has ion-exchange capacity up to 45% greater than that of resins prepd. in absence of inhibitor. 26.2.79 as 004855 (17pp)

GISL- D15 38754A/22 =GB 1556-955
Large surface area plastic elements - giving large contact surface between gas and liq. and used in distn., absorption, cooling, purificn. and biological oxidn.

GUMMIFABR GISLAVED 01.11.76-SW-012110

A88 J01 + P73 (A18 J04) (05.12.79) *DT2748-426 + B32b-03/26
B32b-07/08 B32b-27/06

Construction of a matrix of sheets or plates providing a series of fluid flow passages between the individual sheets or plates for use in interacting processes between fluid flows, is described. The sheets or plates are preformed with co-operating protuberances and/or depressions so that the sheets or plates are interengaged with each other when assembled. Heaters are applied from one side of each pair of mutually interlocked sheets or plates to produce a welded joint between them.

Pref. the sheets or plates are formed of thermoplastic polyolefin and/or vinyl chloride polymer.

The matrix is useful in e.g., mixing, distn. absorption, cooling of liqs., cleaning of combustion gases and biological oxidn., etc. and is partic. useful in food and medical technology due to the absence of use of adhesive in its construction. 31.10.77 as 045171 (5pp393)

BRPE ★ D15 88052B/49 ★GB 1557-067
Crude oil recovery from reservoir - by injection of sea water from which detritus has been removed by novel filtration process

BRITISH PETROLEUM LTD 20.09.76-GB-038856

H01 J01 Q49 (05.12.79) B01d-37 B01d-41 E21b-43/20

Filtration of sea water contg. macerated organic and inorganic detritus involves filtering the sea water through a filter medium. Periodically the flow is discontinued and the filter medium regenerated by directing a jet of a wash liquid onto the residue retained by the filter from the same side of the filter medium as the residue with sufficient force to dislodge the residue.

Backwash techniques are inefficient in removing the residue and thus regeneration becomes a lengthy procedure. The present invention enables the residue on the filter to be readily removed.

Also claimed is the recovery of oil from a coastal or offshore reservoir by filtering sea water and injecting it into the reservoir through an injection well. Crude oil is recovered through a production well. 12.9.77 (3pp1345)

SHEL ★ D15 88059B/49 ★GB 1557-182
Dispersing compsn. for oil slicks - comprising mixt. of ester(s) of fatty acid and polyethylene glycol in ether solvent

SHELL INT RES MIJ BV 12.11.75-GB-046704

A97 E17 H03 (A25) (05.12.79) C02b-09/02

Compsn. for dispersing spilt oil comprises an emulsifier component (A) comprising or contg. either (i) a mixture of an ester (I) of an 8-22C carboxylic acid and diethylene glycol with an ester (II) of an 9-22C carboxylic acid and a polyethylene glycol of mol. wt. 200-500 or (ii) a mixt. of esters (III, IV) of an 9-22C carboxylic acid and polyethylene glycol, the ave. mol. wt. of the polyethylene glycol being 100-300 higher in (IV) than in (III), and (B) a solvent component comprising or contg. an ether of formula $R(O-R_1)_n-OR_2$ (V) (where R is 1-8C alkyl, R_1 is 2 or 3C alkylene, R_2 is H or 1-8C alkyl, and n is 1-3).

Compsn. is for use in treating oil slicks on fresh or sea water. The use of the ether solvent (V) to replace, at least partially, the usual kerosene solvent gives a comps. of higher active mass (e.g. 40-80 wt.% emulsifier cf. 10-20 wt.% using kerosene) and thus reduces transport problems and costs. The comps. are also more compatible with water, esp. sea water. 10.11.76 (5pp909)

GESL D15 41885Y/24 =GB 1557-261
Radioactive effluent solidification in matrix - making it alkaline before last stage to prevent trouble due to volatility

KERNFORSCHUNGS KARLSRUHE 28.11.75-DT-553569

A97 K07 L01 (05.12.79) *DT2553-569 G21f-09/16

An aq. radioactive waste soln. is solidified using a boron cpd., in a borosilicate glass or borosilicate glass-ceramics matrix or in a bitumen or plastics material matrix, by either adding a cpd. to convert the boron cpd. into a sparingly soluble boron cpd., or by adding such a sparingly soluble cpd. to the waste soln. to be solidified.

Pref. an alkaline earth hydroxide is added in an amt. that causes the previously weakly acid waste soln. of pH 2-3 to become alkaline with pH ≥ 9 .

The solidification process avoids the disadvantages inherent when radioactive effluents contg. boron cpds. such as boric acid are used. 5.11.76 as 046052 (4pp931)

PREU D15 18207Y/11 =GB 1557-282
Removing nitrate from water to make it drinkable - by adding carbon cpd. and passing through biomass on spherical support

PREUSSAG AG 04.11.75-DT-549415

A97 (05.12.79) *BE-847-897 C02b-01/23 C02c-01/02

Nitrate is removed from water by biochemical redn. to nitrogen in the presence of phosphorus and a carbon donor. Method includes passing raw water contg. an organic substance acting as the C donor in an upward or downward stream over buoyant spherical bodies which have a rough surface structure and serve to carry microorganisms performing the denitrification process.

The formation and maintenance of active microorganisms or bacteria in a bed is ensured, whilst enabling decomposition prods. to be removed. Pref. the buoyant spherical bodies are expanded polystyrene or silicate balls. 22.10.76 as 044079 (7pp964)

ENGE ★ D15 88089B/49 ★GB 2021-547
Flocculation of gelatinous sludges - by treatment with powdered water-insol. fibrous cpd., then flocculating agent

GEC DIESELS LTD 17.05.79-GB-017232 (25.05.78-GB-022407)

(05.12.79) C02c-03

Gelatinous sludge produced by treatment of H_2O or aq. effluent is flocculated by: (a) treatment with a powdered H_2O -insol. fibrous organic material (I); then (b) addn. of an H_2O -soluble flocculating agent (II). (I) has particle size ≥ 1 mm. in any dimension.

Treatment of the sludge with (I) before use of the conventional (II) improves its filterability considerably, allowing filtration to be effected through a conventional filter cloth. The process is partic. effective for the flocculation of activated sludge or surplus activated sludge produced in an H_2O or aq. effluent treatment plant.

Pref. (I) is bagacillo dust and amt. added is 10-200% pref. $\sim 100\%$ by wt. of suspended solids in the sludge (pref. as a 5-10% aq. slurry). Pref. (II) are conventional polyelectrolytes (esp. cationic), and these are pref. added as dil. aq. soln. (0.25-1.0% of (II) by wt. of sludge solids). 17.5.79 as 017232 (3pp478)

UMAS/ ★ D15 88090B/49 ★GB 2021-551
Compsn. for flocculating hydrophilic colloidal particles - comprising an acrylamide polymer and alkali and/or alkaline earth metal salt
UMASE N 31.07.78-JA-092486 (29.05.78-JA-063343)
A91 E34 (A14 E33) (05.12.79) C02b-01/20

Compsn. comprises 1 pt. wt. of an acrylamide polymer and at least one water-soluble alkali(ne earth) metal salt, the total amt. of the salt(s) present being such that $x+0.1y = 100$ (pref. 8-30) where x is the pts. wt. of alkaline earth metal salt(s), and y is the pts. wt. of alkali metal salt(s).

The salts are pref. Ca, Mg, Na or K chloride, Ca or Mg nitrate, Na or K sulphate or Ca acetate. The polyacrylamide is opt. partially hydrolysed or modified or a copolymer with acrylate. The comps. is a powder, aq. soln. o jelly contg. 20-80% water.

An aq. soln of the comps. is used for treating an aq. suspension or waste mud contg. hydrophilic colloidal particles. The aq. suspension can be prepd. by adding bentonite to a waste soln. to promote the flocculation of non-hydrophilic solid particles in it. The comps. defines the optimum ratio of polymer flocculant to salt sensitiser. Large, strong flocs are readily and quantitatively formed. 24.5.79 as 018167 (8pp558)

UMWE- ★ D15 88190B/49 ★J5 4137-480
Treating and maturing pretreated waste and pptd. sludge - using biochemical exothermic nature of materials to mature comps.

GES UMWELTSCHUTZANL 14.04.78-JA-043401

(25.10.79) B01j-01 C02c-03 C05f-09

Appts. for treating, maturing quickly pre-treated trashes and pptd. sludge is claimed. An annular chamber is formed inside an external cylinder and a secondary cylinder is fitted inside the annular chamber and the external cylinder and a sec. cylinder is fitted inside the annular chamber and the external cylinder and the sec. cylinder are devised to rotate around a common shaft. The annular chamber is sepd. into several sectioned chambers. Feeding means and withdrawal means are fitted inside the internal chamber in the sec. cylinder.

The pre-treated trash and the precipitated sludge contain ca. 65 wt.% moisture and are a biochemically exothermic material. They are matured with the generated heat energy. 14.4.78 as 043401 (7pp15)

MITW ★ D15 88196B/49 ★J5 4137-490
Water-treatment process adsorbent - prepd. by mixing slag from steel prodn., with water and/or binder, moulding mixt. and pulverising

MITSUBISHI STEEL MFG KK 18.04.78-JA-044803

A81 E37 J01 (A14) (25.10.79) B01d-15 C02c-05/02

An adsorbent is prepd. by mixing a slag obtd. in steel prodn., with water and/or a binder, with or without applying pressure. The mixt. is moulded for solidification and pulverised. The adsorbent can adsorb chemical components, such as phosphoric acid, arsenic, heavy metals in waste water.

The slag is pulverised to powder and then mixed with water and/or a binder such as water glass, polyvinyl alcohol. In an example, 100 mesh-through slag powder is mixed with 5% of water and moulded at 2 t/cm² with a roller. The moulded prod. is dried, pulverised and screened. The hydrolysis-product of the slag, such as calcium hydroxide, magnesium hydroxide, activated alumina gel, activated silicate gel, absorb the chemical components. 18.4.78 as 044803 (3pp42)

HITK ★ D15 88217B/49 ★J5 4137-850
Chromium-contg. sludge treatment - by incineration and then heat-treatment under carbon monoxide-contg. reducing atmos.

HITACHI METAL KK 17.04.78-JA-045128

J09 (25.10.79) B01j-01 C02c-03

A Cr-contg. sludge, from the treatment of sewage and industrial waste water, is made harmless by incinerating it, and subsequently heating the obtd. ash at $> 600^\circ\text{C}$ under a reducing atmos. contg. $> 0.1\%$ of CO. The amt. of Cr^{6+} to be dissolved in the case of reclamation of the ash from the incineration of the sludge is < 0.1 mg/l.

Dissolved Cr^{6+} is hardly found by heating the sludge, esp. at 800°C , in the presence of $> 0.1\%$ of CO or at $> 720^\circ\text{C}$ in the presence of $> 0.5\%$ of CO. When the amt. of

is $>0.1\%$ in the amt. of oxygen in the reducing atmos. pref. $<1\%$, esp. $<0.6\%$. The reducing atmos. is maintained by adding a CO generating matter, e.g. activated charcoal and finely powdered coal etc. to a reducing sep or by introducing a reducing gas from the outside. 17.4.78 as 045128 (3pp34)

FF ★ D15 88218B/49 ★ J5 4137-851
Bentonite- and cement-contg. waste liquor treatment - by adding acidic silica sol. to effect gelation, then dewatering, e.g. by filtration

HITACHI SHIPBLD ENGG KK 17.04.78-JA-045470
J02 (25.10.79) B01d-37 C02c-05/02

Bentonite- and cement-contg. waste liquor resulting from the construction of continuous wall by excavating the ground is treated by adding acidic silica sol., e.g. prepd. adding in small portions a dil. silicate soln. to a dil. phosphate soln. under stirring, to effect gelation, and subsequently dewatering the gel obtd., e.g. by filtration, etc. The gel obtd. is easily sep'd. into water and a filter cake by filtration without clogging the filter cloth, and further the pH of the waste water is converted from 12 to 7-8 by gelation.

In an example, 7 pts. of the acidic silica sol. is added under stirring to 100 pts. of bentonite- and cement-contg. waste liquor so as to be gelated. Then, the gel is dewatered in two steps under 3 kgs./cm^2 -30 secs., 7 kgs./cm^2 -20 secs. to give a dewatered cake having water content of 10%. Permeability of filter cloth was found excellent, and its peelability was found to be excellent. 17.4.78 as 045470 (2pp34)

RA ★ D15 88219B/49 ★ J5 4137-852
Treating heavy metals-contg. industrial waste - by adding alkaline materials, to render heavy metals insoluble, and forming into slurry
UNITIKA KK 19.04.78-JA-046892
J01 (25.10.79) B01j-01 C02c-03

Heavy metals-contg. industrial wastes is rendered harmless without any problems of sec. contamination by adding an alkali matter, e.g. Na_2S , NaAlO_2 , NaSiO_3 , NaOH , Na_2CO_3 , KOH , K_2CO_3 , $\text{Mg}(\text{OH})_2$, MgO , Mg carbonate, $\text{Ca}(\text{OH})_2$, CaO , CaCO_3 and their mixts. (Na_2S , NaAlO_2 , NaSiO_3 and $\text{Ca}(\text{OH})_2$ etc. are most pref.) in such an amt. that the pH value becomes 6-9 so as to make the water-soluble heavy metal components in them insoluble. The industrial wastes are formed into a slurry by adding water to dissolve a part or all of the soluble heavy metal components.

In an example, 500 ml H_2O was added to 100 grams ash collected by electric dust collector (in dried state) in dust incinerating station, contg. Ni^{2+} , Mn^{2+} , Zn^{2+} , Cd^{2+} , Cr^{3+} , Pb^{2+} , Hg^{1+} , As^{2+} , Cu^{2+} , Fe^{2+} , Si , Al^{3+} , K^+ , Ca^+ , Mg^{2+} , SO_4^{2-} , Cl^- , CN^- , org. P, PCB and H_2O etc. so as to give a slurry, after which 5 ml of 63%- H_2SO_4 was added to adjust its pH to 5.0. Then 36 ml 6% Na_2S soln. was added to adjust its pH to 7.0, followed by dewatering for 5 mins. by a centrifugal separator (15,000 rpm) to give a filtrate in which hardly any heavy metal components were present. 19.4.78 as 046892 (7pp34)

AWI ★ D15 88220B/49 ★ J5 4137-853
Purificn. of waste water from dry distn. of wood - by adding metal salt soln. and sodium hydroxide, filtering and treating filtrate e.g. with ozone, to remove oils, solids etc.
KAWASAKI STEEL KK 18.04.78-JA-044799
(25.10.79) C02c-05/02

Brown-coloured waste water contg. a large amt. of COD, suspended solids and oil components, from dry distn. of wood is purified by (i) adding a metal salt soln. capable of forming ppt at a pH of 5.5-9, e.g. Al salt and ferric salt, etc., (ii) adding NaOH to adjust the pH of the water to the above range so as to remove by coprecipitation the greater part of colouring components, COD components, suspended solids and oil components, followed by filtration, and (iii) treating the filtrate with activated charcoal or with ozone to further decrease content of the components.

The waste water is made colourless and transparent and its content of COD, suspended solids and oil content is decreased so that it may be flowed directly into rivers without any further treatment. 18.4.78 as 044799 (3pp34)

NICO- ★ D15 88279B/49 ★ J5 4138-078
Honeycomb structure for waste disposal use - is reinforced by applying plastics paste to rims of the cells

SHIN NIPPON CORE KK 20.04.78-JA-045864

A88 P72 P73 (A14) (26.10.79) B29d-31 B31d-03/02 B32b-03/12

Honeycomb structure is reinforced by applying a plastics paste to the brims of the cells; the honeycomb structure being constructed with thin corrugated materials such as plastics sheets, films, etc. The honeycomb becomes rigid enough to withstand the outer forces to which it is subjected

Typically the corrugated sheets forming partitions of the honeycomb cells (size: 20 mm) are made of 0.1 mm thick hard PVC. A urethane polymer of the non-solvent type, consisting of the main and the auxiliary agents, is coated at the brims of the honeycomb cells. The honeycombs can withstand a load of 8 ton/m^2 (parallel to the cells) cf. 1.7 ton/m^2 without the coating. 20.4.78 as 045864 (5pp130)

KITA- ★ D15 88419B/49 ★ J5 4138-801
Recovery of valuable metals from plating waste sludge - involves precipitating iron, electrolysing out copper, precipitating chromium and sepg. nickel from zinc

KITAOSAKA SEISO KK 19.04.78-JA-046777

M25 (M11) (27.10.79) C02c-03 C22b-07 C22b-19/20 C22b-23/04 C22b-34/32 C25c-01/12

In recovering Zn, Cu, Ni, Cr and Fe from plating waste sludge, the first step comprises prepg. a soln. contg. most of the Zn, Cu and Ni and a part of the Cr content. Precipitated Fe is filtered off and in the second step the filtrate is treated to precipitate the copper by electrolysis and to recover the chromium content by precipitation as chromium hydroxide.

In the third step the Zn and Ni are pptd. from which the Zn is dissolved as zincate while the Ni is precipitated as nickel hydroxide so that both are extracted separately. The filtrate includes soda ash and is used repeatedly in the first and second steps. 19.4.78 as 046777 (4pp53)

YUAS ★ D15 88443B/49 ★ J5 4138-873
Separator for solute in liq. - for treatment of water or soln., includes porous sheet impregnated with resin soln.

YUASA BATTERY CO KK 19.04.78-JA-046869

A88 J01 (27.10.79) B01d-13

Fine porous sheet tape of thickness 0.05-0.3 mm and av. pore dia. 200 Å to 10 microns is prep'd. first by impregnating a synthetic resin soln. composed of synthetic resin, heat-resistant PVC etc., a solvent, and a non-solvent into an aggregate and then by drying or by coating a synthetic resin soln. on an aggregate and then dipping it in a non-solvent and drying.

The tape is then coiled spirally to form a 1-8 mm dia. cylinder, and the overlapping portion is fixed with adhesives, e.g. solvent, an acid- and alkali-resistant synthetic resin soln., a hot melt, a synthetic resin emulsion or an epoxy resin adhesive, followed by irradiation with super-sonic radiation of amplitude 20-100 μ .

Separator is an endless separator tube having a stable and high strength. 19.4.78 as 046869 (6pp117)

KURS ★ D15 88444B/49 ★ J5 4138-874
Repairing leaking hollow fibre membrane-filled module - by forcing liq. adhesive, e.g. polyurethane or epoxy resin, into open fibres and solidifying

KURARAY KK 20.04.78-JA-048280

A81 J01 (27.10.79) B01d-13

A method of repairing the leaking portion of a hollow fibre membrane module, used in the treatment of various liquids comprises applying a fluid adhesive (e.g. a two-component polyurethane or epoxy resin, a synthetic rubber, natural rubber, silicone rubber, a vinyl ester, an unsatd. ester or an EVA copolymer) onto ≥ 1 end of the open-ended hollow fibres of the hollow fibre membrane-filled module forcing the adhesive into the leaking portion of the fibres by pressure, solidifying and cutting the sealed portion of the hollow fibres so that no open ends of the hollow fibres are formed. 20.4.78 as 048280 (4pp117)

ISHI/ ★ D15 88452B/49 ★ J5 4138-883
Sponge material for sepn. of oil and water - has oil layer on surface, so water is repelled and oil is absorbed
ISHIGAKI Z 19.04.78-JA-048032
J01 (27.10.79) B01d-17

The material is given an oil layer coating on its surface. The sponge material is used for recovering oil floating on the surface of industrial waste water, and makes it possible to reduce operation costs and to enhance the recovery rate.

Sponge materials generally have a hydrophilic part and a hydrophobic part. The hydrophobic part can absorb the oil, while the hydrophilic part does not absorb oil. When such sponge materials were immersed in industrial waste water contg. oil, hydrophilic parts of the sponge absorb water and lead to an increase in wt. However, since this sponge material covered with a hydrophobic layer, water is repelled and oil is absorbed well. The sponge material may be used for recovering oil which accidentally flows in since it floats on the surface of water. 19.4.78 as 048032 (2pp96)

HITA ★ D15 88475B/49 ★ J5 4139-257
Desalination filter for high temp. water from nuclear reactor - produced by forming metal oxide on porous metal prod., immersing in metal alkoxide, and heating to bind oxide film and fine oxide granules

HITACHI KK 21.04.78-JA-046612

J01 K07 (29.10.79) B01d-15 C02b-01/40 G21f-09/06

The filter is produced by (i) heating a porous sintered metal prod. having ion exchangeability to form metal oxide surface film; (ii) immersing the porous sintered metal prod. on which the oxide film is formed in a metal alkoxide, e.g. Ti tetraisopropoxide etc. then in water to adhere fine granules of the metal oxide to the inside of fine holes of the porous metal sintered prod., (iii) drying the sintered prod. and (iv) heating to bind together the oxide film and the fine metal oxide granules.

The porous metal sintered prod. is e.g. Ti sintered prod. The fine metal oxide granules are adhered to the inside of the fine holes, e.g. by deaerating in vacuo the porous metal sintered prod., immersing it in Ti tetraisopropoxide then in water to hydrolyse Ti isopropoxide. 21.4.78 as 046612 (5pp34)

NIPE- ★ D15 88476B/49 ★ J5 4139-258
Organic sludge treatment - by pretreatment with hydrogen peroxide and opt. iron salt and adding polymer coagulant
NIPPON PEROXIDE KK 21.04.78-JA-046517
A91 (29.10.79) C02c-03

Method comprises pretreating the sludge with H_2O_2 , the amt. of which is 500 to 2,000 ppm, (1,000 to 1,500) ppm, if necessary together with iron salt, e.g. $FeSO_4$ and $Fe_2(SO_4)_3$ etc., the amt. of which is 0-20%, (2.0-10.0%), and subsequently adding cationic, anionic or nonionic polymer coagulant in amt. of 100 to 200 ppm. Organic sludge, e.g. surplus sludge and sea water sludge etc. is effectively dewatered by filtration under excellent workability with a saved amt. of polymer coagulant without any generation of bad odour.

In an example, 1,500 ppm H_2O_2 (based on slurry) and 5% of $FeSO_4$ (Against the solid content) were added to 200 ml of a surplus sludge (solid content: 2%) obtd. by diluting 2 pts. of night soil waste water sludge with one part of sea water, followed by stirring for 5 mins., after which 150 ppm of polymer coagulant (against the slurry) was added thereto followed by agitation for 30 secs. The size of flocs is very large and it is effectively dewatered by filtration and easily peeled-off from filter cloth. 21.4.78 as 046517 (3pp34)

HITK ★ D15 88477B/49 ★ J5 4139-261
Treating chromium-contg. sludge - by multistage incineration followed by heating of ash in presence of oxygen and carbon monoxide
HITACHI METAL KK 21.04.78-JA-047463
J09 (29.10.79) B01j-01 C02c-03

Cr-contg. sludge from the treatment of sewerage or industrial waste water etc. is treated by (a) incinerating in multi-stage incinerating furnace after drying, and then heating the ash obtd. at $>600^\circ C$ under reducing (sic) in the

presence of $< 1\% O_2$ and 0.1-1% CO .

Cr^{6+} contained in the ash is almost completely converted to Cr^{3+} , and the sludge is made harmless and suitable for land reclamation. In order to maintain the reducing atmosphere a reducing gas e.g. CO etc. may be introduced, or matter capable of generating CO gas, e.g. activated charcoal and finely powdered coal etc. may be added to the reducing region of the furnace. 21.4.78 as 047463 (2pp34)

KAOS ★ D15 88478B/49 ★ J5 4139-262
Purifying surfactant-contg. waste water - by adding inorganic coagulant and opt. acid, and removing obtd. flocs
KAO SOAP KK 20.04.78-JA-046787
(29.10.79) C02c-05/02

Method comprises adding an inorganic coagulant, e.g. $Al_2(SO_4)_3$, $NaAlO_2$, polyaluminum chloride or $Fe_2(SO_4)_3$ in an amt. of 100 to 5,000 ppm against the amt. of the surfactant opt. adding an inorganic acid, e.g. HCl or H_2SO_4 to adjust the pH to 2-5, and removing flocs thus formed together with rising air bubbles.

Reduced amts. of coagulant are required and only a small amt. of sludge is generated.

In an example, 500 ppm of $Al_2(SO_4)_3$ is added to waste water contg. 200 ppm of Na dodecylbenzene sulphonate (as an anionic surfactant) followed by filtration at a pH of 4.2. Removability of the surfactant was 90%. The coagulant used is sepd. from the sludge and maintained in the waste water so it is possible to recover it for reuse. 20.4.78 as 046787 (3pp34)

SUMH ★ D15 88591B/49 ★ J5 4139-886
Semipermeable tubular membrane for ultrafiltration appts. produced by passing coupled mandrels through liq. bath of membrane-forming material, then cooling
SUMITOMO HEAVY IND 24.04.78-JA-047857
A88 J01 (A32) (30.10.79) B01d-13/04

Semipermeable membrane tubes for osmotic filtration appts. or ultrafiltration appts. are produced by (i) joining a succession of mandrels in end-to-end relation by snap-in coupling units connected to the ends of each mandrel, (ii) vertically downwardly passing the continuous length of the joined mandrels through a liq. bath of membrane-forming material while pulling the second bottom mandrel by a chain-driven gripper, (iii) sepg. the lowermost mandrel carrying a tubular membrane coating on the outer surface and dipping into a cooling bath, away from the second bottom mandrel by pulling the bottom mandrel downwardly by a second chain-driven gripper moving at a higher rate than that of the first gripper, and (iv) moving the membrane-carrying mandrel from the vertically extending position to the horizontally extending position in the cooling bath. 24.4.78 as 047857 (5pp47)

SEKI ★ D15 88592B/49 ★ J5 4139-887
Semipermeable membrane prepd. from crosslinked aceto-modified PVA - used for desalting of brine, concn. of solns. or dialysis of blood

SEKISUI CHEMI IND KK 21.04.78-JA-048067

A88 J01 (A14 A25) (30.10.79) B01d-13/04

The membrane is produced by shaping the polymer to a film type membrane, and contacting the membrane with a cross-linking agent having a functional gp. which can be reacted with a functional gp. of the membrane.

In an example, a polymer of vinylalcohol was contacted with dimethylaminoacetal to obtain aminoacetal modified PVA. The obtd. PVA was dissolved in deionised water, and filtered to obtain a soln. of 0.5 wt % of the polymer. The soln. was poured on a glass plate to obtain a film type membrane 9.8 μ thick. The membrane was set in an atmosphere of glyoxal for 30 mins. to obtain cross-linked semipermeable membrane. 21.4.78 as 048067 (7pp51)

HIEJ D15 01179A/01 = J7 9036-41
Treating river water etc., to make it potable - by filtration and contact with ozone-contg. gas
HITACHI PLANT ENG CONST 14.05.76-JA-054988
(09.11.79) *J52138-353 C02b-01/23

Colouring matter, e.g. humus, etc. is removed rapidly and economically by decomposition or adsorption from crude water, in the prodn. of city water, by passing it through a filtration membrane capable of collecting gran-

es of dia. 1-100 μ , separately measuring its adsorbance means of a photometer prior to and after the filtration and contacting the filtrate with an O_3 -contg. gas when there is no adsorbance difference, and adding an Al salt, opt. with H_2SO_4 , to cause flocculation when there is a difference. 5.76 as 054988C02b-1/23 (9.11.79) HITACHI PLANT NGG (3pp34)(J52138353)

21/ D15 56682Y/32 = J7 9036-413
Polluted water treatment - including coagulation pptn. using a finely powdered coal, with fine granular carbon and a coagulant SEKIT 23.12.75-JA-152865 (09.11.79) *J52077-455 B01d-21/* C02c-03 C02c-05/02 + B01d-15

treatment of polluted water e.g. sewage, domestic animal waste water, marine-processing waste water, food waste water, heavy metal-contg. waste water, plating waste water etc. finely powdered coal is used contg. > 80% a fraction having granular size 9-500 mesh, a fine granular carbon, e.g. naphtha carbon and petroleum oil carbon etc., and a coagulant capable of forming $Al(OH)_3$, $Al(OH)_3$ and Fe hydroxide on hydrolysis, e.g. $Al_2-(SO_4)_3$, aluminate, alums etc.

Improvement comprises adding a suspended liquor prep. by agitating an aq. suspension contg. about 10-15 wt.%, pref. 25-30 wt.% of the finely powdered coal at rotating rates > 300 r.p.m. by means of a stirrer for a period of > 10 mins. in such a manner that the granular size of the finely powdered coal is not practically destroyed. The coagulation pptn. is carried-out within a very short period to give a very clarified supernatant liquor. Another advantage is that the waste water is effectively treated without any dilution even its concn. is very high. 5.12.75 as 154865 B01d-15/00, 21/01, C02c-3/00-11.79) SEKI T (8pp)(J52077455)

URK D15 69539Y/39 = J7 9036-421
Organic waste water treatment - removes acid and chloride without having adverse effects on bacteria and creating large amt. of sludge

KURITA WATER IND KK 12.02.76-JA-014228 E33 (09.11.79) *J52097-255 C02c-05/02 + C02c-01/06
Org. waste water contg. an acid or a chloride cpd. is subjected to biological treatment without having adverse effects on bacteria and without creating a large amt. of a sludge (contg. a large amt. of a Ca component).

Process comprises adding $Ca(OH)_2$ to neutralise the acid or to decompose by hydrolysis the org. chlorine cpd. treating the soln. with an activated sludge under aeration at neutral pH range to give treated water with CO_2 to form $CaCO_3$ which is mixed with a sludge, adding an acid, e.g. HCl etc., to the $CaCO_3$ -contg. sludge in such an amt. that its pH becomes 1-4 to convert the $CaCO_3$ into a soluble salt.

The sludge is then neutralised with alkali e.g. $Na(OH)_2$, $Ca(OH)_2$, etc. and flocculated with a coagulant, followed by dehydration e.g. using a centrifuge. 12.2.76 as 014228 C02c-1/06, 5/02 (9.11.79) KURITA WATER IND LTD (3pp34)(J52097255)

NTN D15 29849A/16 = J7 9036-422
Amylase anti-bulking agent for activated sludge - suppresses generation and propagation of bacteria causing bulking MITSUBISHI GAS CHEM IND 23.08.76-JA-100327 (D16) (09.11.79) *J53026-466 C02c-01/06

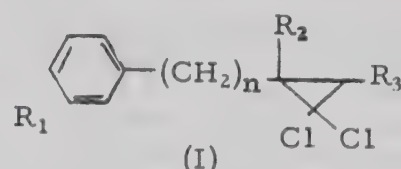
The anti-bulking agent maintains excellent settlability of the sludge or regenerates settlability after treatment of a waste water by the activated sludge process. The anti-bulking agent comprises amylase (composed of α -amylase, β -amylase and sugar-type amylase).

The amt. of the anti-bulking agent used is 0.1-100 ppm. against a waste water to be treated. The anti-bulking agent serves to effectively suppress generation and propagation of bacteria belonging to Sphaerotilus and to accelerate propagation of bacteria capable of forming flocs. 3.8.76 as 100327 C02c-1/06 (9.11.79) MITSUBISHI GAS CHEM IND (4pp)(J53026466)

SOMA- D15 95124X/51 = J7 9036-647
Paper pulp industry slime controlling agent - comprises alpha-chloro o-acyl benzaldoxime derivs. which are active against waste water microbes

SOMAR KOGYO KK 00.00.76-JA-021955 C03 E14 F09 (10.11.79) *J51125-732 + A01n-09/20 C07c-131 C08k-05/33

Cpds. of formula (I) (in which R_1 is H, (m)ethyl, propyl



(I)

or (m)ethoxy, R_2 and R_3 are each H, (m)ethyl or propyl, n is 0 or 1 and in which the total no. of C is ≤ 15) are used as/in perfumes. (I) are very stable both in acid and

alkaline media and may therefore be used in a wide range of products (e.g. cosmetics, detergents, etc.).

20.2.76 as 017161 (clg. 22.2.75-DT-507778) A61k-2/46 (10.11.79) HAARMANN & REIMER GMBH (8pp)(J51106748)

AGEN D15 20558Y/12 = J7 9036-882
Metal recovery from mine waste water - by addn. of organic collecting agent and generation of mist contg. complexed metal AGENCY OF IND SCI TECH 18.12.73-JA-142201 E16 (12.11.79) *J50092-206 + B01j-01/22 C02c-05/02 C22b-07 C22b-15/12 C22b-19/30 C22b-23/04

Org. collecting agent e.g. alkanol amine, acyl polyamine, or polyamine is added in at least 2 portions to Cu-, Zn-, Ni-, or Cr-contg. aq. soln. in excess of amt. required for complexing. The soln. is aerated to generate mist contg. the metal, and the mist is collected. This method is useful for treating mine waste water.

For example, 2 ml soln. contg. 8400 ppm $Me(CH_2)_{15}-CH(OH)CH_2NHC_2H_4NH_2$ was mixed with 1 l. water at pH 7.5 contg. 10 ml of a soln. with 1000 ppm Cu. The soln. was aerated 3 min. to generate mist. The procedure was repeated 4 times to add 10 ml of the collecting agent. The Cu content in the mist was 6.26, 0.59, and 0.09 ppm after 3, 9, and 15 min. aeration, resp. By a single addn. of 10 ml collecting agent, the Cu content was 6.48, 1.81, and 1.60 ppm at 3, 9, and 15 min. aeration, resp. 18.12.73 as 142201 C22b-7/00, 15/12, 19/30, 23/04, 34/32, B01j-1/22, C02c-5/02 (12.11.79) AGENCY OF IND SCI TECH (11pp) (J50092206)

NIMA- D15 81911X/44 = J7 9036-997
Treatment of waste liquor from agricultural processes - by adding polysaccharide and metal salts and separating flocs formed JAPAN MAIZE PROD KK 11.03.75-JA-028675 (D16) (12.11.79) *J51103-881 B01d-21/* + C02c-05/02 C12d-13/04

Method comprises adding acidic polysaccharide and water soluble multivalent metal salt to waste liquor contg. organic substances aggregating and settling the substances and separating them. Large flocks with high settling rate are formed in the waste liquor, and are easily separated. Dehydration of the flocks if facilitated. 11.3.75 as 028675 B01d-21/01, C02c5-/02, C12d-13/04 (12.11.79) JAPAN MAIZE PROD KK (3pp)(J51103881)

NIMA- D15 81872X/44 = J7 9036-998
Sludge treatment with increased filtration rate - resulting from large floc formation

JAPAN MAIZE PROD KK 11.03.75-JA-028676 (D16) (12.11.79) *J51103-673 C12d-13/04 + B01d-21/* C02c-03

To a sludge from biological treatment of sewage, excreta, and organic industrial waste waters is added an acidic polysaccharide produced by Corynebacterium humiferum var. myxogenes and a water-soluble multivalent metal salt so as to be cohered, after which the sludge cohered is dehydrated by a conventional art. such as settling by allowing to stand and centrifugation filtration etc.

The amt. of the acidic polysaccharide to be added is 0.01-10 (0.1-10) wt. % based on that of the sludge dried. It is suitably used a divalent or trivalent metal salt as the water-soluble multi-valent metal salt, and the amt. of which is 1 to 10 folds as that of the polysaccharide. It is elevated filtration ability due to formation of flocs is of large size and also it is improved rapidly filtration rate esp. at initiation, and it is carried out effectively dehydration separation. 11.3.75 as 028676 B01d-21/01, C02c-

3/00, C12d-13/04 (12.11.79) JAPAN MAIZE PROD KK
(6pp)(J51103673)

NIIO D15 38735Y/22 = J7 9037-074
Ozone-contg. air, prodn. - by introducing ozone-contg. oxygen into an ozone adsorbing device, and desorbing the adsorbed ozone with air

NIPPON SANSO 16.10.75-JA-124659

E36 Q74 + Q78 (D22) (13.11.79) *J52048-586 C01b-13/10
+ B01d-53/26 F28d-17

Method comprises (a) compressing atmospheric air to >2 atm. (b) cooling the compressed air in a regenerative type heat exchanger to condensate water of the air and dry the air, (c) introducing the cooled and dried air into an adiabatic expansion engine to adiabatically expand it, (d) introducing the expanded air into the O_3 -adsorbing device contg. adsorbed O_3 to desorb O_3 , and (e) introducing the resulting expanded air contg. O_3 into the regenerative type heat exchanger to gasify condensed water condensed in the heat exchanger, thereby producing the O_2 -contg. air.

The O_3 -contg. air can be used in treatment of waste gas or water, or in the removal of bad odours.

16.10.75 as 124659 C01b-13/10, B01d-53/26, F28d-17/00 (13.11.79) NIPPON OXYGEN KK (4pp)(J52048586)

SNLE D15 03539V/02 = J7 9037-102
Industrial effluent purification - by means of electrolytic cell with auxiliary electrodes

STANLEY DENKI KK 26.07.72-JA-074875 (00.00.77-JA-079071)

J03 (13.11.79) *BE-802-798 C02c-05/12 + C25b-09

Method comprises pumping effluent through an electrolytic cell of the type having two, opposed, principal electrodes with a number of inter. auxiliary electrodes. Basically, the new cell employs a large number of closely spaced, auxiliary electrodes between the main electrodes, the spaces between electrodes being filled with electric insulating material which prevents relative movement as well as any possibility of short-circuiting. 26.7.72 as 079071 C02c-5/12, C25b-9/00 (13.11.79) STANLEY DENKI KK; INOUE JAPAX KENKY USHO KK (6pp)(J53028072)

INOZ ★ D15 88734B/49 ★ J7 9037-103
Electrolytic cell for treating waste water - in which gap between electrodes is controlled by detector for quality of water

INOUE JAPAX RES INC 30.11.73-JA-133353

J03 (13.11.79) C02c-05/12 C25b-15/04

A device for treating a waste liquid flowing between a pair of electrodes for electrolysis of the fluid, has a detector for detecting the dirtiness of fluid and controller for controlling the gap between both electrodes, depending on the output of the detector. 30.11.73 as 133353 C02c-5/12, C25b-15/04 (13.11.79) INOUE JAPAX RES INST (4pp26) (J50084469)

JAOR D15 33466V/18 = J7 9037-104
Treatment of anion exchanger regeneration waste - by dialysis of alkali waste to recover conc. alkali

JAPAN ORGANO KK 09.03.72-JA-023555

E34 J01 (13.11.79) *J48092-268 + B01j-01/04 C02b-01/40 C02c-05/12

The alkali waste soln. from regeneration of anion-exchanger is dialysed to recover concd. alkali soln., and the residual waste soln. is neutralised with the acidic waste soln. from regeneration of cation-exchanger and discarded. 9.3.72 as 023555 B01j-1/04, C02b-1/40, C02c-5/12 (13.11.79) JAPAN ORGANO CO (4pp)(J48092268)

CHIS- D15 49448U/35 = J7 9037-337
Decompsn of oil-contg colloidal solns and waters - with carbon dioxide

CHISSO ENG CO LTD (CHCC) 27.05.71-JA-036468

J04 (14.11.79) *J48000-277 + B01d-17/04

Pressurised CO_2 is dissolved in the colloid soln. and then the pressure is reduced continuously or batchwise. The finite bubbles generated during depressurising destroy the colloid soln. CO_2 can be recovered and reused.

The CO_2 can be pressurised at 5-50 atm. and the solubility is 9-65 g./l. The pH is 3-4. During the depressurising, the liq. can be quiescent or in motion. The longer the depressurising, the more finite the bubbles become and the better the results. 27.5.71 as 036468 B01d-17/04

(14.11.79) CHISSO ENGINEERING CO. LTD. (2pp)
(J48000277)

AKER- ★ D15 B/49 ★ NO 7801-3
Hydrocarbon removal
AKERS MEK VERKSTED 13.04.78-NO-001301
(12.11.79) C02b

BALN- ★ D15 B/49 ★ RU --66-5
Adaptable trap for mineral water gas - in which pressure gauging and cooling are provided in bottling plant to maintain the set carbon dioxide concentration
INST BALNEOLOG FIZ 02.11.73-RU-076507
(05.10.78) C02d-01/04

BALN- ★ D15 B/49 ★ RU --66-8
Bottling and transport of mineral water - in which set temperature and pressure are maintained in thermostated system with suitable valving
INST BALNEOLOGI FIZ 03.01.74-RU-077176
(02.10.78) C02d-01/04

WATE= ★ D15 88779B/49 ★ SU -652-1
Reagent purificn. control system for cyanide contg. effluents - h indicating electrode with ion selective membrane and reagent dispenser with feedback

WATER SUPPLY CANALS 12.01.73-SU-871356

R26 (18.03.79) C02c-05/02 G05d-27

The known control system for reagent purification of cyanide-contg. effluents has a reactor-mixer and inter-connected cyanide concn. sensor with indicating and comparison electrodes, transducer, regulator and dispenser. In order to improve control, widen the field of application and reduce the reagent flow-rate, the indicating electrode has an ion-selective membrane and the dispenser is fitted with feedback. The specified system is useful in e.g. the chemicals industry and in metallurgy.

Karpunin N. Ya., Dmitriev, A. S., Smirnov D. N., et al
Bul.10/15.3.79 12.1.73 as 871356 (2pp840)

LENI ★ D15 88879B/49 ★ SU -652-95
Inorganic electron-ion exchanger prepn. - by coprecipitation of zirconium, vanadium and tungsten salts, for use in water treatment and metals recovery

LENINGRAD LENSOVET TECH 29.12.75-SU-305334

J01 M25 (28.03.79) B01j-01/22 C02b-01/40

Inorganic electron-ion exchangers are prepd. by precipitation from solns. of zirconium salts, pref. zirconyl salt and vanadium salts of the VI gp. metals.

The speed of the oxidising-reducing processes carried out with the use of this electron-ion exchanger in aggressive media is increased by using a tungsten-vanadium salt and using solns. contg. $Zr:V:W = 3:1:5$.

Then electron-ion exchangers are used for the removal of oxygen dissolved in water in power stations, for simultaneous deoxygenation, deionisation and softening of water, for the purification of organic substances, and for removal of precious metals ions from solns.

Boichinova E. S., Kryuchkova N. Ya., Bul.11/25.3.79
29.12.75 as 305334 (3pp70)

BAKI= ★ D15 88909B/49 ★ SU -653-2
Preventing scale formation in boilers - by adding ortho-xylene sulpho-aminobenzene to the feed water

BAKINO WATER SUPPLY 15.11.77-SU-546418

(28.03.79) C02b-05/06

Scale formation in boilers, esp. those used in seawater desalination plant is prevented by incorporating o-xylene sulphoamino-benzene into the feed stream in an amt. 25-300 mg/l. Foaming is eliminated and the method is low cost. The process is used to prepare water for thermal power units.

In an example, a boiler operating at $120^\circ C$ fed with seawater contg. 18mg equivs. of $Ca^{++}/l.$, 63 mg equivs $Mg^{++}/l.$ and 5320 mg. Cl^-/l was inspected after 24 hrs. An acid extract of the boiler surfaces contd. 2 mg. equiv Ca^{++}/l and 5 mg equivs. Mg^{++}/l . When the feed-water contd. 300 mg/l. of the above agent, the respective values for a similar acid extract were 0.13 and 0.43 mg equivs./l.

Adulla-Zade A.A., Aliev D.A., Gamid-Zade E.G., et
Bul. 11/25.3.79 15.11.77 as 546418 (2pp314)

MUTI/ ★ D15 88910B/49 ★SU-653-218
Petroleum container washing waste water purifier - has mesh
filtering means against which layer of petroleum forms to remove
most of mechanical impurities

MUTIN FI 23.01.78-SU-570421

H03 J01 (28.03.79) B01d-17/02 C02c-01/26

The waste water contg. petroleum and mechanical impur-
ities is purified using a device claimed in Parent Patent
44176 and which also includes a settling container, divid-
ed by partitions into filtering and precipitating sections.
The filtering section has an attachment for a "petroleum/
water" transition zone, made, for example, in the form
of a mesh.

Cleaning effectiveness is increased by guaranteeing
continuous regeneration of the contact filtering layers.
An electrode is disposed in the inlet pipeline, and a make-
up pipeline and mutually-connected sensor to monitor the
liquid flowrate, with a liquid flowrate controller and exec-
utive mechanism are placed in the make-up pipeline.

Mutin F.I., Yastrebov P.I., Krasnovekin V.N. et al.

Bul. 11/25.3.79 23.1.78 as 570421 Add to 494176 (2pp29)

IDE/ ★ D15 88911B/49 ★SU-653-219
Metal ion removal from ferrous metal etching aq. wastes - includes
ultrasonic treatment under specified conditions, to improve degree
of purificn.

BUDEKA YUF 03.11.75-SU-186786

J01 M14 (28.03.79) C02c-05

Effluent streams are purified chemically and ultra-sonic-
ally. The latter treatment is carried out at 40°-60°C at
frequency of 15-30 kHz and intensity of 12-27 W/sq.cm
A high degree of purificn. is obtd. and the vol. of ppted.
material is reduced. The method is esp. useful in rem-
oving metal ions from streams such as etching effluents

In a typical process, the amt. of suspended material in
the stream is reduced to 25 mg/l., and the vol. of sedim-
ent after settling for 2 hrs. is 9.5% at 92-94% moisture
content.

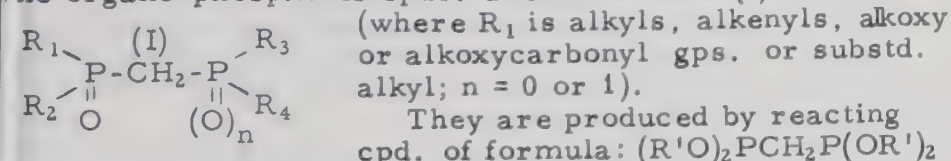
Budeka Yu.F., Moischenko V.A., Bul. 11/25.3.79 3.11.
75 as 186786 (3pp314)

OSU ★ D15 88951B/49 ★SU-653-261
Methylene-di:phosphonic or -phosphonic phosphonous acid deriv. -
prepd. by reacting tetra:alkyl methylene di:phosphonite ester with
corresp. halide, used as extractants and complexants for metals

MOSCOW LOMONOSOV UNIV 06.05.76-SU-354136

E11 (28.03.79) C07f-09/28

The organo-phosphonis cpds. are of formula (I):



They are produced by reacting
cpd. of formula: (R'O)₂PCH₂P(OR')₂

where R' is an alkyl) with cpd. of formula RX (where R
is alkyl, alkenyl, alkoxy carbonyl gp. or substd. alkyl;
X is Cl, Br or I) in an inert gas atmos. (e.g. Ar), at
70 to +150°C; opt. in an organic solvent (ether, toluene
or dimethoxyethane).

By this method the process is simplified and the yields
are increased.

Novikova Z.S., Prishchenko A.A., Lutsenko I.F., Bul.
11/25.3.79 6.5.76 as 354136 (6pp70)

SAMB/ ★ D15 88958B/49 ★SU-653-268
Polyampholyte mfr. from chloromethylated styrene contg. polymer
includes amination with hexa:methylene-tetramine in mixt. of
methylal and methanol, used for metal ion removal from aq. waste

SAMBORSKII V 18.11.76-SU-420695

A91 J01 M25 (28.03.79) C08f-08/30 C08f-212/36

A polyampholyte used for sorption and other chem. pro-
cesses, esp. removing metal ions from effluent streams
and having a high Cu sorption vol. is obtd. by (a) aminat-
ing a chloromethylated macro-porous copolymer of sty-
rene and divinyl benzene with hexamethylene-tetramine in
a solvent comprising a mixt. of methylal and methanol
in a wt. ratio of 20-60: 80-40; (b) subjecting the prod.
to an alcoholic acidolysis to form primary amino gps.;
(c) further aminating the prod. with NH₄OH; and (d) treat-

ing the amino gps. with monochloroacetic acid in the pres-
ence of Ca acetate as neutralising agent. The method is
simpler and quicker than prior art and reduces solvent
waste. The acidolysis is pref. carried out with HCl in
(m)ethanol.

In one embodiment, the copolymer is further chlorome-
thylated by conducting the acidolysis in the presence of a
chloromethylating catalyst (e.g. ZnCl₂) at 65-70°C for
12-15 hrs.

Samborskii I.V., Nekrasova L.G., Vakulenko V.A.,
Bul. 11/25.3.79 18.11.76 as 420695 (3pp314)

MUTI/ ★ D15 89048B/49 ★SU-654-264
Water deoxygenation unit for petroleum industry, etc. - has porous
cone and conical plate between which water passes as another gas
is admitted to diffuse out oxygen

MUTIN FI 15.11.77-SU-542588

H05 J01 (30.03.79) B01d-19

Device for sepg. gas from liquids, pref. for use where it
is required to remove oxygen and other gases from water
as in the petroleum industry for de-oxygenating fresh and
effluent waters, includes a container with an inlet pipe
for the mixt., a pipeline to take away the desorbed gas,
and a distributor.

Effectiveness is increased by making the distributor
as a porous conical screen. A conical plate is also fitted
above the porous screen and connected to the mixt. feed
pipe.

Mutin F.I., Makarov E.P., Bul. 12/30.3.79 15.11.77
as 542588 (2pp29)

PONO/ ★ D15 89049B/49 ★SU-654-265
Waste water cleaning filter - has body divided into raw liquid and
filtrate chamber with perforated rings and plates, and removable
filter cartridges

PONOMARENKO V S 15.10.76-SU-412088

J01 (30.03.79) B01d-27/12

Filter for cleaning liquids, e.g. natural and recirculating
or effluent waters from suspended impurities and petrol-
eum prods., as well as clarifying potable waters, and
cleaning waste waters prior to re-use, etc.

It consists of a body, divided by tubular gratings into
chambers for the initial suspension and the filtrate, dist-
ributor and filtering elements. The latter are mounted
in the tubular gratings and made as perforated rings with
holes in their faces, there is also a framework of plates.

The quality with which the filter elements are regener-
ated is increased and consumption of liquid is reduced
during the regeneration, by perforating the plates in the
framework. The holes in the faces of the perforated rings
used in the initial suspension chamber have a smaller dia.
than the holes in the rings used in the filtrate chamber.

Ponomarenko V.S., Davletshin F.M., Gladkov V.A.
et al. Bul. 12/30.3.79 15.10.76 as 412088 (3pp29)

TEXC D15 80044A/44 =US 4175-312
Sepg. mixt. of oil, water and solids - by passage over forwardly
inclined baffles having grooves on their under surfaces

TEXACO INC 26.08.77-US-827914 (30.07.76-US-710076)

H01 + P56 (27.11.79) *US4122-016 + B23p-19

Settling tank for an oil-solids-water mixture, partic. oil-
field water to give a product suitable for discharge or well
injection, is assembled by mounting two vertically spaced
forwardly inclined baffles to form lower, intermediate and
upper compartments in an upright tank with lower rear in-
let passing mixture across the length from back to front.

Lower front and upper rear ports are formed in the
lower and upper baffles respectively, and a cleaned water
outlet is formed in the upper compartment lower end below
an oil outlet. Each baffle pref. has parallel V-shaped
grooves in its undersurface to trap, guide and coalesce
oil droplets. The parent patent claims the appts. 30.5.78
as 910400 Div.ex. 4122016 (+26.8.77-US-827914) (7pp1358)

PRIM/ ★ D15 89189B/49 ★US 4175-872
Adaptor for liq. manure vacuum agitator - comprises cylindrical
tube with a spiralling blade attached to its inner wall

PRIMUS D R 28.09.78-US-946827

(27.11.79) B01f-13/06 B01f-15/02

An adapter, for a liq. manure vacuum agitator, which

draws liq. manure through the free end of a tank while applying vacuum to a hose at the other end, comprises an elongated cylindrical tube, to the inner wall of which is attached a continuous spiralling blade of width less than the inner radius of the tube, thus leaving an open centre through the tube. One end of this tube is connected to the free end of the hose.

The system agitates liq. manure while allowing passage of particulate material through the hose. Settled solids at the bottom of the liq. manure pit may be loosened and dispersed. The device is cheap, simple and durable. 28.9.78 as 946827 (4pp976)

BRYA/ ★ D15 89237B/49 ★US 4174-012
Appts. for distn. of salt water - in deaerated coiled conduit divided by partition into distilland and distillate troughs

BRYANT JJ 10.01.78-US-868440

J01 (27.11.79) C02b-01/06

A distn. appts. comprises a deaerated conduit having an inlet and an outlet end and coiled so that adjacent loops of the coil extend continuously from the inlet to the outlet. A partial partition extends from the inlet to the outlet and divides the conduit into an inside distilland trough for carrying an impure liq., and an outside distillate trough carrying condensed vapour.

Impure liq. is delivered to the inlet end of the distilland trough at a selected temp. and pressure. The impure liq. and vapour arising from it flow along the distilland trough towards the outlet. The flow of vapour passes across the partition under centrifugal force to the distillate trough which it condenses.

The appts. is used for producing potable water from salt water. Compared with prior art appts., the device reduces energy costs by conserving heat and reducing its loss. 10.1.78 as 868440 (7pp295)

DESA- ★ D15 89241B/49 ★US 4176-023
Brine desalination process - giving concentrated brine which is electrolysed

DESAL-CHEM INC 05.10.78-US-948668

J03 (27.11.79) B01d-03/10 C25b-01/28

Brine of salinity $7\frac{1}{2}$ -9% is introduced into a concentrator consisting of upper and lower chambers interconnected by vertical tubes, surrounded by a closed shell extending between the chambers. Vapour is withdrawn from the upper chamber, compressed and introduced into the space around the tubes. Condensed fresh water is withdrawn from this space, and concentrated brine of salinity about 28% is removed from the lower chamber. This is passed to a stack of electrolytic cells, where it is electrolysed to produce chlorine, a small amt. of hydrogen, caustic alkali which is mainly NaOH, and an inert material contg. Mg and Ca oxides. The chlorine is passed through a mist separator and compressed to a liquid.

The process is esp. useful for brines obtd. from bores e.g. in oil prodn., which otherwise have to be injected into the ground. The system is efficient, produces pure prods. is simple to operate, and may be mobile. 5.10.78 as 948668 (6pp955)

FIPO ★ D15 89244B/49 ★US 4176-031
Calculating hypochlorous acid concn. in chlorinated water - by measuring free available chlorine and correcting for pH and temp. (J5 9.10.79)

FISCHER PORTER 17.03.78-US-887482

E36 J04 + R16 (27.11.79) G01n-27/46

An analyser continuously determines the hypochlorous acid content of chlorinated water, contg. free available chlorine (FAC), by measuring the FAC and subsequently correcting it. A probe measures the pH factor and this is used by a computer which consults a read-only memory to store the relationship between HOCl and OCl⁻ as a function of pH. A second probe measures the temp. and corrects the HOCl value. The resultant value is multiplied by the FAC measurement to deduce the actual HOCl value.

The analyser measures the concn. of the highly reactive HOCl in preference to the less reactive OCl⁻, in chlorinated water which is being disinfected. 17.3.78 as 887482 (9pp295)

WESE D15 14618Y/09 =US 4176-012
Alternating current agglomeration of colloidal solids in suspension used to purify industrial effluents

WESTINGHOUSE ELEC CORP 04.03.76-US-663790 (11.07.74-487730)

J03 (27.11.79) *BE-845-618 + C02b-01/82 C25b-09

Water is purified and solids are agglomerated in appts. which includes a vessel having an inlet for waste water and an outlet for pure water and solids. A pair of uprig electrodes are between the inlet and the outlet defining with the vessel side walls a water treatment chamber. a.c. current of 0.2-800 Hz frequency and a current density of 0.08-6 amp./sq.in. is applied to the electrode

There is an agitator to keep the water turbulent between the electrodes; and a conductive device between the electrodes to enhance the electric field. The vessel side walls are pref. inclined at up to 30° to the vertical. The electrodes are pref. Al, Fe, Mg or steel. 22.3.78 as 888939 Div.ex. 4094755 (+15.9.75; 4.3.76-US-613289, 663790) (12pp1376)

ELPA- ★ D15 89258B/49 ★US 4176-013
Recovering liquid and solid constituents from waste waters - reverse osmosis using closed loop operation

EL PASO ENVIRONMENT 24.06.77-US-809751

J01 (27.11.79) B01d-13 B01d-31

The soln. is treated with chemicals to increase the solubility of the sparingly sol. constituents. It is then passed through a reverse osmosis unit, at a flow rate which is controlled so that pptn. would occur in the unit, to obtain a purified permeate and a supersaturated brine. The brine is reacted with a trivalent cation to ppte. the sparingly soluble solids and the reverse osmosis unit is flushed with permeate to prevent fouling of the membrane. The permeate is recovered as purified water. Pref. the soln. left after pptn. is added to the feed to the reverse osmosis unit.

The process makes possible the recovery of purified water from industrial waste streams, e.g. cooling water blow-down, metallurgical waste water, etc., with the prodn. of only a small volume of sludge, from which useful materials may be reclaimed. The reverse osmosis is carried out with an effective separation efficiency of 80-90%. 24.6.77 as 809751 (10pp955)

GROB/ D15 03698W/02 #US 4176-014
De-silting of water - by agglomeration to form hydrophobic particles, floating and skimming off

GROBLER JJ 09.02.73-ZA-000922 (24.10.74-US-517526)

A91 C03 (27.11.79) *ZA7300-922 + B01d-21/* C02b-01/20

Silt particles are removed from a natural flow of water by adding chemical agglomerating agent to form larger, agglomerated particles; hydrophobically treating the particles to impart hydrophobic character; bubbling air through the water to float the particles to the surface; then removing the floating particles.

The silt comprises mainly natural inorganic silt. The hydrophobic treatment may involve adding an unsatd. fatty acid and the agglomeration may be effected by adding a polyacryl amide. These materials may be added together suitably together with a polyalkylenimine flocculant.

Process is used to purify water, prevent silt deposition in lakes and dams, and provide an agricultural or horticultural soil. 29.1.76 as 653302 (13pp945)

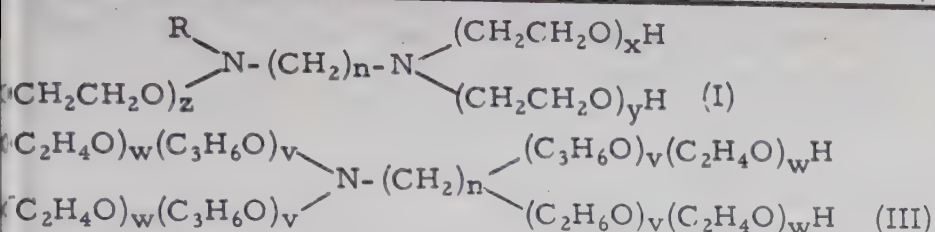
QUAT- ★ D15 89259B/49 ★US 4176-015
Corrosion- and scale-inhibiting additive for aq. systems - comprising molybdate, nonionic or cationic surfactant, polyphosphate, azole

QUATIC CHEMICALS LT 08.06.78-US-913555

A97 E16 M13 (27.11.79) C02b-05/04 C23f-11/08

Water treatment compsn. consists of (a) 3-100 wt. pts. water-sol. molybdate ion, (b) 0.5-100 wt. pts. water-sol. or -dispersible nonionic or cationic surfactant, (c) 0.3-100 wt. pts. of a triazole, pyrazole, imidazole, isoxazole, isothiazole, thiazole or thiadiazole.

The surfactant (b) is (i) ethylene oxide-propylene oxide polymers of mol. wt. 2000-5000 and (ii) cpds. of form (I), R-COO-(C₂H₄O)_nH (II), or (III):



where R is 8-20C (un)satd. alkyl; n = 1-10; x, y and z are integers of sum 0-15; u = 90-140; each v is independently a number such that the ave. mol. wt. of each C₃H₆O gp. is 1000-10,000; and each w is independently a number such that the C₂H₄O gps. constitute 10-30% of the total mol. wt. (III).

Compsn. is effective in amt. 3-330 ppm. in water which contacts metal surfaces (e.g. in heat exchangers, cooling towers, etc.) to prevent corrosion and scaling of the metal surfaces. 8.6.78 as 913555 (7pp914)

BA D15 51264B/28 = US 4176-060
Removal of soluble cyanide complexes from waste waters - by acidification, then chlorination at high temps.

CIBA GEIGY CORP 03.01.78-US-866439

E36 (27.11.79) *GB2011-374 + C02b-01/36

Soluble Fe cyanide complexes are removed from aq. stream by contacting with a concn. of HCl sufficient to lower pH in the system to ≤ 3 , heating the acidic system to 80 (≥ 95)°C., and contacting the heated system with a source of Cl₂, pref. in a stoichiometric excess concn. of 100%. The Cl source is pref. Cl₂.

The method is used for the treatment of industrial waste water. The soluble cyanide complexes break down to free CN⁻ which subsequently hydrolyses to ammonium chloride and CO₂. 3.1.78 as 866439 (4pp964)

OP/★ D15 89260B/49 ★ US 4176-061
Domestic appts. for treating water with ozone - includes ozone generators and elongated path for dissolving gas bubbles in water

STOPKA K 06.03.78-US-883401

E36 J03 (27.11.79) C02b-01/38

Water purifying appts. comprises ≥ 2 ozone generators each including a pair of spaced electrodes between which an ionising electrostatic field is produced. The electrodes define a passage for the flow of gas. The generators are connected in series. Gas is delivered to the inlet of the generators and a corona discharge is established. The air exiting the second generator has an ozone concn. of >1.2 wt. %.

Fluid to be treated is introduced to a conduit ≥ 10 ft. long and microbubbles of the generated gas are entrained in the fluid. The bubbles have a dia. of 10-20 μ . Treated fluid is delivered to a storage tank.

Highly purified water may be produced continuously. 3.78 as 883401 (9pp295)

AUS- D15 33615B/18 = US 4176-063
Water purification plant - with reverse osmosis filter and storage tank issue control by multi-diaphragm valve

GAUSEWITZ CARR & RO (TYLE/) 21.10.77-US-844374

(27.11.79) *DT2844-375 C02b-01/82

Reverse-osmosis water purification system includes a filter element; a storage tank with a movable device to separate the tank into pure water and squeeze chambers; a tap water supply to conduct water under pressure through the element to the pure water chamber, the waste water being conducted to a drain. There is a conduit to convey the pure water to a dispensing point, and a squeeze-control valve to conduct water to the squeeze chamber so as to move the movable device so as to expel water from the pure water tank to the conduit.

There is a device to reduce the water pressure in the squeeze chamber to create a large pressure drop across the filter. A further device responds to pressure reduction in the conduit when an outlet valve is opened to open the squeeze control valve; and there is a device to prevent overflow of pure water when the storage tank is full. 1.10.77 as 844374 (17pp1376)

SLOA/★ D15 89264B/49 ★ US 4176-066

Gravitational flow separator for water and solids - has vertical slitted pipes inside a housing where purified water is collected

SLOAN A H 05.07.78-US-922038

J01 (27.11.79) B01d-23/06

A dewatering device for separating water from sand and gravel includes a housing holding vertical pipes each having small apertures in its walls. The solids/water mixture is introduced into the top of the housing and is discharged down the pipes which have a solids discharge outlet at the bottom. Water discharged through the small apertures collects around the lower ends of the pipes and is discharged from there.

A portion of the water passing through the small apertures is used to gravity flush solids material through a bottom discharge outlet beneath the lower ends of the pipes.

The appts. is used to separate a mixture of sand and gravel from water, e.g. when such a mixture is pumped from an excavation. It is mounted as a portable unit for movement from site to site. 5.7.78 as 922038 (7pp295)

ANKE/ D15 84417A/47 = US 4176-068

Oil water sludge gravity sepn. - in two chambers sepd. by conical partition with filter pairs in bottom chamber (NL 14.11.78)

ANKERSMITH J 10.05.77-NL-005154

H03 J01 (H05) (27.11.79) *DT2820-217 + B01d-23/02

Water, oil, and sludge are separated using appts. which includes a container split into upper and lower chambers, the upper chamber having in its bottom upwardly widening separating chambers into which the sludge mixture is supplied and from which heavy sludge is removed.

Conduits connect the upper to the lower chamber to transfer the light fractions to the lower chamber and the upper surface of a filter pack. There are discharge conduits in the second chamber for separated oil from the upper part and cleaned water from the lower part.

The sludge discharge conduit has a flow capacity the same as the mixture supply volume. 8.5.78 as 904123 (7pp1376)

FARH D15 84590B/47 = WP 7900-975

Quaternised melamine glyoxal resins - useful flocculating agents for crude and waste water

SOC FRANC HOECHST (TROU/) 24.04.78-FR-012092

A21 (A97) (29.11.79) *EP---5-390 C02b-01/20 C02c-05/02 C08g-12/32

D/S: N(DK, JA, SU, US).

Crude natural or effluent waters are treated with cationic aminoplast resins made by quaternizing a resin which has been prepd. by condensn. of melamine (opt. together with small amts. of urea) with glyoxal or a mixt. of glyoxal and HCHO. Pref. the resin is quaternized with dimethyl sulphate.

The quaternized resins are stable on storage and give excellent flocculation and decolourization of crude waters with very low addns. of resin (e.g. 2-500 ppm). Organic and mineral materials present in the water in suspension or emulsion are flocculated out in a form suitable for decanting. The resins form less sludge than known mineral flocculating agents and the sludges are easily dewatered or incinerated. The resins are less sensitive to pH, do not introduce electrolytes into the water, do not modify the pH, and are effective on their own without the addn. of additives such as activated silica.

23.4.79 as FR0035 (15pp513)

(F) ISR: FR2257548; FR1602233; US3483837; US3880753.

BOEK/★ D15 89369B/49 ★ WP 7900-998

Acidity and ion concn. control process streams - using ionic sensors to produce a binary control word for regulating release of reagent

BOEKE J 28.04.78-US-900908

J04 R27 (29.11.79) C02c-05/12 G06f-15/46

D/S: N(DK, JA) + E(CH, DT, FR, GB, SW).

Ionic characteristics in a flow line are controlled by distributing a pattern of ionic sensors over the cross-sectional area of the flow line to generate individual sensor signals in response to the ionic characteristics

detected by each of the sensors. Each signal is converted to its antilogarithm, all the antilogarithms averaged and the av. antilogarithm converted to a binary control word.

Reagent orifices are provided downstream of the sensors in a pattern distributed across the cross-section of the flow line. The release of the reagent to the orifices from individual reagent dispensers is controlled accord-

ing to the binary control word and the flow mixed downstream of the reagent orifices to homogenize it.

Controlling pH and plon in process and waste streams 16.4.79 as US0236 (18pp67).

(E) ISR: US3664951; US3718556.

See Also

D22 J7 9036646

D16: FERMENTATION INDUSTRY

BOEH ★ D16 87609B/49 ★BE -876-739
Antiviral compsn. contg. eucaryotic transfer-RNA - used to treat influenza, measles, german measles, herpes, encephalitis, poliomyelitis, viral cancer etc.

BOEHRINGER SOHN CH 03.06.78-DT-824411
B04 C03 (03.12.79) A61k C12d

Antiviral compsn. contg. eukaryotic transfer-RNA as well as usual adjuvants and/or additives. The t-RNA is pref. obtd. from a yeast, esp. beer yeast from the Kronenbourg brewery.

Antiviral compsn. which can be used to treat all viral infections e.g. influenza, measles, german measles, herpes, encephalitis, poliomyelitis and cancers caused by viruses. 1.6.79 as 876739 (17pp395).

REUT/ ★ D16 87629B/49 ★DL -137-403
Mfr. of reagent for detecting mycosis antibodies - by cultivating non-pathogenic yeast, then extraction and pptn.

REUTER G 26.06.78-DL-206260
B04 (05.09.79) A61k-35/72

Method for producing a reagent for serological detection of mycosis antibodies comprises cultivating a non-virulent strain of fungus in a liq. medium, then suspending the biomass in water or buffer soln. and subjecting to extraction. A prepn. suitable for reagent prepn. is obtd. from the extract by pptn. and drying.

Used in detection of Candida infections. The antigens can be prepd. safely and simply in large quantities and have uniform chemical and antigenic properties. 26.6.78 as 206260 (5pp1251)

BAUM/ ★ D16 87632B/49 ★DL -137-407
Gasifying system in fermentation reactor - includes rotary paddle agitators and flow interrupters formed by heat exchanger coils

BAUMGARTEN U 28.06.78-DL-206326
(05.09.79) B01f-03/04 B01f-07/16 C12b-01/14

Lowest paddle agitator in the gasifying system of a fermentation reactor has a larger dia. and a larger number of paddles of the same size, then those of the agitators arranged above it. The paddles are arranged on a central driven shaft and flow interrupters are positioned alternately with heat exchanger coils, close to the inner wall of the vessel.

The coils are of a length corresponding to the height to which the reactor is filled, whilst the plate-form baffles have a length which is equal to the zone of action of the bottom agitator. Flow interruptor plates may also be positioned alternatively to the exchanger coils in the zones of action of the upper agitators.

Used in agitating reactors handling media with low viscosity, esp. fermentation media. Without increasing the input of energy, a much higher specific dispersion effect is produced, and the gas/fluid dispersion is maintained, so that the interchange of matter takes place under optimal conditions. 28.6.78 as 206326 (7pp1045)

HAHN/ ★ D16 87743B/49 ★DL -137-785
Vaccine prodn. esp. for human larynx papillomatosis - by culturing appropriate virus, then recovering infected cells without using culture liq.

HAHNEFELD H 15.12.75-DL-190065
B04 C03 (26.09.79) A61k-39/12

The parent patent describes prepn. of purified and enriched viral vaccines against human larynx papillomatosis and

other types of papillomatosis in humans and domestic animals. In this addn. the cultured viruses (in duck embryo or other homologous or heterogenous cell culture) are recovered from the cells, which are dissolved away from the culture vessel walls without using the culture liq.

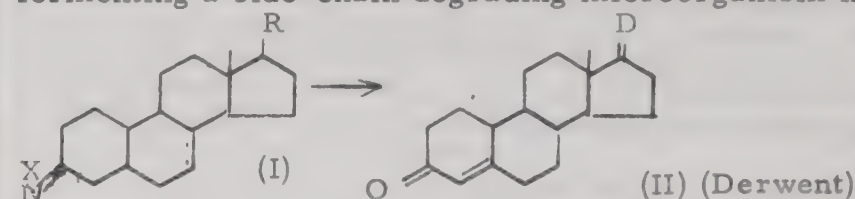
The release cells are sedimented, resuspended to the required concn. in a diluent, subjected to lysis and the cell debris centrifuged off. The cell-free virus liq. is then purified with a suitable lipid solvent, and this eliminated by centrifuging again. The virus may be inactivated by formalin or preserved by freeze drying.

Since the virus is mainly in the cells and not in the liq. the vaccine can be prod. in the required concn. without any ballast liq. Duck embryo cells are superior to calf kidneys previously used and are only rarely contaminated by foreign viruses. 15.12.75 as 190065 (4pp1251)

DEAK ★ D16 87763B/49 ★DL -137-84
Pharmaceutical intermediate androstene di:one prepn. - by fermenting sterol-3-oxime deriv. with side chain degrading microorganism

AKAD WISSENSCHAFT DDR 18.07.78-DL-206775
B01 (26.09.79) C07j-13

Crepn. of androst-4-ene-3,17-dione (I), comprises fermenting a side-chain degrading microorganism in



presence of a sterol deriv. of formula (II) (where R is an 8-10C hydrocarbyl sterol residue, and X is OCH_2COOH , $\text{NHCOCH}_2\text{NMe}_2$ or NHCONH_2).

The microorganism is pref. an Arthrobacter, Bacillus, Brevibacterium, Carynebacterium, Microbacterium, Nocardia, Protaminobacter, Streptomyces or esp. Mycobacterium strain.

(I) is a key intermediate for pharmaceutically active steroids of the androstane and pregnane series. The pro-ss give high yields. (II) are easily obtd. from sterols, stable in culture media and sufficiently water soluble to give a high substrate concn. without additional solvent. A pure prod. is obtd. without chromatographic sepn. 18.7.78 as 206775 (12pp941)

LANG/ ★ D16 87773B/49 ★DL -137-8
Appts. for determining potassium ferrocyanide needed to clarify wine - by measuring current flowing between two electrodes reagent is added

LANGE L 24.07.78-DL-206882
E31 J04 R16 (26.09.79) G01n-33/14

Appts. for determining the amt. of $\text{K}_4\text{Fe}(\text{CN})_6$ (I) needed to clarify wine comprises a recording electrochemical device with simultaneous measuring arrangement of (i) a non-polarisable electrode (e.g. Ag-AgCl or calomel) and (ii) a polarisable electrode (e.g. graphite) between which a defined potential of 0.25-0.5V is applied from a potentiometer circuit.

The device is immersed in a sample vessel which is fitted with a stirrer and supplied with a metering device for supply of (I) which is coupled to a paper supply. The current flowing between the electrodes is passed through

amplifier and subsequent compensator and then recorded on the paper.

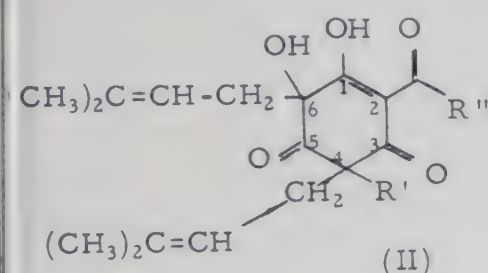
Provides a rapid method suitable for routine analysis and not requiring any subjective assessment. 24. 7. 78 as 5882 (10pp1251)

JO D16 44777T/28 = DS 2164-664
 comycin free of lincomycin b - by direct fermentation
 UPJOHN CO 28.12.70-US-102141
 B04 C03 (29.11.79) *NL7117-563 + C07h-15/16
 Lincomycin is produced by aerobic cultivation of *Streptomyces spinosus* Dietz NRRL 3890 or its commercially available mutants. An aq. medium is used at 18-40°C. Lincomycin is obtd. without simultaneous prodn. of Lincomycin B, so that improved yield of more active Lincomycin is achieved. 24.12.71 as 164664 (7pp913)

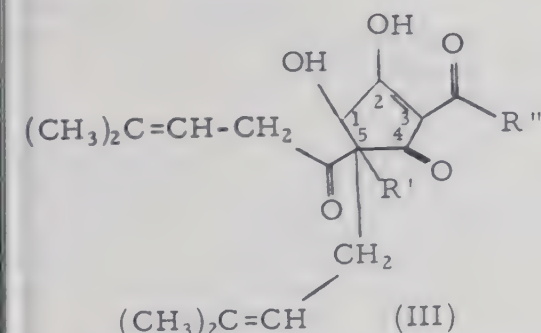
LS D16 82887V/48 = DS 2321-227
 Hydroxylation of subst. acylphloroglucinols - to give humulones and related cpds useful in brewing

ATLANTIC RESEARCH (ATLT) 26.04.73-DT-321227
 E15 (29.11.79) *DT2321-227 C07c-49/58 C07c-49/61

Hydroxylated acylphloroglucinols are prepd. of formula (I) or (II) (where R' is 3, 3-dimethyl allyl or H and R'' is 6-C alkyl). A cpd. of formula (II) but with H subst. at the 6-position instead of OH is treated in a polar alkaline



medium of pH 9-13 (11-12) in the form of peracids, hydroperoxides or with dyes without light activated oxygen at 15-25°C or with N-oxides at 40-60°C. (III) obtd. may be isomerised by known methods to cpds. (II). The prods are useful in brewing beer.



5.4.73 as 321227 (6pp068)

DEF D16 16265X/09 = DS 2438-436
 Moulded articles with an enzymatically active surface - by applying an adhesive and an enzyme immobilized on a solid carrier
 BOEHRINGER MANNHEIM GMBH 09.08.74-DT-438436
 A96 B04 R16 (29.11.79) *NL7509-345 C07g-07/02 C12d-13 G01n-31/14

Moulded articles with enzymatically active surface is made by coating the article with an adhesive then applying a particulate material comprising a solid carrier and an immobilised enzyme.

Pref. the article is of metal, plastics or glass. It is coated with synthetic adhesive, and the carrier material comprises mainly acrylamide units. The adhesive is used as a liq. and hardened or dried. The article is used as a reactor in chemical or clinical enzymatic analyses, or as an enzyme reactor in preparative chemistry. 9.8.74 as 138436 (8pp913)

FIZ D16 57116A/32 = DS 2803-044
 Identification of microorganisms in sub-samples - with different growth-inhibiting agent added to each and statistical evaluation (NL 8.78)

PFIZER INC 17.10.77-US-842736 (28.01.77-US-763719)
 B04 + R16 (29.11.79) *DT2803-044 C12k-01/04
 Microorganism strains in liq. samples are determined by dividing into sub-samples and simultaneously inoculating each with different special growth inhibiting agents, which in reaction with the sub-samples produce properties allowing identification of the microorganism. The special antimicrobial agents are not those usually employed for the

therapy of the microorganisms.

The samples are incubated for a short period to develop possible significant growth differences for the microorganisms in each sub sample. The growth is determined photometrically or otherwise, all measurements being completed in a short time, so that growth differences relative to time difference can be ignored. The growth observed is then compared with a memory of microorganism identifying data relative to the special reagents.

The method can be used for any determination of the susceptibility of bacteria or other microorganisms. A total of 36 specific agents are claimed. 25.1.78 as 803044 (11pp)

PAPI-★ D16 87877B/49 ★DT 2823-123
 Conversion of waste paper by enzymatic hydrolysis - to produce substrate for biomass for animal feed prodn.

VU PAPIERU CELULO 26.05.78-DT-823123

C03 F09 (D13) (29.11.79) A23k-01/12

A process for utilising waste paper and other fibrous polysaccharide-contg. waste material is claimed. The process comprises slurrying the material, treating the slurry with an enzyme soln. to produce a mixt. with a solids content of 1-30%, and stirring the mixt. at 20-70°C until the product has the desired physical properties and nutrient content.

The product is useful as a culture substrate for the prodn. of microbial biomass for animal feed prodn.. The starting material is pref. pulped, washed and dewatered to produce a slurry with a solids content of 20-50%. The slurry is mixed with an aq. cellulose soln. to give a mixt. with a solids content of ca. 10%, and this is stirred at 20-60°C until optimum monosaccharide prodn. is achieved. 26.5.78 as 823123 (13pp367).

MILE★ D16 87909B/49 ★DT 2901-542
 Reducing thermal stability of microbial Mucor rennin - by treating its aq. soln. with hydrogen peroxide NL 26.11.79)

MILES LABORATORIES INC 22.05.78-US-908575

(D13) (29.11.79) A23c-19/02 C12d-13/10

The thermal stability of microbial Mucor rennin is reduced by treating an aq. soln. of the rennin with H₂O₂. The H₂O₂ is pref. added in an amt. of 1-25 (esp. 3-10) vol.%. The treatment is pref. effected at 4-30°C and pH 4.0-8.0 for 15-72 hr.. The H₂O₂ can opt. be formed in situ from a peroxide (esp. Ca peroxide). Residual H₂O₂ after the treatment can be destroyed with catalase, peroxidase and/or ascorbic acid.

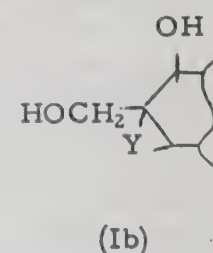
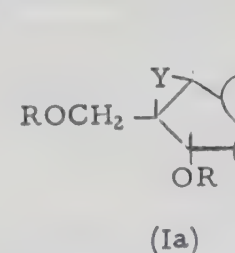
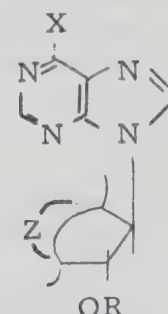
Pasteurisation of the whey obtained when the destabilised rennin is used in cheese mfr. largely destroys residual milk-coagulating activity, so that the whey is suitable for use in the foodstuffs industry. 16.1.79 as 901542 (30pp367).

TOXN★ D16 87915B/49 ★DT 2917-000
 Neplanocin purine nucleoside antibiotics from *Ampullariella* spp. - are active against cancer and phytopathogenic fungi (NL 27.11.79)

TOYO JOZO KK 23.02.79-JA-021201 (25.05.78-JA-062899)

B02 C02 (29.11.79) A61k-31/52 A61k-35/74 C07d-473/26 C12d-09/22 C12k-03

New antibiotic purine nucleoside derivs. are the neplanocins and their derivs. of formula (I):



(where X is NH₂, OH, SH, SCH₃ or Cl; R is H or a protecting group; and Z is a group of formula (Ia) or (Ib) in which Y is -O- or a direct bond and R is H or a protective group).

(I) are antibiotics with inhibitory activity on phytopathogenic microorganisms (e.g. *Helminthosporium oxyzae*) and with antitumour activity.

Specifically claimed are neplanocin A, i.e. (I) in which

X is NH_2 , R is H, and Z is (Ia) in which Y is a direct bond and R is H; neplanocin C, i.e. (I) in which X is NH_2 , R is H, and Z is (Ia) in which Y is $-\text{O}-$ and R is H; neplanocin D, i.e. (I) in which X is OH, R is H, and Z is (Ia) in which Y is a direct bond and R is H; neplanocin F, i.e. (I) in which X is NH_2 , R is H, and Z is (Ib) in which Y is a direct bond; neplanocin B, i.e. (I) in which X is NH_2 , R is H, and Z is (Ib) in which Y is $-\text{O}-$; the neplanocin D analogues in which X is SH or SCH_3 ; and the neplanocin D analogue in which X is Cl and R is acetyl. 26.4.79 as 917000 (+10.8.78, 29.1.79 - JA - 098027, 008205) (53pp).

AMAN ★ D16 87919B/49 ★DT 2917-891
Microbiological prodn. of acyl-coenzyme A synthetase LCF-18 prodn. - by cultivation of e.g. *Escherichia*, *Aerobacter*, *Serratia*, *Proteus* species, etc.

AMANO PHARM KK 26.01.79-JA-007244 (15.05.78-JA-056604)

B04 R16 (29.11.79) C07g-07/02 C12d-13/10 C12k-01 C12k-03 G01n-33/16

The prodn. of acyl-CoA-synthetase LCF-18 comprises (a) cultivation of an acyl-Co A-synthetase LCF-18 producing strain of the genus *Escherichia*, *Aerobacter*, *Serratia*, *Proteus*, *Salmonella*, *Staphylococcus*, *Corynebacterium*, *Pseudomonas*, *Aeromonas*, *Streptomyces*, *Aspergillus*, *Penicillium*, *Fusarium*, *Gibberella*, *Candida*, *Gloeophyllum*, *Trametes*, *Daedalea*, *Laetiporus*, *Flammulina*, *Lentinus*, *Lenzites*, *Pycnoporus*, *Tyromyces*, *Coriolus* or *Schizophyllum*, and (b) isolating the enzyme acyl-CoA-synthetase LCF-18 from the cultivated cells.

Acyl-CoA-synthetase LCF-18 has high activity with regard to 16-18C fatty acids and can be used in the accurate determination of unesterified human fatty acids, which is useful in the diagnosis of diabetes. Acyl-CoA-synthetase with similar activity has previously only been available from rat's liver. 3.5.79 as 917891 (31pp280).

GYOG ★ D16 87983B/49 ★DT 2921-022
Nebramycin antibiotic complex microbiological prodn. - by cultivation of nebramycin-resistant strains of *Streptomyces tenebrarius*

GYOGYSZERKUTATO INT 23.05.78-HU-GO1404

B04 (29.11.79) C12d-09/16

In a new process for the microbiological prodn. of the nebramycin complex, (a) a strain of *Streptomyces tenebrarius* which biosynthesises the nebramycin complex is cultivated in a nutrient medium contg. nebramycin 2, nebramycin 5' and/or nebramycin 6 and the individuals forming growing aerial mycelium and spores in the presence of 10-30 mg/ml of these antibiotics are isolated; (b) the resulting new resistant strains are cultivated in a submerged aerobic culture in a nutrient medium contg. N- and C-sources, inorganic salts and (opt.) vegetable and/or animal fats at 30-42°C (pref. 35-38°C); and the nebramycin complex or nebramycin 2, nebramycin 4 and nebramycin 5' accumulating in the medium is isolated.

Nebramycin 2 (apramycin) is used in the treatment of diseases of animals and plants (cf. US 3691279, 3853709, 3876767). Nebramycin 6 (tobramycin), produced by hydrolysis of nebramycin 5' (6''-O-carbamoyl-tobramycins), is a broad spectrum antibiotic used in human medicine, esp. against polyresistant *Pseudomonas* strains. Use of selected nebramycin-resistant *Streptomyces tenebrarius* strains allows the prodn. of cultures with high nebramycin concns. thus giving improved yields. 23.5.79 as 921022 (35pp280).

SANY ★ D16 87986B/49 ★DT 2921-085
Anti-mycobacterial peptide antibiotic mycoplanecin - produced by *Actinoplanes* nov. sp. strain 41042 NL 27.11.79)

SANKYO KK 24.05.78-JA-062042

B04 (29.11.79) A61k-35/74 C07g-11 C12d-09/22 C12k-03

New antibiotically active substance is mycoplanecin(I) with the characteristics specified below. Also new is the microorganism *Actinoplanes* nov. sp. strain 41042, NRRL 11462.

(I) is a white powder with the following characteristics m.pt. 161-7°; $[\alpha]_D^{21}$ -66° (c = 0.4, CHCl_3). C 61.70% H 8.48%, N 11.75% (after drying to constant weight); given UV, IR and NMR spectra; soluble in MeOH, EtOH, ethyl acetate, acetone and CHCl_3 ; poorly soluble in ben-

zene; insoluble in water; brown colouration with aq. 50% H_2SO_4 ; positive iodine and KMnO_4 reactions on silica gel TLC; negative to ninhydrin and 2,4-dinitrophenyl-hydrazine; after hydrolysis with 6-N HCl for 20 hrs. at 105°, gives 1 mol each of glycine, proline, leucine, 2-amino-methylhexanoic acid, N-methylthreonine, N-methylleucine, methylproline and ethylproline, strong antibacterial activity against *Mycobacterium* spp.

(I) is an antibacterial with good activity against mycobacteria (e.g. HIC's against *M. kansasii* IFM 2069 and tuberculosis IFM 2026 Matsudo 0.025 and 0.195 $\mu\text{g}/\text{ml}$ Dubos medium) with poor activity against other bacteria and fungi (e.g. MIC against *Staph. aureus* 209P JC-1 > 400 $\mu\text{g}/\text{ml}$ on heart infusion agar, MIC against *Candida albicans* Yu 1200 > 400 $\mu\text{g}/\text{ml}$ on Sabouraud agar). 23.5.79 as 921085 (30pp280).

SUMO ★ D16 87995B/49 ★DT 2921-022
Glucose isomerase extraction from cells - by decompression-impulsed homogenisation (NL 27.11.79)

SUMITOMO CHEMICAL KK 25.05.78-JA-062893

(D17) (29.11.79) C07g-07/02

Extraction of glucose isomerase (GI) from microorganism cells is carried out by a continuous homogenisation process, in which a cell suspension with a solids content of 0.5-10 (pref. 1.5-6) wt.% is pressurised to 400-700 (pref. 450-600) atm. and forced through an orifice so that the pressure is suddenly reduced to <1 atm and the particles are propelled against a solid surface.

The process gives ca. 100% recovery of enzyme activity in short times and is suitable for large-scale operation, e.g. with a throughput of 50-9000 l/hr.. The process is pref. carried out in a Gaulin homogeniser. The cell suspension pref. contains 0.1-5 mM of Mg^{2+} ions and has a pH of 6.0-10.0 (esp. 7.0-9.0). The microorganism is pref. a *Streptomyces* sp.. 25.5.79 as 921380 (20pp367).

AUBE/ ★ D16 88002B/49 ★FR 2417-022
Marine salts enriched with biological prods. for food and cosmetic use - prepd. by fermentation using phytoplankton cells

AUBERT M 23.02.78-FR-005802

A88 (D13 D21) (26.10.79) A231-01/23 A61k-07 C12d-13

The salts are prepd. by adding nutritive substances, such as nitrates or phosphates, to sea water in a vessel, then inoculating the mixture with phytoplankton cells. After 10 days when the number of cells has considerably increased, the culture medium is filtered and the filtrate is evaporated and dried under vacuum at 40-50°C.

The product is used wither (a) as bath salts or in cosmetic products or (b) as a food supplement. As (a) it has a sea odour, a soft consistency and is nutritive to the epidermal cells; and (b) it is beneficial as a result of the synthesised substances such as vitamins that it contains.

The phytoplankton cells are pref. diatom, specifically *Chaetoceros teres* and/or *Asterionella japonica*. In the prepn. the culture is pref. filtered first through nylon mesh of 100 μ dia. and then through material of 10-0.5 μ mesh dia. 23.2.78 as 005802 (4pp597)

COMS ★ D16 88041B/49 ★FR 2418-022
Device for sepg. e.g. antibodies in radioimmunology - having extended surface of material adsorbing or covalently bonding with antibodies and fixable in tube above end

COMMISS ENERGIE ATOMIQUE 22.02.78-FR-005040

A89 B04 J04 R16 (26.10.79) G01n-01/28 G01n-33/16

The device is fixed in a tube closed at one end and is forced so as to present a large surface to the soln. being tested, and to permit the soln. to pass to the end of the tube. The material from which the device is made permits a degree of elastic deformation to hold the device in the tube, and is capable of fixing a biological compound from the soln. or its specific antagonist compound, e.g. an antigen or the antibody. Nylon is preferred.

The length of the device will be such that it is just submerged in the soln. The device may have the form of a cylindrical sleeve having longitudinal ribs, pref. curved over at their ends, engaging the inner surface of the tube. Alternatively, the device may have an elastic head part fixing it into the tube and a spiral part beneath it. The head is pref. pierced with a central aperture to allow the soln. to pass.

The device is used in analyses of solns. of biological compounds which interact e.g. forming a complex. Thus can be used to fix the marked and unmarked antigen-antibody complex in a radio-immunological analysis. The devices can produce consistent results, being manufacturable in standard identical form. 22.2.78 as 005040 (12pp)

NVR ★ D16 88042B/49 ★FR 2418-462
Enzymic determ. of glucose - by measurement of reaction rate in the presence of competitive inhibitor

AGENCE NAT VALORISATION 22.02.78-FR-005010
B04 J04 R16 (D13) (26.10.79) G01n-31/14

Quantitative evaluation of substrates which undergo enzymic reactions is effected by contacting the substrate with specific enzyme in the presence of a competitive inhibitor in a suitable concn. for the concn. of the substrate, and measuring the initial rate of enzymic reaction, which is proportional to the substrate concn.

Method is partic. suitable for measuring glucose concentration in plasma, but it may also be used by the pharmaceutical and food industries and in bacteriology. 22.2.78 as 005010 (11pp520)

NOVO D16 05642Y/04 =GB 1557-005
Conditioning collagen for gelatin extraction - by treating with a neutral or alkaline proteolytic enzyme
NOVO INDUSTRIA/S 11.07.75-GB-029341
(05.12.79) *BE-843-964 +C07g-07

The alkaline or neutral conditioning of collagen for gelatine extn. comprises the treatment of a collagenous raw material with a conditioning float of a neutral or alkaline proteolytic enzyme. The enzyme used is not obtd. by culturing an *Aspergillus* microorganism.

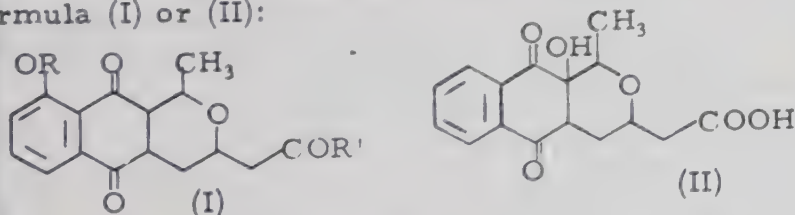
The treatment of collagen is at 20-40°C. for 4-72 hrs. at pH 7-3, thereby eliminating enzymatic activity, and obtaining the prod. Pref. the collagenous raw material is ossein, dehaired hide or dry- or wet-limed or salted hide.

The conditioning time of the collagenous material is reduced, enabling the prodn. capacity of a gelatine producing plant to be raised. 11.7.75 as 029341 (6pp931)

ITA D16 91038Y/51 =GB 1557-041
Nanaomycin A derivs. used as antibiotics - are prepd. from *Streptomyces rosa notoensis*

KITASATO RES INST 28.04.76-JA-049224 (15.04.76-JA-042881)
B02 (05.12.79) *J52133-986 A61k-31/35 C07d-311/92 C12d-09

New antibiotic nanaomycin A and its related cpds. are of formula (I) or (II):



where (a) R is H, R' is OH; (b) R is H, R' is NH₂; (c) R is COCH₃, R' is OH or (d) R is H, R' is OCH₃. Specifically (I) (a) is nanaomycin A, (I) (b) is nanaomycin C, (II) (c) is acetyl-nanaomycin A, (I) (d) is nanaomycin A methyl ester and (II) is nanaomycin B.

The cpds. are prepd. by culturing microorganisms of the genus *Streptomyces*, specifically *S. rosa var. notoensis* FERM-P No. 2209. The antibiotics are active against Gram-positive bacteria, trichophyton and mycoplasma. 21.7.76 as 030433 (31pp924)

IST D16 63484A/36 =GB 1557-123
Bitter essence extn. from hops - by contact with liq. carbon dioxide which dissolves essence and heating soln. to recover essence
DISTILLERS CARBON 29.04.77-GB-018056
(05.12.79) *BE-866-572 B01d-11/02 C12c-09/02

An extract can be prepd. from a material (e.g. hops, coffee and tea), by dissolving out the extract using liquid CO₂, evaporating the CO₂ from the resulting soln. and recycling the CO₂ by compression, and using part of the heat evolved from the vapour to liquid CO₂ stage in the recycling to achieve the evaporation of CO₂ in the previous step.

Pref. the liquid CO₂ is cooled before being used in the dissolving out stage. The necessary plant is inexpensive and the extract is of better quality. 29.4.77 as 018056 (12pp1376)

BREW D16 59311Y/33 =GB 1557-156
Introducing gases into fermentation liquids - by injecting a small volume of supersaturated soln. of gas
BREWING PATENTS LTD 08.04.75-GB-014461
(05.12.79) *US4041-180 +B01d-19

The degree of supersaturation of dissolved CO₂ in an aq. fermentation liquor is reduced by introducing a dispersion of a multitude of microbubbles of a sparingly soluble gas in an aq. liq. carrier into the liquor.

Pref. the dispersion of microbubbles is generated by rapid decompression of the sparingly soluble gas in the carrier liq. into the aq. liquor under high shear, where the soln. is saturated in the gas at a higher pressure than in the fermentation liquor at the point of introduction.

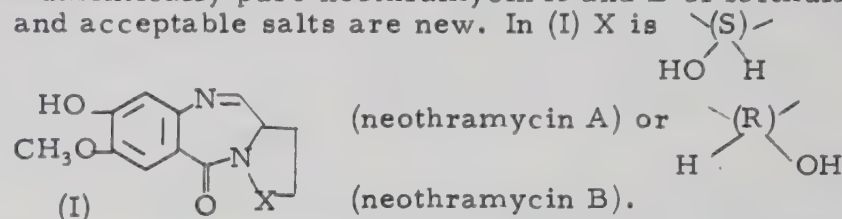
The process is esp. used to control the gas release from wort, beer or other fermentation liqs. 8.4.75 as 014461 (5pp931)

ZAID D16 12856Y/08 =GB 1557-271
Neothramycins A and B and methylneothramycins - antitumour agents active against leukemia L-1210 cells which have antibacterial and antifungal activity

ZAIDAN HOJIN BISEIB 15.10.75-JA-123256

B02 (05.12.79) *BE-847-372 A61k-31/55 C07d-209 C07d-243/06 C07d-487/04

Authentically pure neothramycin A and B of formula (I) and acceptable salts are new. In (I) X is



Each cpd. has given IR spectrum, prepared when pelleted in KBr.

The cpds. are isolated from a culture broth of the MC 916-C4 strain of *Streptomyces*. The cpds. are antibacterial agents. 24.9.76 as 039798 (22pp964)

PLAT- D16 52182Y/30 =GB 1557-340
Ensilaging agent for fodder plants - comprises formate salts and hexamethylene tetramine or other formaldehyde precursor

PLATE KOFASIL GMBH 24.01.76-DT-602626

C03 E19 (D13) (05.12.79) *BE-850-607 A23k-03/03

Novel ensilaging agents contain a mixt. of 50-90 wt.% formic acid salts and 50-10 wt.% hexamethylene tetramine.

Pref. the formate is Ca formate. Pref. compsns. also contain a physiologically acceptable carrier, esp. crude phosphate, bone meal, Ca₃ phosphate, bole, talc, alkaline earth metal stearate, NaCl or rock salt.

Agents are used for fermenting fodder plants that are difficult to convert into silage. 24.1.77 as 002744 (5pp974)

PELL/ ★ D16 88088B/49 ★GB 2021-546
Stabilisation of aq. bentonite suspensions - by addn. of magnesium sulphate heptahydrate

PELL WH 29.03.78-GB-012211 (20.06.79-GB-021457)

E33 P64 (05.12.79) B28c-01/02 C01b-33/26 C12h-01/04

Bentonite (I) is held in suspension by addn. of MgSO₄·7H₂O. Addn. of MgSO₄·7H₂O to aq. based liqs. (esp. beers and wines) contg. suspensions of (I) prevents the known pptn. of (I). (I) is useful in preventing the formation of haze in wine and beer.

In an example, suspension was prepd. from H₂O (1 gallon), (I) (453 g.), and MgSO₄·7H₂O (8 g.). 20.6.79 as 021457 (2pp478)

ATKI/ ★ D16 88095B/49 ★GB 2021-594
Storage stable glycerol dehydrogenase enzyme prepn. - useful in assays for serum tri:glyceride cpds. and in prepn. of di:hydroxy-acetone

ATKINSON A 17.05.79-GB-017146 (22.05.78-GB-021194)

B04 R16 (05.12.79) C07g-07/02 G01n-31/14

Glycerol dehydrogenase (I) enzyme prepn. having an active half-life >4 days at 20°C. as a 3 mg./ml. soln. in a buffer at pH 6.8 and consisting of 50 mM K phosphate, 10 mM β-mercaptoethanol and 0.1 mM phenylmethylsulphonyl fluoride, is new. A strain of *Bacillus stearothermophilis* capable of producing (I) is new.

The enzyme is stable in soln. for long periods at ambient or even elevated temps. Such enzymes are used in bio-

30°C for 4 hrs. Colistin was obtd. in yield of 80 units/ml. 19.4.78 as 046396 (5pp52)

KYOW ★ D16 88373B/49 ★ J5 4138-592
Antibiotic XK-201-IV - prepd. by culture of *Streptomyces* microorganism

KYOWA HAKKO KOGYO KK 19.04.78-JA-045228

B04 (27.10.79) A61k-31/54 C07d-501 C12d-09/14

Novel antibiotic XK-201-IV is prepd. by cultivating a microorganism belonging to genus *Streptomyces* (specifically, *S. sp.* MK-201, FERM-P No. 4478) in the nutritive medium. A liq. culture, partic. a submerged culture with stirring, is the most suitable. Cultivation is pref. conducted at 25-40°C at a pH of 3-10 for 2-7 days.

Since XK-201-IV is easily water-soluble and principally contained in the culture, the fungus body is removed by centrifugation or filtration and the purposed substance is extd. from the culture filtrate. The extract is then purified utilising the difference in affinity to adsorbents, difference in solubility in solvents and difference in coefft. of distribution between two liq. phases. If necessary, these techniques are employed in combination or repeatedly. 19.4.78 as 045228 (pp140)

AGEN ★ D16 88389B/49 ★ J5 4138-624
Immobilised enzyme fibre prodn. - using polyvinyl alcohol filaments modified by treatment with aldehyde contg. (substd.) amino gp. or corresp. acetal

AGENCY OF IND SCI TECH (NICH-) 01.12.77-JA-144109

A96 B04 F01 (A14) (27.10.79) D01f-06/50 D01f-11/06

Immobilised enzyme fibre is produced by (1) spinning polyvinyl alcohol (PVA) to prepare PVA filaments, followed by treating the filaments with aldehyde having amino (or substd. amino) gp., or corresp. acetal, to obtain polyvinyl aminoacetal filaments, and (2) immersing the resulting filaments in aq. soln. of enzyme to effect chemical combination of the fibre with the enzyme.

The immobilised enzyme fibre is applicable to industrial enzyme reaction. The polyvinyl aminoacetal fibre has sufficient mechanical strength and improved enzyme-immobilising capacity. The capacity can be further increased by pretreatment of the fibre with 0.2-3.0 N acid soln. 1.12.77 as 144109 (8pp173)

MATU ★ D16 88552B/49 ★ J5 4139-792
Electrode for determn. of concn. or activity of enzymes - contains a coenzyme for oxido:reductase, and an electron-collecting substance

MATSUSHITA ELEC IND KK 21.04.78-JA-047984

A89 B04 J04 R16 (30.10.79) G01n-27/40 G01n-33/16

The electrode contains a coenzyme for oxidoreductase and (II) and electron-collecting substance, (I) is directly chemically bonded with (II) a polymeric carrier and is mixed with (II). The oxidoreductase is fixed on or near (II).

Since (I) is oxidised with good efficiency, the determn. is carried out rapidly and simply. (II) is e.g. carbon SnO_2 , In_2O_3 , WO_3 , TiO_2 , etc.; and (II) is an organic carrier, e.g. cellulose or albumine, or an inorganic carrier, e.g. glass, alumina, SnO_2 , etc. When the electrode is only fixed with coenzyme without combining it with fixed enzyme, the activity of the enzyme can be determined.

In an example, NAD was reacted with succinic anhydride in dimethylsulphoxide to introduce the carboxyl gp. into the molecule. The NAD deriv. was reacted with aminohexyl-cellulose in dicyclohexylcarbodiimide to fix NAD on the cellulose deriv. by amide-bonding. The NAD-fixed cellulose was mixed with graphite powder and press-moulded to give NAD-fixed electrode. The electrode was dipped in a soln. contg. lactic dehydrogenase to prepare NAD-enzyme bonding substance, which was then treated with a cross-linking reagent to give the coenzyme enzyme-fixed electrode. 21.4.78 as 047984 (5pp90)

MATU ★ D16 88553B/49 ★ J5 4139-793
Electrode for determn. of concn. or activity of enzymes - contains coenzyme for oxido:reductase, and electron-accepting substance

MATSUSHITA ELEC IND KK 21.04.78-JA-047985

A89 B04 J04 R16 (30.10.79) G01n-27/40 G01n-33/16

The electrode contains (I) a coenzyme for oxidoreductase and (II) an electron-collecting substance which are directly fixed to each other by chemical binding. The oxidoreductase

is fixed on or near (II), which is a metal oxide (e.g. TiO_2 , WO_3 , MoO_3 , etc) or carbon.

Since (I) is oxidised with good efficiency, the determn. is carried out rapidly and simply. When the electrode is fixed with only a coenzyme without combining it with fixed enzyme, the activity of the enzyme can be determined.

In an example, NAD was reacted with succinic anhydride in dimethylsulphoxide to introduce the carboxyl gp. into the molecule. The resultant NAD deriv. was reacted with the OH gp. or the surface of SnO_2 which has been treated hydrophilically to form ester bonding, so that NAD was fixed onto the surface of glass coated with a semiconductive thin film of SnO_2 . The NAD-fixed glass was then dipped in a soln. contg. lactic dehydrogenase to prepare NAD-enzyme bonding substance, which was treated with a cross-linking reagent, e.g. glutaraldehyde, to give the coenzyme enzyme-fixed electrode. 21.4.78 as 047985 (6pp90)

MATU ★ D16 88669B/49 ★ J5 4140-5
Enzymic electrode for selective determn. of tri:methylamine comprises electrode contg. oxido-reductase, coenzyme and current collector

MATSUSHITA ELEC IND KK 24.04.78-JA-048879

E16 J04 R16 (31.10.79) G01n-27/40 G01n-33/16

Enzyme electrode contains at least (a) oxidoreductase, (b) coenzyme and (c) current collector and (a) and (b) are fixed on or near (c). (a) is trimethylamineoxide reductase and (b) is nicotinamide adenine dinucleotide. A redox cpd. which conjugates with (b) to form electron-transferring cpd. is fixed on or near (c).

(a), (b) and redox cpd. can be reused. The enzyme electrode is useful for convenient sensor for determining tri:methylamine which is a useful criterion to assess the degree of food decay.

In an example, 0.3 mg trimethylamine oxide reductase extractase extracted from gram-negative bacillus of *Flavobacterium* and 0.4 mg coenzyme were dissolved in phosphate buffer (pH 7). A disc of 15 mm dia. was formed by press-moulding graphite powder. The above soln. was applied on the disc and dried. The dried surface is treated with glutaraldehyde to crosslink the coated film. An enzyme electrode is produced by using the enzyme-coenzyme fixed disc. 24.4.78 as 048879 (4pp90)

NISY D16 68007U/45 = J7 9036-2
Poly(vinyl alcohol) resin decomposing enzymes

NIPPON SYNTH CHEM IND 11.11.71-JA-090207

A14 (A60) (08.11.79) *J48056-886 + C12d-13/10

Microbes belonging to *Xanthomonas* produce enzymes which decomp. polyvinyl alc. (PVA) resins by successive aerobic cultivation in a series of medium contg. PVA resins as C-source, for 0.5-3 hr. at 25-45°C, pH 5.5-6.0. 0.001-5% PVA resins 1-10% (w.r.t. PVA) enzyme.

In an example 4 ml. PVA medium (pH 7.5) contg. 1 g PVA (mean polymn. 700, sapon. value 98.4 mole %) 0.05g yeast ext. 0.02g meat ext. 0.4g NH_4NO_3 , 0.1g K_2HPO_4 , 0.1 g KH_2PO_4 and 0.05g MgSO_4 in 100 ml H_2O . 0.1 ml soil suspension was inoculated and cultured by shaking at 30°C. By 8 successive cultures, and other precedures strain No. Z-401 1,002) was isolated. 11.11.71 as 090207 C12d-13/10 (8.11.79) NIHON SYNTH ETHIC CHEMICAL IND.CO.LTD. (7pp)(J48056886)

NISY D16 68008U/45 = J7 9036-3
Poly(vinyl alcohol) resin decomposing enzymes

NIPPON SYNTH CHEM IND 11.11.71-JA-090208

A14 (A60) (08.11.79) *J48056-887 + C12d-13/10

The cpds. are produced by aerobic cultivation of mixt. of microbes, ≥ 1 of *Pseudomonas* and 1 of *Xanthomonas* in a medium contg. PVA resins as C-source, for 0.5-3 hr. at 25-45°C.

In an example *Pseudomonas* strain No. Z-301 (FERM-P-1, 000) No. Z-302 (FERM-P 1, 001) and *Xanthomonas* strain No. Z-401 (FERM-P 1, 002) were isolated from soil in mediums contg. 1g PVA (mean polymn. 700, sapon. value 98.5 mole %) 0.4g NH_2NO_3 , 0.1g K_2HPO_4 , 0.1 g KH_2PO_4 , 0.05g MgSO_4 , 7 H_2O and vitamin mixt. 1 ml. in 100 ml. H_2O . Crude enzyme was prepd. by salting out and pptn. with org. solvent from the cultured broth of the mixed culture. Prodn. of the enzyme was 3.42×10^4

units (total activity of 20 l broth) in the broth cultured by mixt. of 3 strains and 9.0×10^3 units in the broth cultured by single strain. 11.11.71 as 090208 C12d-13/10 (8.11.79) NIHON SYNTHETIC CHEMICAL IND. CO. LTD. (12pp)(J48056887)

AGEN D16 42308Y/24 = J7 9036-229
Fixing microbial body contg. lipase - by heating lipase-producing bacteria belonging to *Pseudomonas* to 50 to 90 degrees celsius
AGENCY OF IND SCI TECH 00.00.76-JA-132971 (09.11.72-JA-112499)
(08.11.79) *J52054-082 C07g-07/02 C12k-01 + C12d-13/10

Applicable stocks are e.g. *Pseudomonas mephitica* var. *lipolytica*, *Pseudomonas aeruginosa*. The stocks are cultured ordinarily in a culture medium, in which inorganic nitrogen source such as ammonium sulphate is added to increase intracellular production of lipase. Pref. the treatment is practised immediately after the culture to avoid autolysis. Before the treatment microbial body may be washed with water.

It is desirable to stabilise lipase previously either by adding the inhibitor which hardly inhibits lipase and inhibits the enzymes relating to the solubilisation of lipase or by treating microbial body at pH 3.5-6. The obtd. fixed lipase shows similar enzymic properties to the soluble lipase produced in the culture medium and has rather higher activation energy. Lipase can be fixed economically and effectively. 9.11.72 as 132971/76 Div ex 112499/72 (C07g-7/02; C12d-13/10; C12k-1/00 (8.11.79) AGENCY OF IND. SCI. TECH. (5pp) (J5 2054082)

HOFF D16 13520T/09 = J7 9036-232
Antibiotic x-5108 - with activity against bacteria and coccidia and growth-promoting effect

HOFFMANN-LA ROCHE AG 14.08.70-US-064389
B04 C03 + P14 (08.11.79) *DT2140-322 A23k-01/17 C12d-09/14 + A61k-31/71 C07h-07/06

Antibiotic- X-5108 and its physiologically tolerable cationic salts inhibit the growth of gram-positive and negative bacteria. With low toxicity, it is markedly active against streptococci and pneumococci and is active in ceacal cocci-diosis. It has a marked growth promoting effect in poultry, and improved feed utilisation in animals.

The antibiotic is prepf. by cultivating *Streptomyces* spp X-5108 under submerged aerobic conditions in an aqs. culture liquid contg. assimilable carbohydrate and N-sources and inorganic salts until the medium displays a considerable antibiotic activity, and separating the desired antibiotic from the fermentation soln, pref. by extraction with butyl acetate. The antibiotic may be purified by counter-current extraction and gel permeation chromatography. 13.8.71 as 061082 (+14.8.70-US-064389) C12d-9/14, A23k-1/17, A61k-31/71, C07h-7/06 (8.11.79) HOFFMANN-LA ROCHE & CO. AG., F. (35pp)(J47005292)

MORG D16 58412Y/33 = J7 9036-235
Protein decomposition product prepn. - having no bitter taste and no antigen activity

MORINAGA MILK KK 26.12.75-JA-156666
(D13) (08.11.79) *J52079-083 C12d-13/06 + A23j-01

Prepn. comprises adding an enzyme mixture comprising (a) ≥ 100 (300-2000) active units of a rupture product of lactic acid bacteria or an enzyme extracted therefrom having a proteolytic activity, (b) ≥ 100 (300-200) active units, of pancreatin having a proteolytic activity and (c) ≥ 200 (600-3000) active units, of a protease obtd. from a strain belonging to *Aspergillus*, to an aq. soln. of protein, maintaining the mixt. at 40-55 (45-52)°C, for ≥ 12 (16-28) hrs., to decompose the protein until at least 40% of total nitrogen amt. is decomposed into amino nitrogen. The total active units of the three enzymes per g of protein is 1200-6000 (1500-5000).

The resulting protein decomposition prod. can be used as a protein source of foodstuffs effective for prevention of food allergy. 26.12.75 as 156666 A23j-1/00, C12d-13/06-(8.11.79) MORINAGA MILK KK (15pp)(J52079083)

KOKU-★ D16 88673B/49 ★ J7 9036-236
High activity koji mfr. - by culturing bacteria in medium contg. distiller's solubles to accelerate growth
KOKUZEICHO-CHOKAN (KIBU-) 28.10.77-JA-128656
(08.11.79) A231-01/20 C12g-03/02

The method comprises culturing bacteria in a medium containing filtered or centrifuged distiller's solubles (I). (I) accelerates growth of bacteria and gives high activity koji. Koji is a malt for brewing wine, soy, etc. 28.10.77 as 128656 C12g-3/02, A231-1/205, (8.11.79) KOKUZEI-CHO-CHOKAN, KIBUN KK (7pp83)(J54064697)

SHII- D16 67556Y/38 = J7 9036-240
Brown vinegar prodn. - by fermentation of sake waste solubilized in hot water by addition of alkali
SHI-ICHI JOZO KK 29.01.76-JA-007990
(08.11.79) *J52094-500 C12j-01/04

Vinegar is prepared by addition of a small quantity of alkali in mixture of "sake" lees and hot water, and neutralisation. The vinegar is brown, is obtained in high yields and is suitable for sushi prodn. (cooked Japanese food).

The starch in saki waste becomes soluble in hot water by the addition of alkali. Fermentation first gives alcohol and than, vinegar is produced by oxidation fermentation. The alkali is pref. sodium hydroxide. 29.1.76 as 007990 C12j-1/04 (8.11.79) SHI-ICHI JOZO KK (3pp)(J52094500)

SANW- D16 42228Y/24 = J7 9036-601
Petroleum desulphurisation by *Pseudomonas haconensis* - which converts sulphur cpds. to water soluble cpds.

SANWA YUKO KK 31.01.74-JA-013026
H04 (10.11.79) *J50107-002 + C10g-31/12 C12k-03

A sulphurous petroleum is contacted with *Pseudomonas haconensis* to convert the S cpds. to water-sol. cpds., which are then removed.

In an example, to a 500-ml flask contg. 50 ml culture 0.1% dibenzothiophene (I) was added. A soln. contg. $\text{Ca}(\text{H}_2\text{PO}_4)_2$ 0.05, $(\text{NH}_4)_2\text{NO}_3$ 0.1, MgCl_2 0.01 and H_2O , was prepd. and adjusted to pH. 5.5-6.0. The newly isolated *Pseudomonas haconensis* was inoculated (5 ml) was cultivated by shaking at 200 rpm at 30° for 7 days. The (I) content was decreased to 0.025% (75% conversion). 31.1.74 as 013026 C10g-31/12, C12k-3/00 (10.11.79)

SANWA YUKO KK (6pp)(J50107002)

LIOY D16 44417Y/25 = J7 9036-674
Microbial decomposition of polyoxyethylene nonionic surfactants - using microorganism of *Pseudomonas nov. sp.* LF 3101

LION FAT & OIL KK 06.11.75-JA-132423
A35 (A25 A97) (10.11.79) *J52057-389 + C02c-01/02 C12b-01

Surfactants such as alkyl-ether alkylarylether alkylester or sorbitanmonoester type with the microorganism *Pseudomonas nov. sp.* LF 3101 (FERM-P-3299).

The stock is cultured in JIS K 3363 medium contg. polyethyleneglycol-dodecylether (EO-7) a polyoxyethylene nonionic surfactant and then cultured successively in the mediums contg. EO-7 with increasing concn. 6.11.75 as 132423 C12b-1/00, C02c-1/02 (10.11.79) LION FAT & OIL KK (6pp)(J52057389)

BRIU D16 68008W/41 = J7 9036-676
Culture of *Bacillus* microbe - in medium contg. gaseous hydrocarbons e.g. propane

BRIDGESTONE GAS (BRID) 01.11.73-JA-122193
H04 (10.11.79) *J50070-580 + C12k-03

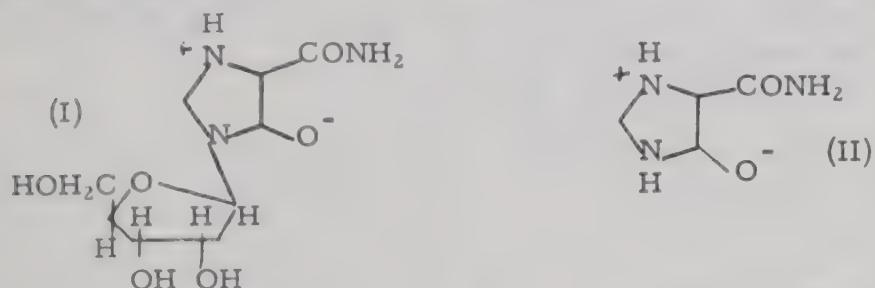
A microbe belonging to *Bacillus* and assimilating gaseous hydrocarbon was cultured on a medium contg. a gaseous hydrocarbon.

In an example, strain BN-3408-c (FERM-P 2206) was cultured at 35° for 50 hrs. on a medium (pH 6.3) contg. $(\text{NH}_4)_2\text{SO}_4$ 2.0, KH_2PO_4 1.0, Na_2HPO_4 7H₂O 0.4 g. plus FeSO_4 7H₂O 10, MnSO_4 nH₂O 2.0, CaCl_2 2H₂O 10, CoCl_2 6H₂O 11.9, CuSO_4 5H₂O 0.241, ZnSO_4 7H₂O 2.41, and H_3BO_3 1.0 mg. in 1 l. with addn. of a mixed gas of propane and air (1:4). Yield of cells was 102 wt.% against propane and 43 wt.% against O₂. Growth rate (u) was 0.139/hr. Protein content of the dried cells was 70.0 wt.%. 1.11.73 as 122193 C12k-3/00 (10.11.79)

BRIDGESTONE GAS (5pp)(J50070580)

TOXN D16 13937X/08 = J7 9036-678
4-Carbamoyl-1-beta-D-ribofuranosyl-imidazolium-5 oleate prepn. -
useful as an antibiotic and immuno-suppressing agent
TOYO JOZO KK 21.06.74-JA-071804
B03 (10.11.79) *J51001-693 C12d-13

4-Carbamoyl-imidazolium-5-oleate of formula (II) or
reactive deriv. is added to a treated culture broth (e.g.
trituated, centrifuged, etc) selected from microorgan-
isms of 265 genera, including bacteria, actinomycetes,
mould fungi, basidiomycetes and yeasts, to obt. 4-carbam-
-oyl-1-β-D-ribofuranosyl-imidazolium-5-oleate(predeinin)
of formula (I)



21.6.74 as 071804 C12d-13/00 (10.11.79) TOYO BREWING
KK (19pp)(J51001693)

FRNG D16 47311Y/27 = J7 9036-679
Vinegar prodn. with high acetic acid concn. - by two stage
submerged fermentation of an alcohol contg. medium
FRINGS H FA 22.12.75-US-643297
(10.11.79) *DT2657-330 + C21j-01/04

Prodn. of vinegar of acetic acid (I) concn. < 15 w/v%
comprises submerged cultivation of an aq. mixt. of alcohol
(I), bacteria (*Acetobacter*) and nutrients at an initial
concn. of 7-10 w/v% (I) and total concn. 12-15% (i.e.
concn. of (I) plus that of alcohol in vol. %). In a first
fermentation stage the total concn. is adjusted to > 15%
by adding a 30-100% alcohol soln., so that (I) concn. is
increased to < 15%. In a second stage the tota concn. is
kept constant at > 15, pref. 15-17% and fermentation
continued until alcohol concn. is < 0.5%.

Pref. at the end of the first stage 20-50% of the fermen-
-tation liquid is separated when (I) concn. reaches 13-15%
transferred to a second reactor, and the residue left in
the first reactor is treated to restore (I) and total concns.
to their initial values. The process is repeated as often
as required.

The vinegar is used in food preservation. Highly conc.
vinegar (lower storage capacity and freight costs) can be
prod. because oxidn. of alcohol to (I) continues after
the end of the bacterial propagation stage. (The bacteria
are killed by this high acid concn. so process must be
in 2 stages to retain a viable culture). 10.5.76 as 052300
(clg. 22.12.75-US-643297) C21j-1/04 (10.11.79) FRINGS
H GMBH (8pp)(J52079092)

MITU D16 31426W/19 = J7 9037-233
Cystein desulphhydrase prodn. - by cultivating e.g. *Brevibacterium*
ammoniogenes in medium contg. yeast extract etc.
MITSUBISHI CHEM IND KK 14.03.73-JA-029848
(14.11.79) *J49117-678 + C12d-13/10

Cystein desulphhydrase (I) is produced from *Brevibacterium*
ammoniogenes, *Sarcina lutea*, *Corynebacterium equi*,
Arthobacter simplex, *Pseudomonas fluorescens*, *Proteus*
morganii, and *Micrococcus reseau*. In an example, these
organisms were cultivated in a medium (pH 7.5) contg,
L-cystein-HCl 0.2, yeast ext. 0.5, meat ext. 0.5, peptone
0.5, and NaCl 0.2% at 30° for 16 hrs.

(I) was extd. from the washed cells and purified by
(NH₄)₂SO₄ fractionation and column chromatogs. on
DEAE-Sephadex (RTM) and Sephadex (RTM). (I) catalyses
a reaction decomp. cystein into pyruvic acid, NH₃ and
H₂S. Pyruvic acid produced by the reaction is a measure
of activity. Activities were 0.04(A. simplex IFO 03530)
.3.92 (S. lutea IFO 3232) units. 14.3.73 as 029848
C12d-13/10 (14.11.79) MITSUBISHI CHEM IND KK (3pp)
(J49117678)

MITN D16 81621X/44 = J7 9037-234
L-dextro-rotatory-tartaric acid and salt prepn. - by enzymatic
hydrolysis of cis-epoxy-succinic acid or salts
MITSUBISHI GAS CHEM IND 16.04.75-JA-046030
A97 E17 (14.11.79) *DT2616-673 C12d-01/02 + C12d-13/10
Prepn. of L(+)-tartaric acid and its salt takes place by
allowing an enzyme to act on cis-epoxy-succinic acid,
(I), or its salts (I'), under hydrolysis and opening of epoxy
gp., pref. at pH 4-10 and ≤ 65°C, and then separating the
L(+)-tartaric acid formed or its salts. The cis-epoxy-
succinic acid hydrolase (II) is pref. obtd. from a micro-
organism of *Acetobacter* species, pref. *Acetobacter curtus*
no. 4, no. 10 or no. 21, of *Corynebacterium* species, pref.
of *Corynebacterium* S-13, Pref. enzymatic reaction takes
place at 70°C, pH 4-10 using (II) derived from microor-
ganisms enclosed in a gel. Cis-epoxy-succinic acid hydro-
lase is new.

L(+)-tartaric acid is used as an additive to pharmaceu-
ticals and food and as an industrial raw material. Process
can be carried out on an economical, industrial scale,
with good yields and selectivity. 16.4.75 as 046030
C12d-1/02, 13/10 (14.11.79) MITSUBISHI GAS CHEM IND
(13pp)(J51121593)

AJIN D16 31147V/17 = J7 9037-235
Microbiological L-arginine prodn - using a guanine-requiring strain
of *Brevibacterium*
AJINOMOTO KK 09.10.72-JA-101448
B05 E16 (14.11.79) *DT2350-210 C12d-13/06

Process comprises cultivating an L-arginine (I)producing
strain of *Brevibacterium* or an aq. medium contg. C
and N sources, inorg. salts, substances essential for
growth and growth promoters, where the strain used (a)
requires guanine and (b) is resistant to feedback inhibition
and/or suppression by arginine or its analogues. C source
is e.g. a carbohydrate, acetic and/or NH₄ acetate or
EtOH and pref. bacterium is *B. flavum* FERM P1639.

(I) is produced in high yields and is easily recovered,
(I) is an essential amino acid widely used in medicine and
in foodstuffs. 9.10.72 as 101448 C12d-13/06 (14.11.79)
AJINOMOTO CO INC (3pp)(J49061388)

KYOW D16 43112U/31 = J7 9037-236
Megalomycins prodn - by fermentation
KYOWA HAKKO KOGYO 13.01.72-JA-005523
B03 (14.11.79) *DT2301-080 + A61k-31/71 C07h-17/08 C12d-
09/14

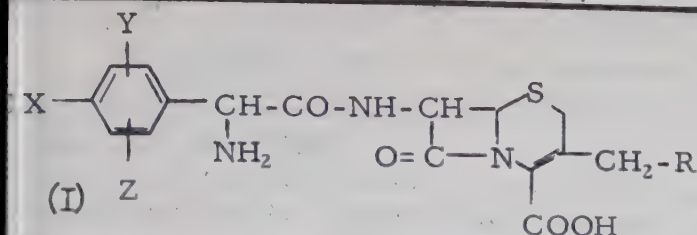
Megalomycins (a known group of antibiotics with broad
spectrum antibacterial activity) are produced simply and
inexpensively by cultivating *Micromonospora inositol*
ATCC 21773 in a nutrient medium and isolating the meg-
alomycins accumulated in the medium.

The megalomycins can be isolated by extraction with
organic solvents and other conventional procedures in
the form of a powder. Column chromatography of this on
alumina followed by countercurrent distribution gives
megalomycin C₂, B and A. Megalomycin B can be split
into 2 components of which one is the new cpd 4'-propion-
yl megalomycin A. 13.1.72 as 005523 C12d-9/14, A61k-31/
71, C07h-17/08 (14.11.79) KYOWA HAKKO KOGYO CO
LTD (20pp)(J48075794)

TOXN D16 78241V/45 = J7 9037-237
Alpha-aminocephalosporin from 7-aminocephem cpds. - acylated
in the presence of microbially produced catalyst
TOYO JOZO KK (TOYO) 20.11.72-JA-116870
B02 (14.11.79) *J49075-787 + C12d-09/20

Cephalosphorin of formula (I), (where R is H or lower
alkanoyloxy, X, Y, and Z are H, OH and halogen) is pro-
duced by acylation of a 7-aminocephem compd. with α-
amino acid or its deriv. catalysed by a culture broth,
cells, or a cell ext. of *Achromobacter*, *Alcaligenes*, *Bac-*
illus, or *Beneckea*.

In an example, washed cells of *Achromobacter* sp.
B-402-2 (FERM-P 1095) were suspended in 50 ml of
0.1 M acetate buffer (pH 6.0) contg. 7-aminocephalospor-
anic acid or 7-aminodesacetoxy cephalosphoranic acid
at 0.2% and D-phenylglycine methyl ester -HCl or its
derivs. at 1% and reacted at 37°C for 1 hr with stirring.
Prodn. of I was 1.8-12.6 mg/ml.



20.11.72 as 116870 C12d-9/20 (14.11.79) TOYO BREWERY CO LTD (4pp)(J4905787)

BANY D16 76426W/46 = J7 9037-238
Cephalosporin prodn. - in presence of deacylation enzyme prepd. from *Azotobacter*

BANYU PHARM CO LTD 22.10.73-JA-117993
B02 (14.11.79) *J50069-293 + C12d-09/20
7(o- α -Aminophenylacetamide)-3-cephem-4-carboxylic acid (I) or its deris. are produced from 7-amino-3-methyl-3-cephem-4-carboxylic acid (II) and (-)-phenylglycine (III) in the presence of a deacylation enzyme prepn. from *Azotobacter*.

In an example, *Azotobacter* No. 5686 was cultured aerobically at 28°C for 24hrs. in 100 ml. of a medium contg. glucose 6, yeast extract 1, $\text{NH}_4\text{H}_2\text{PO}_4$ 0.2, and K_2HPO_4 0.1%. The cells were collected and suspended in a phosphate buffer. The cell suspension was mixed with (II) 19.2 and (III) 27.3 mg/ml. and incubated at 37°C for 1 hr. with stirring. The (I) content in the reaction medium was 27.8 mg/ml. 22.10.73 as 117993 C12d-9/20 (14.11.79) BANYU PHARM CO LTD (5pp)(J50069293)

KAYA D16 33252Y/19 = J7 9037-239
Antibiotic K13-1 fermentative prepn. - using *Streptomyces tanashiensis*

KAYAKU ANTIBIOTIC RES 16.01.74-JA-007689
B04 (14.11.79) *J50100-295 + C12d-09/14
Antibiotic K13-1 (I) is produced by *Streptomyces tanashiensis* var. K-73.

In an example, *S. tanashiensis* var. K-73 was aerobically cultured on a medium (pH 7.0) contg. starch 3, peptones 1, meat extract 1, NaCl 0.5 and CaCO_3 0.2% at 30° for 40 hr. The culture liq. was filtered with Celite (RTM). The filtrate was then passed through an Amberlite XAD-II (RTM) column, and eluted with H_2O followed by 70% acetone - H_2O . After adjusting to pH 7.5, the eluate was extd. with CHCl_3 , and the CHCl_3 fraction was further extd. with H_2O to give 9 g. I after lyophilisation or concn. under reduced press. 16.1.74 as 007689 C12d-9/14 (14.11.79) KAYAKU ANTIBIOT RE (7pp)(J50100295)

AJIN D16 31418W/19 = J7 9037-240
Imidazolyl acetol fermentative prodn. - from *Brevibacterium* or *Corynebacterium*

AJINOMOTO KK 07.03.73-JA-027463
E13 (14.11.79) *J49116-296 + C12d-13
Imidazolylacetol (I) was produced by *Brevibacterium* or *Corynebacterium*. In an example, B, flavum AJ 3439 (FERM-P 1946) was cultured in a medium contg. glucose 10, $(\text{NH}_4)_2\text{SO}_4$ 3, KH_2PO_4 0.25, and MgSO_4 0.04% plus 2 ppm of Fe^{++} and Mn^{++} , vitamin B HCl 350 and biotin 100 $\mu\text{g/l}$, and Mieki (protein hydrolysate) 3 mm/dl at 31.5° for 48 hrs.

(I) was produced at 0.8 g/dl. (I) was sepd. and purified from the culture supernatant by a chromatog. on an ion exchange resin. 7.3.73 as 027463 C12d-13/00 (14.11.79) AJINOMOTO KK (2pp)(J49116296)

DOLI/★ D16 B/49 ★PT--69-393
Conversion of tomato concentrate plants to alcohol prodn. - by distn. of aq. alcoholic solns.
DE OLIVEIRA A S 26.03.79-PT-069393
(D14) (15.11.79) C12f

NICO-★ D16 B/49 ★RU--65-129
Prophylactic vaccine preventing still-birth of ovine foetus - by multistage extraction of foetus and deactivation of some bacteria
NICOLAU S S INST 30.04.75-RU-082131
B04 C03 (30.10.78) A61k-39/02

PROT=★ D16 88840B/49 ★SU-652-203
Lubricant for metal treatment by pressure - is prepd. by treating microbic fat with acetone, separating phospholipids and treating soln. with alkali

PROTIEN BIOSYNTHESI 16.01.76-SU-316565
E17 H07 M21 (E11) (16.03.79) C10m-01/04

Lubricant for hot and cold working of metals under pressure is described in Parent Patent Cert. No. 493499.

The following changes improve lubricant quality and stability. Phospholipids are isolated as a melt, while the powdered fatty acid salts are obtd. simultaneously by treating raw material with acetone at 35-45°C in the ratio 1:2 to 1:4. When phospholipids have sepd., the acetone soln. is treated with 50-100% excess alkali (< 50% concn) and the pptd. fatty acids salts are removed.

Levchenko O.A., Kazantsev Yu.E., Oseiko N.I. et al.
Bul.10/15.3.79 16.1.76 as 316565 (5pp835)

AKGO=★ D16 88847B/49 ★SU-652-210
Microbial biomass from culture liquid sepn. - using as coagulants aluminium chloride hexahydrate and sodium hydroxide, used in biological prodn. of amino acids

AS KIRG ORG CHEM 23.08.76-SU-399067
(15.03.79) C12b-01/26 C12c-11/24

Sepn. of the microbial biomass from the culture liquid in the biological prodn. of amine acids by inorganic coagulants is improved by using as coagulants $\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$ and NaOH . The ratio culture liquid: $\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$: NaOH = 100:20=8. The $\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$ is introduced before NaOH .

The treatment is carried out at 20-40°C. The precipitation is carried out very effectively and the filtration rate is increased.

Struchalina T.I., Aimukhamedova M.B., Potemko U.I. et al. Bul.10/15.3.79 23.8.76 as 399067 (3pp70)

FERM=★ D16 88848B/49 ★SU-652-213
Continuous alcoholic fermentation of molasses - using one part of molasses first for yeast growing, then combining both parts in fermenter battery to increase yield of alcohol

FERMENT PRODUCTS 12.08.77-SU-518452
(15.03.79) C12c-11/08

Continuous fermentation of molasses, for alcohol prodn., is carried out by sepg. the molasses into two streams; the first stream is directed to the yeast-growing station and fermented by the subsequent passing through a fermenter battery; the second stream is passed directly to the fermenter batter.

This process is intensified and the alcohol yield is increased by directing the second molasses stream to the fermentation in the exponential phase of the yeast growth in the second fermenter of the battery. Simultaneously, the leading fermenter is filled with molasses sowed with yeasts. The concn. of the solids in both streams is maintained at 22-25% and the concn. of yeasts in both fermenters is 100-120 mln. cells per ml.

Yarovenko V.I., Reger P.P., Mostovoi V.P. et al.
Bul.10/15.3.79 12.8.77 as 518452 (2pp70)

MOSU★ D16 88849B/49 ★SU-652-214
Continuous microbiological prodn. of propionic and acetic acids - using *Propionibacterium shermanii* bacterial strain producer cells immobilised in polyacrylamide gel and carbohydrate-contg. culture medium

MOSCOW LOMONOSOV UNIV 02.08.77-SU-521151
A97 E17 (15.03.79) C12d-01/02

Propionic acid is produced by cultivating *Propionibacterium shermanii* in a medium contg. a carbohydrate; subsequently the cells are sepd., and propionic acid is obtd. from the culture liquid.

This process can be carried out continuously and its effectiveness can be increased by immobilising the cells in a polyacrylamide gel; granulating the gel; contacting the granules with a soln. contg. a carbohydrate (e.g. glucose) pref. in a column; sepg. the resulting mixt. of propionic and acetic acid from the soln. (e.g. by steam-distn. or extraction with ether); and sepg. propionic acid from acetic acid by the adsorption chromatography on Amberlite-IRC-50. More of the propionic and acetic acids can be obtd. from the bacteria culture liquid by steam-distillation. This process can be carried out batch

-wise as well.

Vorobeva L.I., Iordan E.P., Gaitan V.I., Bul. 10/
15.3.79 2.8.77 as 521151 (2pp70)

MOMA= ★ D16 88850B/49 ★SU -652-215
Fruit-berry juice alcoholic fermentation - using evolving gas for stirring bottom growing yeast to improve wine flavour and accelerate process

MOSC MAGARACH WINE (FOOD=) 25.08.77-SU-522409
(15.03.79) C12g-01

This process is intensified and the quality of the wine is improved by carrying out the juice fermentation, in an appts. provided with a headpiece, simultaneously with proliferation of the yeasts in the headpiece in contact with the juice. The stirring of the juice is carried out in the lower zone of the appts. by recirculation of gases evolved during the fermentation from the upper part into the lower part of the appts.

Daukshis, Yu. P., Mekhuzla N.A., Paragulgov O.D.
et al. Bul. 10/15.3.79 25.8.77 as 522409 (2pp70)

KEVA= ★ D16 88851B/49 ★SU -652-216
Microbial culture medium for bio-preparation mfr. - contg. aq. yeast extract peptone, millet, Endo medium, sodium hydroxide, meat and casein hydrolysate mixt.

KAZA EAST VASKHNIL 17.10.77-SU-531692
B04 (15.03.79) A61k-39/08 C12k-01/06

Nitrient medium for culturing anaerobic microorganisms, pref. *Clustridium perfringens* C- or B- type, is useful in veterinary and medical microbiology for the mfr. of biological preps., e.g. vaccines, antitoxins etc. The nutrient medium contains (in g/l): aq. yeast extract 190-210; peptone 3.5-5.5; millet (grain) 8.0-12.0; Endo medium (dry) 1.5-2.5; sodium hydroxide 1.0-1.5; meat and casein hydrolysates (1:1 mixt. based on amine N) to make up 1 l.

This medium gives clostridia with high immunogenic characteristics. It is obtd. from cheap raw materials and has high stability. When culturing microbial cultures in this medium, the end of culturing process can be controlled visually.

Gorelov Yu. M., Oreshin A. S., Bul. 10/15.3.79 17.10.77 as 531692 (3pp938)

FARH D16 08585A/05 =SU -652-901
Bacterial cell mass protein source for nutrition - prepd. by cultivating *Methylomonas clarus* strain on nutrient media contg. methanol (BE 25.1.78)

HOECHST AG 24.07.76-DT-633451
C03 (D13) (17.03.79) *DT2633-451 C12d-13/06

Bacterial cell mass is prepd. by cultivating *Methylomonas clarus* ATCC 31226 strain bacteria, (I) under aerobic conditions. Nitrient medium contains 5-150 (10-50 ppm MeOH (w.r.t. nutrient medium wt.) as C source, N sources and essential inorganic salts.

Dried prod. is a protein source for human nutrition and animal feedstuffs. Dried prod. contains 80-80 wt. % crude protein including 75-78 wt. % aminoacids, 50 wt. % of which are essential aminoacids, < 14 wt. % nucleic acid, 5-10 wt. % fat and 5-10 wt. % carbohydrates. Dried mass contains no pigments, toxic substances, reserve materials such as mucilages or polyhydroxybutyric acid odouriferous materials, or sec. metabolites.

Preve P., Sukach D., Faust U., Bul. 10/15.3.79 22.7.77 as 504950 (3pp)

ASFA= ★ D16 88955B/49 ★SU -653-265
Animal tissue glycosidase enzyme extract purificn. - by hydrophobic interaction chromatography on N benzoyl-amido-heptyl-amino-hydroxy-triazinyl agarose, used in food, medicine, microbiology

AS USSR FAR EAST SC 10.03.77-SU-461735
B04 (28.03.79) C07g-07/02

Glyeosidases are extracted from animal matter, such as the liver of the sea mollusc *Acmaea pallida* and separated by the hydrophobic chromatography on 2-N-benzoylamido-heptylamino-4-hydroxy-5-triazinyl-agarose.

The adsorption is pref. effected from a 0.05 M phosphate buffer at pH 5.0. The elution is pref. carried out with a 50% soln. of ethylene glycol in a phosphate buffer (pH 5.0) contg. 1M NaCl.

The glycosidases sepd. by this method have high activ-

ity and purity.

Artyukov A.N., Molodtsov N. V., Bul. 11/25.3.79
10.3.77 as 461735 (3pp70)

MELN/ ★ D16 88976B/49 ★SU -653-2
Microorganisms cultivation appts. - has vertical cylindrical vessels closed circulation loop, each with aerator, nutrient feed and ax agitator

MELNIKOV I A 15.04.77-SU-474435
(28.03.79) C12b-01/10

The appts. comprises a closed circulation loop of vertical cylindrical vessels with tubing connecting the upper part of each vessel with the lower part of the succeeding vessel. An aeration system is connected to the lower part, and a deaeration system to the upper part, of each vessel, and nutrient medium is supplied to the lower part.

Pref. heat-exchangers are located in the connecting tubing, and there is an axial agitator in each vessel. The ratio of the dia. of each connecting tube to vessel dia. is pref. 1.5-2.

Such arrangement improves output and the effectiveness of mass-exchange between air and culture fluid.

Melnikov I. A., Dorosinskii L. B., Bul. 11/25.3.79
15.4.77 as 474435 (3pp1358)

PACI= ★ D16 89010B/49 ★SU -653-4
Water heating and cooling unit - has logic control block with detectors and usual water circulation and temp. control systems

PACIFIC OCEAN FISH 22.02.78-SU-585124
J08 Q75 (25.03.79) F25b-29

The water heating and cooling unit can be used for water organisms cultivation and contains a cooling circuit with a compressor, evaporator, condenser and water circulation circuit. The water circulation circuit is provided with suitable vessels and pumps. To create optimum temp. condition, the unit is additionally provided with a logic control block with detectors. The detectors are placed in the volumes.

Air cooling heat exchanger is placed in the cooling circuit. The heat exchanger at one end is connected to the line connecting the evaporator to the condenser through a solenoid valve. The heat exchanger other end is connected to the compressor through two switches. The switches are placed at the compressor intake and pressure sides. In practice the water temp. is held between 8 to 18 °C. Thus the use of heat pumps is more economical than the direct heating and cooling.

Proskurenko I. V., Kurganskii G. N., Bul. 11/25.3.79
22.2.78 as 585124 (3pp110)

REDP- ★ D16 89234B/49 ★US 4176-C
Immobilised enzymes esp. for isomerisation reactions - covalently linked by di-sulphide groups to glass bead supports

REDPAH SUGARS 13.01.78-US-869239
(D17) (27.11.79) C07g-07/02 C12d-13

An insolubilised enzymatically active substance $E_2-N(R_1)-CO-(CH_2)_n-S-S-(CH_2)_p-O-G(V)$ is new: (where $EtN(R_1)-$ is the residue of an enzyme which has lost an H atom from an amino gp.; $n, p = 1-6$; G is a support carrier consisting of glass beads of specific pore size 200-1000 Å, and surface area -510 m²/g.

(V) are simply prepd., and allow the carrier material to be regenerated from spent material contg. inactivate enzyme. (V) are partic. useful when they contain expensive enzymes such as glucose isomerase or xylose isomerase, which are used for the isomerisation of glucose to levulose (a sweetening agent). 13.1.78 as 869239 (9pp478)

USAS ★ D16 89235B/49 ★US 4176-C
Determin. of bacterial concn. in a test fluid - by chemiluminescent assay involving removal of interfering materials

NAT AERO & SPACE ADMIN 09.02.78-US-876440
(27.11.79) C12k-01/04

Interfering luminescence produced by agents unrelated to the concn. of bacteria in a test fluid during a chemiluminescent assay is eliminated. First, a predetermined amt. of test fluid is treated with a reagent to reduce luminescence-producing organic materials. The reagent is a H₂ soln. and its concn. determines the contact time.

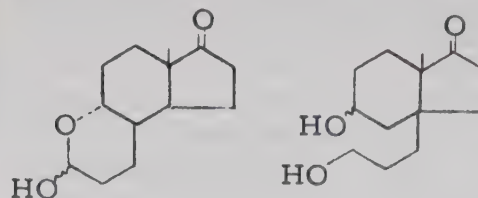
Then the mixt. is treated with a second reagent that

releases components of the bacterial cells and reacts with the components to cause luminescence. The reagent contains NaOH and the iron porphyrins released react with a luminol/H₂O₂ mixt. also in the reagent. The mixt. is allowed to luminesce to maximise decay of luminescence produced by inorganic agents in the test sample. Then the remaining luminescence is measured and the measurement is visually displayed to indicate bacterial concn.

The method is more accurate than prior methods, the effects of interfering materials being eliminated so that the luminescence only relates to the bacteria present. The method is used in an automated system. 9.2.78 as 876440 (9pp1248)

UPJO ★ D16 89296B/49 ★ US 4176-123
Hexa:hydro indanone(s) and corresp. hemiacetal(s) - useful as steroid intermediates, prepd. by microbial transformation
UPJOHN CO 20.11.78-US-961965 (17.11.75-US-632650)
B02 (B05) (27.11.79) C07c-49/28 C07d-311/02

Steroid intermediates of formula (II) and (IV), are new:



Cpds. (II) and (IV) are intermediates for steroids.

Cpds. (II) and (IV) are prepd. by microbial transformation using mutants to selectively degrade steroids with or without

2-10C 17-alkyl side chains. The mutants are obtd. from microorganisms of the genera Artherobacter, Bacillus, Brevibacterium, Corynebacterium, Mycobacterium, Nocardia, Protaminobacter, Serratia and Streptomyces, pref. Mycobacterium fortuitum NRRL B-8128. 20.11.78 as 961965 Div.ex. 4042459 (+10.2.77; 30.1.78-US-769369; 873101) (6pp957)

See Also

D13 DL 137783
D15 J7 9036422
D25 US 4176079

D13 DS 2123375
D15 J7 9036997

D13 GB 1556987
D15 J7 9036998

D17: SUGAR; STARCH

SELW- ★ D17 87781B/49 ★ DS 2833-348
Preliminary liming plant for raw sugar beet juice - stands vertically and recirculates part flow to ensure uniform alkalinity
SELWIG & LANGE MASC 29.07.78-DT-833348
(29.11.79) C13d-03/02

The juice of sugar beet obtd. by extraction is limed preliminarily in a vertical cylinder having at one end an inlet for the raw juice and at its other end an outlet for the treated product, together with a feed opening for the milk of lime. The cylinder is divided by roughly horizontal partitions into chambers one above the other. These have passages which allow an interchange of fluid between them. Agitators for the fluid are fixed to a vertical shaft, centrally positioned in the cylinder. These bring about a partial reversal of the flow from the inlet to the outlet and a mixing of the raw juice of one chamber with that of an adjacent chamber.

The flow reversing agitators are formed by a system of pipes each of which is bent at an angle and connects two chambers together. Each pipe has a suction inlet formed at the top end of a vertical leg and an outlet at the outer end of an horizontal leg, in the lower of the two chambers, when the cylinder is arranged with the raw juice inlet below and the outlet above.

Improves the design of the machine particularly as regards the partial reversal of flow so that more accurate fixing of the pH values is obtd. in the separate chambers. 29.7.78 as 833348 (6pp1045)

MACA/ D17 96005X/51 #GB 1557-248
Two stage fluid bed calcination - with high capacity first stage controlled to give incomplete oxidn.

MACASKILL D 31.03.75-US-563863 (09.09.76-GB-037477)
C04 J09 L02 Q77 (05.12.79) *US3995-987 + C01g-01/02
Calcining non-metallic minerals is claimed so that hydrates and carbonates are decomposed while volatiles are expelled. Method comprises (1) introducing materials into a first fluidised stage; (2) adding a fuel and effecting controlled introduction of oxygen-contg. gases to the first stage to cause incomplete oxidn. while the fluidised material is being heated to $\geq 1100^\circ\text{F}$; (3) transferring material to a second fluidised stage; (4) adding sufficient O₂ and fuel to complete combustion of the partially oxidised material by heating to $> 1100^\circ\text{F}$; and (5) recovering prod.

Pref. in first stage, material is heated in presence of coal; and in the second, in the presence of gas or oil. The 2 stages are pref. maintained in fluidised condition by passing a gas (pref. air) through at 3-15 ft./sec. (first stage) and 1-5 ft./sec. (second stage) mean velocities.

Useful for calcining ores, precipitates, concentrates and residues. Materials such as phosphates, limestones, aluminium silicates, alkaline earth minerals and sludges may be so treated. 9.9.76 as 037477 (5pp963)

HAYB D17 42078T/26 = J7 9037-211
Saccharose-starch syrup without reducing sugars - prepd by treating s saccharose, dextrin and/or cyclodextrin with cyclodextrin-glycosyltra

HAYASHIBARA T 16.12.70-JA-111840
(14.11.79) *BE-776-816 + C13k-13

Method comprises mixing sugar with hydrolysed starch of dextrose equiv. (D.E) ≤ 10 , and reacting cyclodextrin glycosyl transferase with the mixt. to give sugar syrup contg. non-reducing oligosaccharides as main component.

The oligosaccharides obtd. are of a novel type, with sweetness comparable to sucrose and excellent heat stability. The syrup contains no high mol. wt. dextrin. Sweetness and viscosity can be controlled in wide range by selecting starch/sugar ration.

The transferase used is pref. obtd. from Bacillus macerans, Bacillus megaterium, etc. The hydrolysed starch is pref. prepd. by use of α -amylase. The enzymic reaction is carried out at 45-60°C, starch/sugar ratio of 1-10:1 and solid concn. of ca. 50%. The reaction is continued until cyclodextrin in the reaction mixt. disappears. 16.12.70 as 111840 C13k-13/00 (14.11.79)

HAYASHIBARA, T (5pp83)

KIFO= ★ D17 88852B/49 ★ SU -652-218
Treatment of condensate from sugar juice evaporator - using lime followed by air or steam-blowing to expel ammonia before using condensate for sugar extraction from sugar-beet chips

KIEV FOOD IND TECH 13.12.76-SU-428869
(15.03.79) C13d-01/08

Condensate from the juice-evapn. station, used for the extn. of sugar from the sugar-beet chips, is first treated with CaO to pH 11.0-11.5 and then sulphitised.

This method is improved by blowing compressed air or steam through the condensate, after the treatment with CaO, but before the sulphitisation, to reduce the ammonia content in the condensate.

The air-or steam-blowing is carried out at 80-85°C for 8-10 min. By this method, the quality of the juice is improved, as the ammonia is nearly completely expelled. The sugar yield is increased. The consumption of fresh water is reduced.

Samoilenko V.S., Reva L.P., Grivtseva E.A. et al.
Bul.10/15.3.79 13.12.76 as 428869 (2pp70)

DEAK D17 51953U/36 = SU -652-219
Hydrolysed starch prods of low dextrose equivalent - - as supports or food additives

AKAD WISSENSCHAFT DDR 21.02.72-DL-161100
(D13) (15.03.79) *BE-795-706 C131-01/08

Products are prepd. where the starch, pref. from roots or nodules, and opt. as a deriv. or having been pre-treated is suspended in water at a concn. of 15-50 wt. % solids at pH optimally 7 for the enzymes, decomposed by a starch-hydrolysing enzyme (pref. α -amylase bacteria) to

a predetermined optimal concn. heated to swell the grains (pref. to 55-70°C) when the grains are rapidly hydrolysed (for 5-30 min) the enzyme is deactivated and the mixt. cooled (opt. after adding additives) to form a gel or a dry powder by removal of water, where the different starch prods. (of high and low mol. wt.) have degrees of polymerisation covering a factor of six. White bright, thermoreversible neutral tasting gels are formed stable to congealing and degelling.
Richter M., Schirbaum F., Augustat S. et al. Bul.10/15.3.79 21.2.73 as 889601 (4pp)

HAYB D17 82559R/44 =SU -652-883
Maltitol prodn

HAYASHIBARA BIOCHEM (HAY -) 12.07.68-JA-048921
(23.01.68-JA-003862)
(18.03.79) *ZA6900-481 +C07c-31/26

A starch slurry is completely gelatinized and dissolved and the soln. treated with α -1,6-glucosidase and β -amylase to produce maltose; which may be further purified and then hydrogenated thereby permitting each mole of the maltose to absorb one mole of hydrogen.

Mitsuhashi M., Hirao M., Sugimoto K. et al. Bul.10/15.3.79 21.1.69 299759 (2pp)

ROSE- D17 28607X/16 =SU -652-902
Splitting polysaccharides contained in row matls by acid hydrolysis - using two-stage process requiring only one reactor vessel
ROSENLEW OY W AB 04.10.74-SF-002911
E13 F09 (17.03.79) *DT2541-119 C13k-13

A continuous procedure for breaking down by acid hydrolysis under pressure and increased temp., raw materials contg. polysaccharides, and obtg. from them raw materials for the chemical and microbiological industries, effects the hydrolysis in two steps. In the first, the hydrolysis is carried out in the upper zone of the reactor, in the vapour phase, in the presence of a 10 wt.% concn. of acid and water vapour, so that the pentosans are converted into furfural, acetic acid, methanol and acetone, whilst the hexosans are split into di- and trisaccharides. In the second step, hydrolysis takes place in the bottom of the reactor in the fluid phase. Diluted, i.e. less than 10 wt.% acid and water vapour are used in the reaction, so that the di- and trisaccharides of the first step are split into monosaccharides with the accompanying formation of sugars and fatty acids.

Method replaces the highly complicated batch-working previous methods requiring up to twenty reactors, by a continuous process using only one.

Kiminki K., Kulmala R., Sipila S., Bul.10/15.3.79 2.10.75 as 176260 (2pp)

KIFO= ★ D17 88899B/49 ★SU-653-134
Sugar-beet pulp dewatering press - has truncated conical mesh drum inside which are conical pressing rollers, made of discs with annular gap of decreasing width

KIEV FOOD IND TECHN (SMEL=) 11.02.76-SU-326806

P71 (30.03.79) B30b-09/26

Press for dewatering sugar-beet pulp and other moisture-contg. prods, comprises a revolving mesh filtering drum, inside which are rotating pressing rollers, mounted on arms via hinge-links. Scraper blades are mounted on a single shaft down the centre of the drum and the blades are set at an angle. The possibility of controlling the process and increasing the degree of dewatering is realised by making the filter drum and the rollers as truncated cones, which widen out in the direction in which the beet pulp is moving. They are positioned relative to one another, leaving a gap which decreases in the same direction. The pressing rollers consists of a collection of freely-rotating discs, and the blades are installed with a means by which their angle of slope can be altered.

Zadnepryanyi V.A., Zadnepryanaya L.S., Gurskii B.A et al. Bul.11/25.3.79 11.2.76 as 326806 (4pp29)

ENTI ★ D17 89364B/49 ★WP 7900-990
Appts. for processing bagasse - with centrifugal impaction in hot exhaust gas for defibering and drying bagasse
ENTOLETER INC 26.04.78-US-900150
J09 Q73 (29.11.79) F23g-07/02
D/S: N(BR, DT, GB, JA, SW)

A method of processing fibrous organic material comprises centrifugally impacting the material in an atmosphere which principally comprises gas exhausted from a combustion zone. The impacted material entrained in the gas is delivered to a separation zone where the material is separated from the gas. Preferably the separation zone is energized by the fluid energy of the gas. The separated material is preferably applied as a fuel for the combustion zone.

Electricity may be generated from heat produced in the combustion zone. This electricity may be used to preheat the material before being centrifugally impacted.

The apparatus is used to treat waste fibrous material such as bagasse.

The moisture content of the bagasses can be reduced from 52% to 40% or less. This enables combustion to be carried out at a higher temperature. When the input bagasse has 50% moisture, the net heat value produced using conventional apparatus is about 2,400 BTU/lb. The present system improves this to about 3,600 BTU/lb.
25.4.79. as US0263 (22pp295).

(E) ISR: US2148,447; US3387574; US3970255; US4047489.

See Also

D13 J5 4139894

D16 DT 2921380

D16 US 4176006

D18: SKINS; HIDES; LEATHER; TOBACCO

HAUN D18 74438V/43 =DS 1900-701
Cigarette producing machine - including a shift register through which control signals for various processing stages are transported
HAUNI-WERKE KORBER KG 08.01.69-DT-900701
P15 (29.11.79) *CA-956-011 +A24c-05/31

When a machine for the processing of rodlike articles of tobacco, and esp. one for the assembly of a cigarette and a filter together with an adhesive strip, is started up or stopped, successive timing impulses are generated synchronously with the forward movement of the components.

The frequency of the impulses is timed to the progress of the components in such a way that when a timing impulse is generated, the components reach a point along the processing path which had been reached by the preceding group of components when a previous timing impulse was put out. Timing impulses are selected which are put out simultaneously with the arrival of a definite component at a predetermined point along the path, and the timing impulses selected control the putting out of the signal for starting or stopping the working operations.

The technique overcomes the shortcomings of timing devices which produce scrap on starting up, and it operates independently of the speed of revolution of the machine, at accurately defined points in time corresp. to the motion of the components. 8.1.69 as 900701 Add in 2121044, 2161611 (18pp1045)

CELA D18 06276S/03 =DS 2034-594
Synthetic tobacco
CELANESE CORP 15.07.69-US-841969
A11 P15 (A97) (29.11.79) *BE-753-482 +C081-01/08 C081-03/02

An expanded film of a nonpoisonous starch or a deriv. of starch or cellulose is prepd. which is useful in tobacco prods. The film is made from a matrix material with recurring units of formula (I) (where R is a lower alkyl, lower hydroxyalkyl,

als are cheap and plentiful. Perfumes and other additives are easily added in step (iii) to improve the appearance and taste of the final prod. The substitute tastes in use much the same as commercially available tobacco and is free from unpleasant aromas. 9.9.77 as 037744 (2pp990)

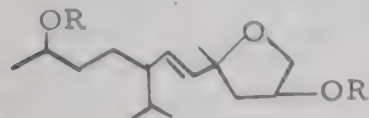
NISB D18 34355B/18 = J7 9037-135

Tetrahydrofuran derivs. - useful as flavourants for tobacco

JAPAN TOBACCO & SALT PUB 30.08.77-JA-103248

E13 P15 (13.11.79) *J54039-070 A24b-03/12 C07d-307/20

Tetrahydrofuran cpds. of formula (I) (where R is H or COCH₃) are novel.



(I) markedly improve the flavour and taste of tobacco and at the same time suppress irritation by tobacco smoke. (I) are added to tobacco in an amt. of about 0.0001-0.05 wt. %.

(I) can be prepd. by extracting conventional tobacco leaves with a pair organic solvent, concentrating the extract under reduced press., extracting the concentrate with a non-water sol. solvent, washing the extract with an alkaline soln. to obtain a solvent-soluble neutral portion, steam-distilling the neutral portion to obtain 10-200-fold (w/w) distilled water, saturating the distilled water with a neutral salt, extracting an essential oil component from a satd. distilled water with a non-water soluble solvent, and repeatedly subjecting the resulting solvent-soluble neutral portion to column chromatography until the fraction contains 5-30 wt. % of the cpds. (I). 30.8.77 as 103248 C07d-307/20, A24b-3/12 (13.11.79) JAPAN TOBACCO & SALT PUB (5pp)(J54039070)

KDFO = ★ D18 89044B/49 ★ SU -654-241
Preventing mould growth in tobacco leaves - includes treating with a 1:1000 aqueous solution of sodium benzoate followed by heating to improve storability

KRASD FOOD IND RES (MOLD=) 25.12.76-SU-435521

E12 P15 (30.03.79) A24b-15

The formation of mould on tobacco leaves during storage or processing by treating the leaves with an disinfectant and subsequently heating them.

Effectiveness is increased by using an aq. soln. of a salt of benzoic acid as the disinfectant, in a concentration of 1 in 1000, in an amt. = 0.1-5% of the weight of the tobacco. The treatment is done by spraying the soln. over a period of 1-5 secs. Heating is done at 40-100 °C.

Trubnikov V. F., Krymtseva I. M., Kogan I. S. et al.
Bul. 12/30.3.79 25.12.76 as 435521 (2pp29)

BADI D18 32262U/23 = US 4175-92

Depilating hides - with thioalkanols and calcium hydroxide

BASF AG 17.11.71-DT-157034

E17 (27.11.79) *DT2157-034 C14c-01/06

Drumming process for dehairing animal skin and hide is carried out in the presence of air in a liquor of 10-50 pts. wt. w.r.t. 100 pts. wt. raw hide. The liquor contains 1-2 pts. wt., w.r.t. 100 pts. wt. raw hide of an α- or β-mercaptoalkanol of 2-6C (I) and 2-4 pts. wt. w.r.t. 100 pts. wt. raw hide, of an alkali(ne earth) metal hydroxide (II).

Pref. (I) is mercaptoethanol or mercaptoisopropanol and (II) is Ca(OH)₂. Pref. the dehaired hides are limed and further treated to produce leather.

(I) are subsequently converted to thioether or disulphide cpds. which have no toxic or keratolytic action. 15.11.72 as 306671 (3pp393)

SETB D18 72205X/39 #US 4175-99

Adhesive for tobacco prods. - consisting of aq. gel contg. major proportion of gelatine, and plasticising vegetal gum or cellulose ether

SERVICE EXPL IND TABACS 05.05.75-FR-013922 (13.05.76-US-685750)

A97 P15 (27.11.79) *BE-841-472 C09j-03/02

Articles of the tobacco industry are glued using a glue which is in gel form at ambient temp. and is composed mainly of gelatine and water. The gelatine is present at 25-180% of the water weight and a minor amt. of plasticiser for the gelatine is present in aq. soln. The plasticiser belongs to the food polymer gp. of natural and modified vegetable gums and cellulose ethers. The plasticiser conc. is 0.25-8 wt. % w.r.t. the gelatine alone and is adjusted so that the temp. where the liquified gel viscosity remains >50 cPs and becomes <1000 cPs is 40-70 °C.

Pref. the plasticiser is Na alginate, carrageenate, guar gum, gum arabic, acetylated starch, Na CMC or galactomannic methyl-cellulose. The glue can be used on high speed machines for prodn. of cigarettes, cigars, filter tips, etc. 2.3.78 as 882764 (+26.1.78-US-872471) (4pp945)

SeeAlso

D23 J7 9036234

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

LORE/ ★ D21 87661B/49 ★DL-137-527
Viscose fibre reinforced plastics dentures - are mfd. by degassing doubling mass and plastics mash in vacuum filling and insulating cuvette and polymerising plastic
LORENZ S 05.07.78-DL-206513
A96 P32 (12.09.79) A61c-13

Dentures of fibre reinforced plastics material are mfd. in three successive stages in a doubling cuvette. In the first stage the doubling mass which is to be introduced into the cuvette composed of split halves is degassed in vacuum and the viscose fibre reinforced polymer and monomer containing mash is degassed in vacuum with simultaneous agitation until setting pt. is attained, the mash is then aerated and covered until ready for use.

In the second stage the split cuvette halves which are filled with the doubling mass are insulated by covering the teeth and the adjacent wax portions with "Stefanat Knetbar" (RTM), the doubling mass is coated with "Altisol" (RTM), and elastic foil sprayed with silicone oil is placed at the interface of the split cuvette halves. In the third stage, the closed cuvette is exposed briefly to the action of pressure, then opened for removal of the foil, finally the lower half of the cuvette supporting the model and the still soft denture body is polymerised in water at a temp. of from 26 to 28°C and pressure of six atmos.

Mfg. costs are lowered whilst accuracy and masticating load distribution are improved. 5. 7. 78 as 206513 (17pp536)

LORE/ ★ D21 87662B/49 ★DL-137-528
Dentures with fibre reinforced base - contg. statistically oriented viscose fibres in a non-porous polymerised plastic mass
LORENZ S 05.07.78-DL-206514
A96 P32 (12.09.79) A61c-13

Plastic tooth prothesis comprises plastic teeth set into a denture base consisting of a non-porous polymerised plastic mass contg. 15-25 wt. % statistically oriented viscose fibres with a titer of 1.6-5.6 tex and a length of 1.5-5 mm. The viscose fibres may be crimple and/or coloured with a substantive dye.

Pref. the moulding contains 600-900 viscose fibres. The dentures are pref. made from known 2:1 mixts. of polymethylmethacrylate denture base material and methacrylate monomer.

The fibres reinforce the dentures and render them less prone to breakage e.g. when dropped or when chewing tough foods. 5. 7. 78 as 206514 (7pp513)

LIED/ ★ D21 87673B/49 ★DL-137-573
Prod. of Maddrell's salt from sodium mono:phosphate - by very rapid heating, useful as polishing agent in tooth-paste
LIEDLOFF B 04.07.78-DL-206503
E34 (12.09.79) C01b-25/44

Prod. of Maddrell's salt (I) comprises mixing, tableting or granulating (a) a soln. of Na monophosphate (II) of Na:P ratio (0.96-0.995):1, contained at 20-85 (50-80)°C, with (b) powdered (I), prewarmed to 25-200(40-130)°C, in wt. ratio >2. The mixt. is then heated at a rate >50°C/min to 300-450(370-420)°C and then conditioned for 5-10 min.

(I) is esp. useful as a polishing agent in tooth pastes. The method is rapid and simple giving a prodn. of <2 wt. % Na trimetaphosphate content which contains no complex forming materials (soluble polyphosphates). 4. 7. 78 as 206503 (8pp1251)

WIDM/ ★ D21 87742B/49 ★DL-137-784
Lipid system contg. oil and ethoxylated surfactant - with mixt. of coco di:ethanolamide and glycerol, giving emulsions useful in cosmetics and pharmaceuticals
WIDMANN L 06.10.77-DL-201390
B07 (26.09.79) A61k-07/48

A lipid system contg. a vegetable, animal, paraffinic and/or synthetic oil and ethoxylated surfactants (pref. ethoxylated alky(phenol) also contains ≥3% of a mixt. of 80-95 wt. % coco fatty acid diethanolamide (I) and 20-5 wt. % glycerin.

When diluted with water these systems give highly dispersed emulsions suitable for prodn. of cosmetic and pharmaceutical prods. The mixt. contg. (I) and (II) are storage stable and can be used with any sort of oil. 6. 10. 77 as 201390 (6pp1251)

CUSI- D21 38369Y/22 = DS 2607-849
Glycol-based excipients for pharmaceutical compsns. and cosmetics - prepd. from glycols and fatty acids or fatty acid esters
LAB CUSI SA 13.11.75-ES-442603
A96 B07 (29.11.79) *DT2607-849 A61k-07 A61k-09/06 + A61k-31 C07c-29/24 C07c-31/18

Glycol-contg. gelled prepn. contains (a) 5-90% glycolic solvent; (b) 5-40% of 16-18C fatty acid or one of its esters with a polyol; (c) 0-16% of a softener; (d) 0-15% of an emulsifier; and (e) 0-20% of usual adjuvants.

The prepn. is produced by heating the ingredients to a temp. between room temp. and 75°C and cooling back to room temp. under stirring.

The prepn. can be used in human or veterinary medicine as an excipient, and to make skin pommades or lathers for the cosmetic industry. It is thick, well tolerated by the skin and can easily be poured into tubes and medicine bottles. 26. 2. 76 as 607849 (4pp997)

OREA D21 03895Y/03 = DS 2629-100
Prod. of aq. dispersions of lipid spherules - by forming lamellar phase from lipid and aq. phase for encapsulation then shaking with dispersing liq.

L'OREAL SA 30.06.75-FR-020456
A97 B07 (29.11.79) *BE-843-300 B01j-13/02

Dispersion of spherules comprises molecular layers of lipid cpds. enclosing an aq. phase. The lipids are non-ionic cpds. of formula XY (where X is a hydrophilic polyoxyethylene, polyglycerin or opt. oxyethylated polyester; and Y is a lipophilic gp.). The spherules are of 100-50000 Å dia.

The spherules are produced by mixing the cpds. XY and the aq. phase to be enclosed. The lipophilic:hydrophilic ratio of the lipids is chosen so that the lipid in the aq. phase is swollen to form a lamellar phase. An excess dispersant fluid is added and the mixt. stirred for 15 min. - 3 hrs. The wt. ratio of the to be enclosed aq. phase to the lamellae forming lipid(s) is 0.1-3. The working temp. is >melting temp. of the lipids.

The spherules may contain e.g. cosmetics, skin or hair-treating agents, synthetic suntan lotions, antiperspirants, dyes, pharmaceuticals, etc. 29. 6. 76 as 629100 (10pp913)

HOKK- ★ D21 87800B/49 ★DT 2822-021
Detergent compsns. for skin cleansing - contain gamma-oryzanol and surface-active amino acid
HOKKO YUSHI KK (TAKR) 19.05.78-DT-822021
E19 (29.11.79) A61k-07/40 C11d-01/10 C11d-03/48

Detergent compsns. contain γ-oxyzanol (I) in combination with a surface-active amino acid (II). (II) is suitably Na N-acyl-L-glutamate (IIa).

(I) forms a protective layer on the skin, has a curative effect on skin disorders and promotes subcutaneous blood circulation.

In an example, a cleansing cream comprises 32% (IIa), 1% myristic acid, 15% propylene glycol, 5% Na pyrrolidone-carboxylate, 7% coconut fatty acid diethanol-amide, 4% polyoxyethylene-stearyl N-lauroylglutamine di-ester ("Amiter LGS-5"), 6% polyoxyethylene-stearate + polyoxyethylene-stearyl ether ("Emalex 810" + Emalex 606"), 28% H₂O and 2% (I). 19.5.78 as 822021 (8pp367).

BERG ★ D21 878558/49 ★DT 2822-907
Indole prodn. from 1,2,3,4-tetrahydroquinoline - by thermal cleavage in the presence of steam in a packed reactor
BERGWERKSVERBAND GMBH 26.05.78-DT-822907
C03 E13 (D13 D23) (29.11.79) C07d-209/08

In a new process for the production of indole, 1, 2, 3, 4-tetrahydroquinoline (I) is subjected to thermal cleavage at 650-750°C (pref. 675-725°C) in a reactor filled with inert material in the presence of steam. Process give good yields of indole from the readily accessible starting material (I) (obtainable by selective hydrogenation of quinoline).

Indole is used in the perfume industry for fixing of fragrances. It is also used as a raw material for the plant growth regulator 3-indolylacetic acid, as well as for the essential amino acid tryptophan which is used as an animal feed additive. 26.5.78 as 822907 (7pp280).

WELA ★ D21 878968/49 ★DT 2823-243
Solid hair-straightening compsns. - contg. alkali metal hydroxide precursors and thickeners
WELLA AG 27.05.78-DT-823243
E12 (E33 E34) (29.11.79) A61k-07/09

Hair-straightening compsns. in solid form comprises (A) either (a) a combination of a Ca or Sr hydroxide or oxide and a Li, Na or K carbonate, bicarbonate, sulphate or phosphate, or (b) a Li, Na, or K alcoholate derived from a 1-5C aliphatic alcohol; (B) one or more thickeners; and opt. (C) conventional cosmetic additions.

The compsns. are easier to handle than gels or creams, are not hygroscopic like solid compsns. contg. free alkali metal hydroxide, and can be converted into active form (gel or cream) by adding water, which gradually releases the alkali metal hydroxide by chemical reaction. 27.5.78 as 823243 (12pp367).

YAMA- ★ D21 879398/49 ★DT 2920-163
Permanent wave preparation for warm setting - contg. thioglycolic acid, unbound ammonia, and a carbonate
YAMAHATSU SANGYO KA 19.05.78-JA-060501
E17 (E37) (29.11.79) A61k-07/09

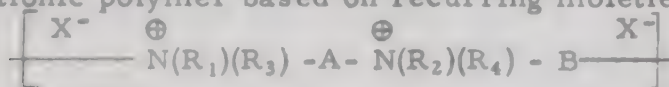
New permanent wave preparations contain (a) ca 0.03-0.06 mol thioglycolic acid, (b) ca 0.06-0.12 mol total ammonia content, (c) 0.01-0.06 mol unbound ammonia, and (d) ca 0.01-0.06 mol of a carbonate per 100ml of compsn. and have a pH value of ca 7.4-8.0 at 25°C.

New procedure for prodn. of a permanent wave comprises (a) application to the hair before, during and/or after curling a permanent wave preparation as defined above, (b) treatment of the hair for ca 5-30 mins. with an atmosphere supersatd. with moisture at ca 40-60°C, and (c) hardening of the hair by oxidn..

The compsn. gives waving over the entire length of the hair, but is not harmful to the skin of the hands or scalp. 18.5.79 as 920163 (52pp280).

OREA ★ D21 880038/49 ★FR 2417-981
Protective compsn. for treating the hair - contg. crosslinked poly(amino-amide and a specified cationic polymer
L'OREAL SA 27.02.79-FR-004983 (02.03.77-FR-006044)
A96 (A14) (26.10.79) A61k-07/06

The compsn. contains crosslinked polyamino-amide and cationic polymer based on recurring moieties of formula



In the formula X is a cosmetically acceptable cation and either (a) R₁ and R₂ are each 1-3C alkyl or hydroxyalkyl and R₃ and R₄ are each 1-3C alkyl; A is 2-20C alkylene, -CH₂)_n-O(CH₂)_n- in which n is 2 or 3, -CH₂-C₆H₄-CH₂- or -CH₂CH(OH)-CH₂-; and B is -(CH₂)_n-Z-(CH₂)_n- in which Z is 0 or -NHCONH-; or A is -(CH₂)_n-NHCONH-(CH₂)_n- and B is 2-20 Calkylene or (b) R₂=R₄=CH₃ and R₁=R₃ in

which case R₁ and R₃ can also be 4-8C alkyl or (c) R₂=R₄=R₁=CH₃ and R₃ is as (a) or is 4-12C alkyl, cyclohexyl or benzyl. In the case of (b) and (c) A and B are each 2-20C alkylene, -CH₂)_n-Z-(CH₂)_n-, -CH₂-C₆H₄-CH₂-, or -CH₂-CH(OH)CH₂-.

The compsn. is used for conditioning the hair. The use of the particular cationic polymers in the compsn. gives a protective effect to the hair against any possible degradation in subsequent treatment such as dyeing, bleaching and perming. 27.2.79 as 004983 Add to 2.3.77-004983 (+28.2.78-CA-297854)(47pp597)

MIEL D21 67205A/38 =GB 1557-047
Pretreatment for ceramic coating - by applying a base layer of zinc by electrodeposition; used for dentures
MIELE & CIE 09.03.77-DT-710122
L02 M11 P32 (05.12.79) *DT2710-122 C25d-13/20

Non-ferrous metal components are coated with a ceramic layer by applying a Zn coating to the components, then electrophoretically applying the ceramic coating. The oxygen liberated during the electrophoretic coating oxidises the Zn coating.

The thickness of the Zn coating is such that the timetable for the electrophoretic coating corresponds to the time taken for the oxygen to oxidise all the metallic Zn to ZnO, such that no Zn remains on the surface of the metal components. The termination of the application of the electrophoretic coating occurs simultaneously with the termination of the oxidn. of Zn. Pref. thickness of Zn coating is ≤ 1 mg./cm.²

The ceramic coating is applied uniformly and accurately in a rapid manner. The process is partic. useful in the mfr. of dentures. 27.2.78 as 007631 (3pp924)

JOHJ D21 43933Y/25 =GB 1557-263
Dental sealing compsn. - contg. bis-methacryloxy-hydroxypropyl-phenyl propane, opt. bis-phenol A dimethacrylate and triethylene glycol dimethacrylate
JOHNSON & JOHNSON 15.12.75-US-641002
A96 E14 +P32 (A14) (05.12.79) *DT2656-385 A61k-05/* +C08f-220/20

A compsn. for sealing pits and fissures in teeth is prepd. by dissolving a peroxide catalyst in a liq. polymerisable monomer material and adding an accelerator for the catalyst. The monomer material is ≥1 liq. polymerisable (meth)acrylate having a contact angle w.r.t. dry etched tooth surface of <10° at 25°C. and ambient humidity, and having a Brookfield viscosity of ≤1200 cP at 25°C.

Pref. the compsn. comprises 40-60 pts. wt. of 2,2-bis-[4(3-methacryloxy-2-hydroxypropyl)phenyl]-propane and 0-3 pts. wt. bis phenol-A dimethacrylate per 9 pts. of first cpd., 60-40 pts. wt. of triethylene glycol dimethacrylate, amts. of peroxide catalyst, and N,N-bis-(2-hydroxyethyl)-3,4-dimethylaniline as catalyst accelerator.

The compsns. prepd. provide a tenacious and long-retained protective film over the tooth surface. 14.12.76 as 052095 (11pp931)

NIOF ★ D21 88305B/49 ★J5 4138-129
Thermally stable gelatinous or creamy compsn. - useful as base e.g. for cosmetic or floor wax, contains polyoxyethylene cpds.
NIPPON OILS & FATS KK 17.04.78-JA-044121
A96 B07 G02 (A25 A82) (26.10.79) A61k-07

Gelatinous or creamy compsn. comprises (a) 10-40 w/w% cpd. of formula HO(C₂H₄O)_a(C₃H₆O)_b(C₂H₄O)_cH (I) (where a + b = 40-300, b = 30-80 and oxyethylene gp. is present a 30-90 w/w% of the ave. mol. wt. of (I)); (b) 2-30 w/w% polyoxyethylene cpd., other than (I) which has ave. mol. wt. 200-20000 and has oxyethylene gp. content 35-100 w/w% on the av. mol. wt. of the cpd. and (c) 40-85 w/w% water.

Gelatinous (transparent) or creamy (cloudy) compsn. is thermally stable and can be used as a base for gelatinous or creamy prods. such as medicines, cosmetics, deodoriser, aromatiser, ointment, floor wax, car wax, etc. 17.4.78 as 044121 (7pp5)

IGU-★ D21 88306B/49 ★J5 4138-130
Cysteine-contg. cosmetics - in which L-cysteine effect is realised before oxidn. to L-cystine

KIGUCHI YG 14.04.78-JA-044008
E16 (26.10.79) A61k-07

The cosmetics are prepd. by mixing L-cystein, its salt or its deriv., in water, cleansing cream, toilet lotion, milk lotion, cream, face pack, etc. and can be used for the preservation of the health of the skin and beauty culture.

The cosmetics activate SH-enzyme and show a curing effect on inflammations on the skin and allergic skin diseases. They normalise skin metabolism, dissolve horny substances formed on the skin through cornification, and can prevent ageing of the skin.

Pref. L-cysteine hydrochloride is used and at every application it is neutralised with sodium bicarbonate. The formed CO₂ gas makes the cosmetics foamy and gives a beautifying effect with L-cysteine. 14.4.78 as 044008 (5pp5)

CHI-★ D21 88307B/49 ★J5 4138-131
Cosmetic skin powder prepn. - from hydrochloric acid soln. of silk fibre

ICHIMARU BOEKI KK 19.04.78-JA-046036
A96 (26.10.79) A61k-07

The method comprises (a) adding 12 l aq. 1.2N HCl soln. to 2 kg of silk fibre (e.g. bleached rewinded silk thread dust, dil. alkali-treated rewinded silk thread dust, dilute alkali-treated spinned silk thread dust, etc.), (b) standing the mixt. in the water bath of 60-70°C for 24 hrs., (c) stirring the mixt. strongly for 30 mins., (d) filtering the mixt. through a Buchner funnel, (e) adding 20 pt. of water to 2 pt. of thus obtd. residue, (f) stirring the mixt. slowly, (g) removing floated dusts and foreign matters by decantation, (h) adding 5-6 times amt. on the ppt. of water to the clear liq., (i) standing the mixt. for ca. 12 hrs., (j) removing floated matters again through decantation, (k) sepg. water layer, (l) adding 5-6 times the amt. of water to the residue, (m) decanting the mixt. 2-3 times at pH 5.5-7.5 using aq. 2N NaOH soln., (n) filtering the mixt. under aspiration, (o) immersing the residue in ethanol for 2 hrs., (p) filtering it again under aspiration, (q) drying the residue and (r) pulverising the dry residue.

Excellent powder for cosmetic use can be prepd. inexpensively from waste silk material with high yield through the sample process. The obtd. powder has elegant glossiness, noble touch and pearl-like brightness specific to silk and can be used as a cosmetic base. It has excellent affinity for skin and humidity-retaining property. It is nontoxic and forms a thin protective film on skin and does not prevent the skin respiration and the secreting ability of skin. 19.4.78 as 046036 (5pp5)

CHI-★ D21 88308B/49 ★J5 4138-132
Skin cosmetic base - prepd. starting from aq. ethylene:di:amine-cupric hydroxide complex soln. and silk thread

ICHIMARU BOEKI KK 19.04.78-JA-046037
A96 (26.10.79) A61k-07

The method comprises (a) adding 600 pt. aq. ethylenediamine-cupric hydroxide soln. (obtd. by dissolving ethylenediamine 48 pt. and cupric hydroxide 36 pt. in 300 pt. of water and making it up to 600 pt. with water) to 60 pt. of plain boiled-off silk thread; (b) dissolving the thread with stirring, (c) adjusting pH of the soln. to 6.5-7.0 with acetic acid, (d) filtering the soln. through cotton plug to remove insolubles, (e) putting the filtrate in a cellulose tube C-65 (RTM Visking Co.), (f) dialysing the filtrate for 24-48 hrs. in water stream; (g) filtering dialysed soln. under aspiration; (h) adding water to make up the mixt. to 2400 pt.; (i) adding 80 pt. of the strongly acidic cation exchange resin (Dowex 50 wx-2) which is previously wetted remarkably, in it; (j) stirring the mixt., (k) filtering the mixt. under aspiration to remove the resin; (l) adding the mixed soln. composed of ethyleneglycol 2160 pt. and refined water 2640 pt. to thus obtd. ca. 2400 pt. of the filtrate; (m) adjusting pH of the mixed soln. to 4.0-4.5 with aq. 0.2N NaOH soln. and aq. 0.3M acetic acid soln.; (n) standing it for 24 hrs.; and (o) sterilising it in the water bath of 70-75°C for 3 hrs.

The cosmetic base has good long term stability silk-like glossiness and touch, can be prepd. The sol-type cosmetic base can be obtd. and the solubilised cosmetic base can be prepd. by regulating pH of the mixed soln. to 6.0-6.9 with aq. 2N NaOH soln. 19.4.78 as 046037 (6pp)

LIOY ★ D21 88309B/49 ★J5 4138-133
Hair cosmetic compsn. - contains a polypeptide, and a quat. nitrogen contg. cellulose ether cpd., giving a complex strongly adsorbed by hair

LION FAT & OIL KK 14.04.78-JA-043268
A96 (A11) (26.10.79) A61k-07/06

Hair cosmetic compsn. contains 0.1-30 wt. % of polypeptide of average mol. wt. 2000-30000 and 0.05-5 wt. % of quat. N-contg. cellulose-ether having quat. N content 0.5-3.5 wt. %, as the essential ingredients.

Polypeptide and quat. N-contg. cellulose-ether form a complex salt which can be strongly adsorbed on the surface of hair and is hardly washed out by rinsing with water, and proper water-holding properties can be given to hair. Thus with the hair cosmetic composition excellent hair-finishing effect that cannot be expected by conventional hair cosmetics, can be attained. 14.4.78 as 043268 (5pp5)

ISEH-★ D21 88310B/49 ★J5 4138-134
Fragrant nail enamel - prepd. by combining plasticiser, solvent and soft resin with perfume

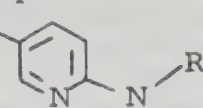
ISEHAN HONTEN KK 14.04.78-JA-043194
A96 (D23) (26.10.79) A61k-07/04

The nail varnish contains 0.3-10 wt. % perfume and is prepd. by combining a little odorous or odorless plasticiser, solvent which does not affect the aroma of the perfume and soft resin with the perfume.

Specifically phthalic acid ester or citric acid ester which are odorless are used as plasticiser iso-butylacetate and ethanol are used as the solvent. The soft resin e.g. acrylic resin, alkyd resin, etc. is used to supplement the plasticising effect. 14.4.78 as 043194 (2pp5)

KOEI ★ D21 88613B/49 ★J5 4139-930
Dye compsns. contg. di:amino:pyridine derivs. - used to dye hair black without causing irritation

KOEI CHEM IND KK 21.04.78-JA-049049
E13 (30.10.79) C09f-57

Dye compsns. include a diaminopyridine deriv. of formula (I):  (where R and R₁ are 1-4C alkyl gps) or their salts.

In an example, 1.921g of 2-dimethylamino-5-aminopyridine dihydrochloride and 1.350g of 2,6-dihydroxypyridine dihydrochloride are dissolved in 75 cc of water. The soln. is added with 25% aq. ammonia to produce a pH of 10 and then with 40 cc of 6% H₂O₂ and the mixt. is stirred thoroughly. The dye compsn. is applied to gray hair and kept at the body temp. or room temp. for 20 min. The hair is dyed into wettable and fast black. The dyed hair is rinsed with water, dried and subjected to discoloration test by exposing to sunlight in accordance with JIS L084-1974 as is found to be in class 3.

The fast black dyes for hair induce no irritation. 21.4.78 as 049049 (7pp59)

SNKM D21 00951Y/01 =J7 9036-791
Acrylic resin dental compsn. - contg. (meth)acrylate monomer or prepolymer, organic peroxide, tert. amine and L-ascorbic acid
SANKIN KOGYO KK 12.05.75-JA-057057
A96 (10.11.79) *J51132-687 +C08f-02/44 C08f-04/40 C08f-20/10

Dental compsn such as a dental resin compsn. or composite resin compsn. contains organic peroxide such as ketone peroxide, tert. amine such as triethylamine and L-ascorbic acid.

The dental resin compsn. consists of monomer or prepolymer of methacrylate and/or acrylate. The dental composite resin compsn. consists of a polymer binder of acrylate and/or methacrylate and inorganic powder such as quartz powder, aluminium oxide powder and silica powder.

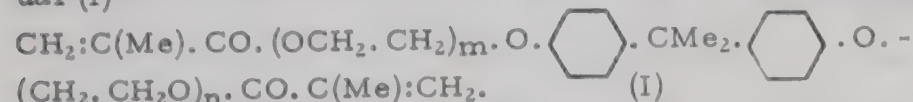
Compsn. has a long gel time but cures rapidly at prevailing in the mouth. 12.5.75 as 057057 C08f-20/10, 2/44, 4/40 (10.11.79) SANKIN KOGYO KK (5pp)(J51132687)

GCDE- D21 50642Y/29 = J7 9036-953
Resinous compns. for repair or construction of dental crowns - comprising modified bismethacryloxy ethoxy phenyl propane and polymethyl methacrylate

G-C DENTAC IND 15.12.75-JA-148406

A96 E14 +P32 (A14 A25) (12.11.79) *DT2656-847 +C08f-02/44 C08f-20/30

A paste of resinous material for construction and repair of dental crowns comprises a liq. component (A) of formula (I)



and a powder component (B) which is a polymeric methacrylic acid deriv. In (A) the average number of ethyleneoxide units (m+n) is 2.2-6.0.

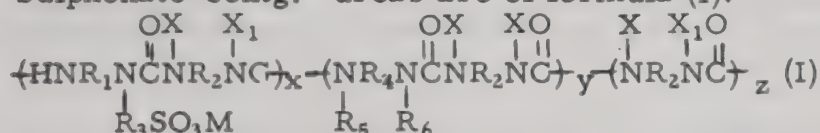
Component (A) is a modification of 2,2-bis(4-methacryloxyethoxyphenyl)-propane (I). (I) is regarded in dental technology as having excellent physical properties as a filling and crowning constituent and has been extensively used for this purpose. The disadvantage of (I) is that it must be liquefied before use by heating. A complicated apparatus and lengthy process are necessary when (I) is employed by the normal building-up technique. The cpd.(A) of the invention is already liq. and is therefore much easier to use. 15.12.75 as 148406 C08f-20/30 2/44 (12.11.79) G-C DENTAL IND (5pp)(J52072749)

HATS D21 63804A/36 = J7 9037-040
Sulphonate-contg. polyurea - used as antistatic agent, dye-fixing agent, flocking agent, light sensitive agent etc.

NHK SPRING KK 25.02.77-JA-019980

A26 C03 G02 (G03) (13.11.79) *DT2807-861 C08g-18/32

Sulphonate-contg. ureas are of formula (I):-



(where R_1 is a 2-17C divalent hydrocarbon, R_2 is a 4-29C divalent hydrocarbon or a polyester or polyether segment with an ave. mol. wt. ≥ 10000 , R_3 is $-\text{CHR}_d\text{CR}_c\text{R}_c'-\text{CR}_b\text{R}_b'\text{CR}_a\text{Ra}'-$ or $-\text{CHR}_c\text{CR}_b\text{R}_b'\text{CR}_a\text{Ra}'-$, $\text{R}_a, \text{R}_a', \text{R}_b, \text{R}_b', \text{R}_c, \text{R}_c'$ and R_d are H, 1-5C alky or any other monovalent gp. which is unreactive with isocyanates or amines, R_4 is as R_1 or forms with the neighbouring N atoms a piperidine or piperazine ring, R_5 and R_6 are a monovalent 1-16C hydrocarbon or together form a divalent C chain, X and X_1 are H or $-\text{CONH}-$ to form an amide, M is a cation and x, y and z are given by $x+y+z=1$, $0.1 \leq 10x/x+y+z \leq 100$ and $0 \leq 100z/z+y+z \leq 50$).

(I) is soluble in water or has hydrophilic properties, is ionisable and ionexchangeable, has surface activity, water absorption properties, antistatic properties, good dielectric characteristics, buffer effect, forms metal chelates, may be flocculated and is non-toxic. (I) may be used as an antistatic agent, dye fixing agent, flocking agent, sensitiser, light sensitive agent, in inks and paints, as an ion exchanger, chelate former, in adhesives, agricultural chemicals, cosmetics, as an oxidising or reducing agent etc. 25.2.77 as 019980 C08g-18/32 (13.11.79) NHK SPRING KK (25pp)(J53127596)

UNIL ★ D21 B/49 ★PT--68-518
Prod'n. of hair spray compns. - contg. polymeric drag-reducing agent

UNILEVER NV 06.09.78-PT-068518

A96 (15.11.79) A61k C08f

MIRA- ★ D21 B/49 ★RU--65-015
Nutrient night cream - based on lanolins and Hippophae rhamnoides extracts

MIRAJ INTR COSMETIC 19.02.75-RU-081447

(30.10.78) A61k-07/02

MIRA- ★ D21 B/49 ★RU--65-072
Hydrating emulsion restoring fat balance - contains lanolins, fats, sapropelic mud extract and distilled water

MIRAJ INTR COSMETIC 27.06.75-RU-089665

(30.10.78) A61k-07/48

MIRA- ★ D21 B/49 ★RU--65-
Skin toning and cleansing lotion - contains boric acid, salicylic acid, ethanol, therapeutic mud extract and distilled water

MIRAJ INTR COSMETIC 27.06.75-RU-089666

(30.10.78) A61k-07/06

MIRA- ★ D21 B/49 ★RU--65-
Skin toning lotion - based on lanolins, fats, therapeutic mud extract and distilled water

MIRAJ INTR COSMETIC 27.06.75-RU-089667

(30.10.78) A61k-07/48

MIRA- ★ D21 B/49 ★RU--65-
Hydrating emulsion restoring fat balance - contg. oils, fatty alcohols, cholesterol therapeutic mud extract and distilled water

MIRAJ INTR COSMETIC 27.06.75-RU-089691

A96 (30.10.78) A61k-07/48

MIRA- ★ D21 B/49 ★RU--65-
Tonic lotion restoring fat content - based on alcohol, lanolins, therapeutic and mineralised mud and distilled water

MIRAJ INTR COSMETIC 27.06.75-RU-089692

(30.10.78) A61k-07/48

MIRA- ★ D21 B/49 ★RU--65-
Beauty mask compsn. restoring fat content - based on cellulose polymer, modified pork fat, therapeutic mud extract and mineralised water

MIRAJ INTR COSMETIC 27.06.75-RU-089693

A96 (30.10.78) A61k-07/48

WARN D21 26559B/14 = US 4175-
Prosthetic denture - where lateral posterior prosthetic to locations can be altered to approximate patients residual gum ridge

WARNER-LAMBERT CO 21.09.77-US-835143

A96 P32 (27.11.79) *GB2004-466 A61c-13

A denture has a segmented hard base, each segment being rigid and being joined so as to allow relative lateral movements to each other; prosthetic teeth on the base; and a deflectable tray layer which moulds to the shape of the wearer's mouth. During the shaping the segments move relatively to align the teeth with ridges.

Pref. the segments are joined by portions of the deflectable tray layer. The layer pref. includes a portion extending across the base to provide a palatal vault for the maxillary denture. The teeth and base are pref. of acrylic and the layer is a thermo deflectable acrylic plastic. Accurate fitting is easily achieved. 21.9.77 as 835143 (See 376)

FORS- ★ D21 89129B/49 ★US 4175-3
Hollow fibre device contg. indicator or therapeutic agent - useful for diagnosis or treatment of dental diseases

FORSYTH DENTAL INF 26.10.77-US-845587

A96 B04 F01 P32 (A11 B07) (27.11.79) A61c-19/06

Capillary hollow fibre comprises a flexible semipermeable polymeric material e.g. cellulose acetate of outside dia. $\leq 500 \mu$ and of wall thickness 1-100 μ . The lumen of the fibre contains a known amount of an indicator-diagnostic agent. The indicator is an acid-base, oxidn.-redn., tooth-corrosive action or proteinaceous proteolytic-action indicator. The indicator gives diagnostic information as a chemical reaction with the prods. of localised diseases in the oral cavity. The indicator diffuses out of the fibre at a rate controlled by its permeability.

The fibre is suitable for diagnosis of dental diseases in the oral cavity. The fibre may contain therapeutic agents when treatment of dental diseases is required. 26.10.77 as 845587 (6pp1248)

JOHN- ★ D21 89163B/49 ★US 4175-4
High pH hair conditioning compns. - contg. mineral oil, fatty alcohol, nonionic emulsifier and poly-di:allyl-di:methyl-ammonium salts

JOHNSON PRODUCTS CO 22.07.77-US-818282

A96 P24 (27.11.79) A45d-07

Hair conditioning compsn. for use under highly alkaline conditions, consists of an aq. dispersion of (all by wt.) (a) 1-20% mineral oil (I); (b) 1-20% of a 12-18C fatty alcohol (II); (c) 1-15% of a non-ionic emulsifier (III); and (d) 0.05-20% of a quat. polymer having recurring units of formula (IV):

IGU-★ D21 88306B/49 ★ J5 4138-130
 Cysteine-contg. cosmetics - in which L-cysteine effect is realised before oxidn. to L-cystine
 KIGUCHI YG 14.04.78-JA-044008
 E16 (26.10.79) A61k-07

The cosmetics are prepd. by mixing L-cystein, its salt or its deriv., in water, cleansing cream, toilet lotion, milk lotion, cream, face pack, etc. and can be used for the preservation of the health of the skin and beauty culture.

The cosmetics activate SH-enzyme and show a curing effect on inflammations on the skin and allergic skin diseases. They normalise skin metabolism, dissolve horny substances formed on the skin through cornification, and can prevent ageing of the skin.

Pref. L-cysteine hydrochloride is used and at every application it is neutralised with sodium bicarbonate. The formed CO₂ gas makes the cosmetics foamy and gives a beautifying effect with L-cysteine. 14.4.78 as 044008 (5pp5)

CHI-★ D21 88307B/49 ★ J5 4138-131
 Cosmetic skin powder prepn. - from hydrochloric acid soln. of silk fibre

ICHIMARU BOEKI KK 19.04.78-JA-046036
 A96 (26.10.79) A61k-07

The method comprises (a) adding 12 l aq. 1.2N HCl soln. to 2 kg of silk fibre (e.g. bleached rewinded silk thread dust, dil. alkali-treated rewinded silk thread dust, dilute alkali-treated spinned silk thread dust, etc.), (b) standing the mixt. in the water bath of 60-70°C for 24 hrs., (c) stirring the mixt. strongly for 30 mins., (d) filtering the mixt. through a Buchner funnel, (e) adding 20 pt. of water to 2 pt. of thus obtd. residue, (f) stirring the mixt. slowly, (g) removing floated dusts and foreign matters by decantation, (h) adding 5-6 times amt. on the ppte. of water to the clear liq., (i) standing the mixt. for ca. 12 hrs., (j) removing floated matters again through decantation, (k) epg. water layer, (l) adding 5-6 times the amt. of water to the residue, (m) decanting the mixt. 2-3 times at pH 5.5-7.5 using aq. 2N NaOH soln., (n) filtering the mixt. under aspiration, (o) immersing the residue in ethanol for 2 hrs., (p) filtering it again under aspiration, (q) drying the residue and (r) pulverising the dry residue.

Excellent powder for cosmetic use can be prepd. inexpensively from waste silk material with high yield through the sample process. The obtd. powder has elegant glossiness, noble touch and pearl-like brightness specific to silk and can be used as a cosmetic base. It has excellent affinity for skin and humidity-retaining property. It is nontoxic and forms a thin protective film on skin and does not prevent the skin respiration and the secreting ability of skin. 19.4.78 as 046036 (5pp5)

CHI-★ D21 88308B/49 ★ J5 4138-132
 Skin cosmetic base - prepd. starting from aq. ethylene:di:amine-cupric hydroxide complex soln. and silk thread
 ICHIMARU BOEKI KK 19.04.78-JA-046037
 A96 (26.10.79) A61k-07

The method comprises (a) adding 600 pt. aq. ethylenediamine-cupric hydroxide soln. (obtd. by dissolving ethylenediamine 48 pt. and cupric hydroxide 36 pt. in 300 pt. of water and making it up to 600 pt. with water) to 60 pt. of plain boiled-off silk thread; (b) dissolving the thread with stirring, (c) adjusting pH of the soln. to 6.5-7.0 with acetic acid, (d) filtering the soln. through cotton plug to remove insolubles, (e) putting the filtrate in a cellulose tube C-65 (RTM Visking Co.), (f) dialysing the filtrate for 24-48 hrs. in water stream; (g) filtering dialysed soln. under aspiration; (h) adding water to make up the mixt. to 2400 pt.; (i) adding 80 pt. of the strongly acidic cation exchange resin (Dowex 50 wx-2) which is previously wetted remarkably, in it; (j) stirring the mixt., (k) filtering the mixt. under aspiration to remove the resin; (l) adding the mixed soln. composed of ethyleneglycol 2160 pt. and refined water 2640 pt. to thus obtd. ca. 2400 pt. of the filtrate; (m) adjusting pH of the mixed soln. to 4.0-4.5 with aq. 0.2N NaOH soln. and aq. 0.3M acetic acid soln.; (n) standing it for 24 hrs.; and (o) sterilising it in the water bath of 70-75°C for 3 hrs.

The cosmetic base has good long term stability silk-like glossiness and touch, can be prepd. The sol-type cosmetic base can be obtd. and the solubilised cosmetic base can be prepd. by regulating pH of the mixed soln. to 6.0-6.9 with aq. 2N NaOH soln. 19.4.78 as 046037 (6pp)

LIOY ★ D21 88309B/49 ★ J5 4138-133
 Hair cosmetic compsn. - contains a polypeptide, and a quat. nitrogen contg. cellulose ether cpd., giving a complex strongly adsorbed by hair

LION FAT & OIL KK 14.04.78-JA-043268
 A96 (A11) (26.10.79) A61k-07/06

Hair cosmetic compsn. contains 0.1-30 wt. % of polypeptide of average mol. wt. 2000-30000 and 0.05-5 wt. % of quat. N-contg. cellulose-ether having quat. N content 0.5-3.5 wt. %, as the essential ingredients.

Polypeptide and quat. N-contg. cellulose-ether form a complex salt which can be strongly adsorbed on the surface of hair and is hardly washed out by rinsing with water, and proper water-holding properties can be given to hair. Thus with the hair cosmetic composition excellent hair-finishing effect that cannot be expected by conventional hair cosmetics, can be attained. 14.4.78 as 043268 (5pp5)

ISEH-★ D21 88310B/49 ★ J5 4138-134
 Fragrant nail enamel - prepd. by combining plasticiser, solvent and soft resin with perfume

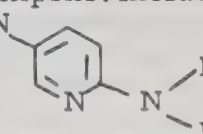
ISEHAN HONTEN KK 14.04.78-JA-043194
 A96 (D23) (26.10.79) A61k-07/04

The nail varnish contains 0.3-10 wt. % perfume and is prepd. by combining a little odorous or odorless plasticiser, solvent which does not affect the aroma of the perfume and soft resin with the perfume.

Specifically phthalic acid ester or citric acid ester which are odorless are used as plasticiser iso-butylacetate and ethanol are used as the solvent. The soft resin e.g. acrylic resin, alkyd resin, etc. is used to supplement the plasticising effect. 14.4.78 as 043194 (2pp5)

KOEI ★ D21 88613B/49 ★ J5 4139-930
 Dye compsns. contg. di:amino:pyridine derivs. - used to dye hair black without causing irritation

KOEI CHEM IND KK 21.04.78-JA-049049
 E13 (30.10.79) C09f-57

Dye compsns. include a diaminopyridine deriv. of formula (I):  (where R and R₁ are 1-4C alkyl gps) or their salts.

In an example, 1.921g of 2-di-methylamino-5-aminopyridine dihydrochloride and 1.350g of 2,6-dihydroxypyridine dihydrochloride are dissolved in 75 cc of water. The soln. is added with 25% aq. ammonia to produce a pH of 10 and then with 40 cc of 6% H₂O₂ and the mixt. is stirred thoroughly. The dye compsn. is applied to gray hair and kept at the body temp. or room temp. for 20 min. The hair is dyed into wettable and fast black. The dyed hair is rinsed with water, dried and subjected to discoloration test by exposing to sunlight in accordance with JIS L084-1974 as is found to be in class 3.

The fast black dyes for hair induce no irritation. 21.4.78 as 049049 (7pp59)

SNKM D21 00951Y/01 = J7 9036-791
 Acrylic resin dental compsn. - contg. (meth)acrylate monomer or prepolymer, organic peroxide, tert. amine and L-ascorbic acid
 SANKIN KOGYO KK 12.05.75-JA-057057
 A96 (10.11.79) *J51132-687 + C08f-02/44 C08f-04/40 C08f-20/10

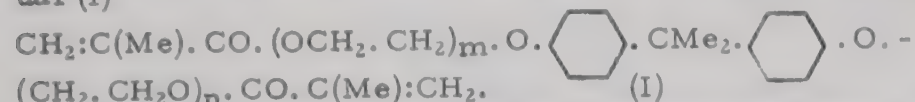
Dental compsn such as a dental resin compsn. or composite resin compsn. contains organic peroxide such as ketone peroxide, tert. amine such as triethylamine and L-ascorbic acid.

The dental resin compsn. consists of monomer or prepolymer of methacrylate and/or acrylate. The dental composite resin compsn. consists of a polymer binder of acrylate and/or methacrylate and inorganic powder such as quartz powder, aluminium oxide powder and silica powder.

Compsn. has a long gel time but cures rapidly at prevailing in the mouth. 12.5.75 as 057057 C08f-20/10, 2/44, 4/40 (10.11.79) SANKIN KOGYO KK (5pp)(J51132687)

GCDE- D21 50642Y/29 = J7 9036-953
Resinous compsns. for repair or construction of dental crowns - comprising modified bismethacryloxy ethoxy phenyl propane and polymethyl methacrylate
G-C DENTAC IND 15.12.75-JA-148406
A96 E14 +P32 (A14 A25) (12.11.79) *DT2656-847 +C08f-02/44 C08f-20/30

A paste of resinous material for construction and repair of dental crowns comprises a liq. component (A) of formula (I)



and a powder component (B) which is a polymeric methacrylic acid deriv. In (A) the average number of ethyleneoxide units (m+n) is 2.2-6.0.

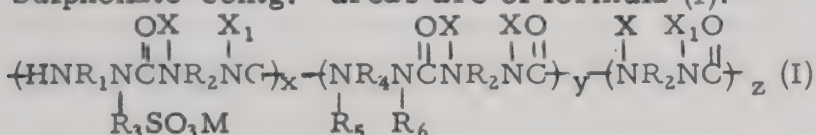
Component (A) is a modification of 2,2-bis(4-methacryloxyethoxyphenyl)-propane (I). (I) is regarded in dental technology as having excellent physical properties as a filling and crowning constituent and has been extensively used for this purpose. The disadvantage of (I) is that it must be liquefied before use by heating. A complicated apparatus and lengthy process are necessary when (I) is employed by the normal building-up technique. The cpd.(A) of the invention is already liq. and is therefore much easier to use. 15.12.75 as 148406 C08f-20/30 2/44 (12.11.79) G-C DENTAL IND (5pp)(J52072749)

HATS D21 63804A/36 = J7 9037-040
Sulphonate-contg. polyurea - used as antistatic agent, dye-fixing agent, flocking agent, light sensitive agent etc.

NHK SPRING KK 25.02.77-JA-019980

A26 C03 G02 (G03) (13.11.79) *DT2807-861 C08g-18/32

Sulphonate-contg. ureas are of formula (I):-



(where R_1 is a 2-17C divalent hydrocarbon, R_2 is a 4-29C divalent hydrocarbon or a polyester or polyether segment with an ave. mol. wt. ≥ 10000 , R_3 is $-\text{CHR}_d\text{CR}_c\text{R}_c'-\text{CR}_b\text{R}_b'\text{CR}_a\text{Ra}'-$ or $-\text{CHRCR}_b\text{R}_b'\text{CR}_a\text{Ra}'-$, $R_a, R_a', R_b, R_b', R_c, R_c'$ and R_d are H, 1-5C alky or any other monovalent gp. which is unreactive with isocyanates or amines, R_4 is as R_1 or forms with the neighbouring N atoms a piperidine or piperazine ring, R_5 and R_6 are a monovalent 1-16C hydrocarbon or together form a divalent C chain, X and X_1 are H or $-\text{CONH}-$ to form an amide, M is a cation and x, y and z are given by $x+y+z=1$, $0.1 \leq 10x/x+y+z \leq 100$ and $0 \leq 100z/z+y+z \leq 50$).

(I) is soluble in water or has hydrophilic properties, is ionisable and ionexchangeable, has surface activity, water absorption properties, antistatic properties, good dielectric characteristics, buffer effect, forms metal chelates, may be flocculated and is non-toxic. (I) may be used as an antistatic agent, dye fixing agent, flocking agent, sensitiser, light sensitive agent, in inks and paints, as an ion exchanger, chelate former, in adhesives, agricultural chemicals, cosmetics, as an oxidising or reducing agent etc. 25.2.77 as 019980 C08g-18/32 (13.11.79) NHK SPRING KK (25pp)(J53127596)

UNIL ★ D21 B/49 ★ PT--68-518
Prod'n. of hair spray compsns. - contg. polymeric drag-reducing agent

UNILEVER NV 06.09.78-PT-068518

A96 (15.11.79) A61k C081

MIRA- ★ D21 B/49 ★ RU--65-015
Nutrient night cream - based on lanolins and Hippophae rhamnoides extracts

MIRAJ INTR COSMETIC 19.02.75-RU-081447

(30.10.78) A61k-07/02

MIRA- ★ D21 B/49 ★ RU--65-072
Hydrating emulsion restoring fat balance - contains lanolins, fats, sapropelic mud extract and distilled water

MIRAJ INTR COSMETIC 27.06.75-RU-089665

(30.10.78) A61k-07/48

MIRA- ★ D21 B/49 ★ RU--65-
Skin toning and cleansing lotion - contains boric acid, salicylic acid, ethanol, therapeutic mud extract and distilled water

MIRAJ INTR COSMETIC 27.06.75-RU-089666

(30.10.78) A61k-07 06

MIRA- ★ D21 B/49 ★ RU--65-
Skin toning lotion - based on lanolins, fats, therapeutic mud extract and distilled water

MIRAJ INTR COSMETIC 27.06.75-RU-089667

(30.10.78) A61k-07/48

MIRA- ★ D21 B/49 ★ RU--65-
Hydrating emulsion restoring fat balance - contg. oils, fatty alcohols, cholesterol therapeutic mud extract and distilled water

MIRAJ INTR COSMETIC 27.06.75-RU-089691

A96 (30.10.78) A61k-07/48

MIRA- ★ D21 B/49 ★ RU--65-
Tonic lotion restoring fat content - based on alcohol, lanolins, therapeutic and mineralised mud and distilled water

MIRAJ INTR COSMETIC 27.06.75-RU-089692

(30.10.78) A61k-07/48

MIRA- ★ D21 B/49 ★ RU--65-
Beauty mask compsn. restoring fat content - based on cellulose polymer, modified pork fat, therapeutic mud extract and mineralised water

MIRAJ INTR COSMETIC 27.06.75-RU-089693

A96 (30.10.78) A61k-07/48

WARN D21 26559B/14 = US 4175-3
Prosthetic denture - where lateral posterior prosthetic tooth locations can be altered to approximate patients residual gum ridges

WARNER-LAMBERT CO 21.09.77-US-835143

A96 P32 (27.11.79) *GB2004-466 A61c-13

A denture has a segmented hard base, each segment being rigid and being joined so as to allow relative lateral movements to each other; prosthetic teeth on the base; and a deflectable tray layer which moulds to the shape of the wearer's mouth. During the shaping the segments move relatively to align the teeth with ridges.

Pref. the segments are joined by portions of the deflectable tray layer. The layer pref. includes a portion extending across the base to provide a palatal vault for the maxillary denture. The teeth and base are pref. of acrylic and the layer is a thermo deflectable acrylic plastic. Accurate fitting is easily achieved. 21.9.77 as 835143 (9pp1376)

FORS- ★ D21 89129B/49 ★ US 4175-3
Hollow fibre device config. indicator or therapeutic agent - useful for diagnosis or treatment of dental diseases

FORSYTH DENTAL INF 26.10.77-US-845587

A96 B04 F01 P32 (A11 B07) (27.11.79) A61c-19/06

Capillary hollow fibre comprises a flexible semipermeable polymeric material e.g. cellulose acetate of outside dia. $\leq 500 \mu$ and of wall thickness 1-100 μ . The lumen of the fibre contains a known amount of an indicator-diagnostic agent. The indicator is an acid-base, oxidn.-redn., tooth-corrosive action or proteinaceous proteolytic-action indicator. The indicator gives diagnostic information after chemical reaction with the prods. of localised diseases in the oral cavity. The indicator diffuses out of the fibre at a rate controlled by its permeability.

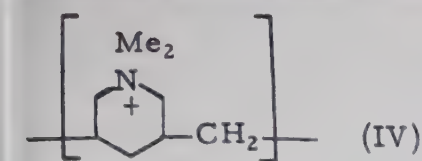
The fibre is suitable for diagnosis of dental diseases in the oral cavity. The fibre may contain therapeutic agents when treatment of dental diseases is required. 26.10.77 as 845587 (6pp1248)

JOHN- ★ D21 89163B/49 ★ US 4175-5
High ph hair conditioning compsns. - contg. mineral oil, fatty alcohol, nonionic emulsifier and poly-di-allyl-di-methyl-ammonium salts

JOHNSON PRODUCTS CO 22.07.77-US-818282

A96 P24 (27.11.79) A45d-07

Hair conditioning compsn. for use under highly alkaline conditions, consists of an aq. dispersion of (all by wt.): (a) 1-20% mineral oil (I); (b) 1-20% of a 12-18C fatty alcohol (II); (c) 1-15% of a non-ionic emulsifier (III); and (d) 0.05-20% of a quat. polymer having recurring units of formula (IV):



(IV) are highly effective in conditioning, and straightening or waving hair at alkaline pH. The compsns. are safe and effective.

Prefd. compsns. contain (all by wt.) 3-7% (I), 8-12% (II), 1-20% (III), and 3-5% (IV), and have pH 12-13. (IV) may also be a copolymer of (IV) (<50%) and vinyl cpds. (III) is pref. Emulsifying Wax NF. 22.7.77 as 818282 (4pp478).

UOHJ ★ D21 89212B/49 ★ US 4175-953
Non-precious dental alloy - contg. chromium, cobalt, nickel, molybdenum, boron, silicon and manganese

JOHNSON & JOHNSON 29.06.78-US-920430

M26 (27.11.79) C22c-19/05 C22c-30

A dental alloy, of good polishability and useful in fabrication of dental prosthetic devices such as crowns and bridges, which have a bonded porcelain covering, has the compsn. (by wt.) 13-25% Cr, 20-40% Ni, 3-7.5% Mo, 0.2-1% B, 2.75-5% Si, <5% Mn and 30-60% Co.

A dental construction is prepd. by (a) casting a metal core of the alloy, (b) applying to the core surfaces a porcelain having coeffts. of expansion of $10-21 \times 10^{-6}$ in./in./°C. and (c) firing the porcelain onto the core.

The alloy has improved castability, strength, hardness, and ductility, and can be melted with a natural gas-oxygen torch. 29.6.78 as 920430 (8pp935)

ALBE ★ D21 89318B/49 ★ US 4176-176
Hair shampoos and cleansers - contg. quat. ammonium detergent, and hydrophobic lipophobic per-fluoro cpd.

ALBERTO CULVER CO 31.05.74-US-474955

E19 (27.11.79) A61k-07/06

Liq. or paste shampoo contains: (a) an H₂O-carrier; (b) a non-perfluorinated H₂O-soluble quat. NH₄ detergent (I); and (c) 0.5-2% of an anionic, cationic, non-ionic or amphoteric hydrophobic-lipophobic cpd. CF₃(CF₂)_x-(CH₂)_y-Z (II) (amt. < amt. of (I)). In (II) Z is a water-solubilising or oil-solubilising gp.; n = 2-17; and y = 0-4. Prefd. (II) have x = 7-11, and Z is typically sulphonic, sulphate, phosphate, amide (opt. alkyl substd.), sulphonamido, carboxylic, quat. NH₄, betaine, etc.

Shampoos contg. (II) are not only as effective as conventional shampoos, but also reduce the excess flow of the sebum or sebaceous secretions from treated hair.

31.5.74. as 474955 (5pp)

See Also

D16 FR 2417979

D22 GB 1557225

D23 J7 9036657

D25 DS 2705047

D22: BANDAGES; DRESSINGS

ATER ★ D22 87592B/49 ★ BE -876-680
Aralkyl and aryloxy-alkyl di:alkyl phosphonate(s) - antiviral agents used topically and as disinfectants

STERLING DRUG INC 05.06.78-US-912502

B05 C01 (30.11.79) A61k C07f

Aralkyl and aryloxyalkylphosphonates of formulae
Ar-Y-PO(OR)₂ (I) and Ar-Y-CH-PO(OR)₂

R₁ (II) are new.

where Ar = phenyl opt. substd. by 1 or 2 halo, 1-4C alkoxy, hydroxy, 1-4C alkanoyloxy, 2-4C carbalkoxy, carbamyl or carboxy gps.; Y in (I) = -(CH₂)_n- or -O-(CH₂)_n- and Y in (II) = -(CH₂)_m- or -O-(CH₂)_m-; n = 6-8; m = 3-10; R = 1-6C alkyl and R₁ = 2-4C carbalkoxy or alkanoyl).

Antivirals used to treat surfaces etc. and infected animals. In vitro tests against Herpes simplex types 1 and 2 and various RNA viruses show that the cpds. have MIC of 0.4-25 µg/ml. The cpds. are formulated by classical methods to give compsns. (sprays, aerosols, solns., ointments, creams, etc) to treat surfaces and for local (topical) application in medical and veterinary uses. 31.5.79 as 876690 (19pp395).

PESQ- ★ D22 B/49 ★ BR 7901-868

slow-releasing insecticidal compsns. - for air purification

INST PESQUISAS MARI 28.03.79-BR-001868

C03 (20.11.79) A01n-17

DELM ★ D22 87615B/49 ★ CA 1066-614
Germicidal and bactericidal compsn. - prepd. by gently mixing and mildly heating iodine and powdered polyvinyl-pyrrolidone

DELMAR CHEM LTD 29.12.75-GB-052982

A97 E36 (A14) (20.11.79) A01n-17/08 C07c-19/07

Elemental iodine and a powdered polyvinyl-pyrrolidone having a moisture content of 5-15 (pref. 8-12) wt. % are mixed and heated to 30-70 (pref. 50-70, esp. 60-70)°C during or after mixing. Pref. the polymer is poly-1-vinyl-2-pyrrolidone.

Mixing may be carried out over 4-6 hrs, the total reaction time being 14-18 hrs. and the prod. having an available iodine/iodide ion ratio of 1.9-2.5. A heated rotating vessel can be used for the mixing, mechanical mixing aids such as paddles generally being unnecessary. 23.12.76 as 268652 (8pp558)

SQUI D22 10351T/07 = DS 2124-451
Enzyme-inhibiting peptides - useful as hypotensives

SQUIBB & SONS INC 28.07.70-US-058686

B04 E16 P34 (E13) (29.11.79) *NL7108-452 A61k-37/02 C07c-103/52

Pyroglutamyl-asparaginyl-tryptophyl-prolyl-histidyl-prolyl-glutamyl-isoleucyl-prolyl-proline (I), pyroglutamyl-seryl-tryptophyl-prolyl-glycyl-prolyl-asparaginyl-isoleucyl-prolyl-proline (II), pyroglutamyl-asparaginyl-tryptophyl-prolyl-arginyl-prolyl-glutamyl-isoleucyl-prolyl-proline (III) and pyroglutamyl-tryptophyl-prolyl-arginyl-prolyl-glutamyl-isoleucyl-prolyl-proline (IV) are new.

Peptides (I)-(IV) are used specifically for combatting high pressure and may be applied in the form of their acid addn. salts, e.g. of hydrochlorid- or hydrobromic acid. They may be applied orally or parenterally together with carrier. 17.5.71 as 124451 (3pp936)

RUHL D22 78529A/44 = DS 2717-537
Sterilisable inner bag for surgical suture material - with slotted paper carrier, information top label and seam welded plastic container

DR RUHLAND NACHF (RUHL-) 20.04.77-DT-717537

P34 (29.11.79) *DT2717-537 A61l-17/02

A sterilisable inner envelope for surgical stitching materials includes an envelope of transparent film and a holder for the thread. The film envelope with the thread holder are formed, and an information ticket is arranged in the envelope in such a way that simultaneous tearing off of the top of the envelope and of the ticket from the thread holder is made possible.

Thus, whilst the envelope is still sealed, the information relative to the material contained, the type of needle and the length and strength of the thread, can be gathered; the envelope being then quickly opened and the thread removed without entanglement. 20.4.77 as 717537 (5pp1045)

HENK ★ D22 87832B/49 ★ DT 2822-608
Hand disinfecting solns. for use before operating - contain 2,4,4'-tri:chloro-2-hydroxy di:phenyl ether, ethanol, isopropanol and water

HENKEL KG AUF AKTIEN 24.05.78-DT-822608

E14 P34 (29.11.79) A61l-13

Solns. contg. 0.5-1.5 wt. % 2,4,4'-trichloro-2'-hydroxy-diphenyl ether (I), 40-50 wt. % ethanol, 20-30 wt. % isopropanol and the remainder water are used to disinfect the hands before putting on operating gloves. The residual bacterial count is very much reduced compared with

known solns., 24.5.78 as 822608 (5pp903).

NUKE ★ D22 87874B/49 ★DT 2823-115
Deodorisation of sulphurous and nitrogenous gas - from plant for processing vegetable and animal prods.; uses acid, chlorite and alkali scrubbing stages

NUKEM NUCLEAR-CHEM GMBH 26.05.78-DT-823115
E36 J01 (29.11.79) B01d-53/34

Purificn. of foul-smelling sulphurous and/or nitrogenous waste gases from plants for processing vegetable and animal prods. involves treatment with alkaline(ne earth) chloride soln. at pH 1-5, the gases being scrubbed with an acid at pH 1-5 before and with an alkali soln. at pH 6-14 after treatment with the chlorite soln..

The process is useful for deodorising waste gases from fish meal factories, carcass disposal plants, intensive animal units, clarification plants and food factories. It is simple and economical and avoids the liberation of ClO_2 , Cl_2 and chloramine, whilst NaClO_2 , HCl and alkali are saved. 26.5.78 as 823115 (6pp016).

STER= D22 51887B/28 #GB 1556-962
Gaseous formaldehyde recovery from aq. soln. - by extn. with alcohol, azeotropically rectifying the extract soln. with a hydrocarbon, and heating the prod.

STERLITAMAK PETROCH 12.11.77-JA-136143 (10.11.77-GB-046805)

A41 E17 (05.12.79) = J54070-209 C07c-45/24 + C07c-43/30

Formaldehyde is recovered from an aq. formaldehyde soln. as a semiformal by extracting the soln. with a $\geq 4\text{C}$ alcohol to obtain an alcoholic extract soln. and a raffinate soln.

Water is removed from the extract soln. by azeotropic rectification in the presence of ≥ 1 4-6C hydrocarbon. The dried extract soln. is heated to the b.pt. of the alcohol to evolve gaseous formaldehyde which is reacted with ≥ 1 2-3 C alcohol to form the semiformal alcohol. The raffinate soln. is extracted with ≥ 1 4-6C hydrocarbon to recover the $\geq 4\text{C}$ alcohol.

The process is esp. used for the concn. of dil. aq. solns. of formaldehyde resulting from the synthesis of 4, 4-dimethyldioxane-1, 3 from isobutylene and formaldehyde, in the prodn. of isoprene by the Prince reaction. 10.11.77 as 046805 (6pp931)

HANR/ D22 65660A/37 =GB 1557-140
Protective garment with moulded-on cushions - has hydrokinetic characteristics, and is applicable both clinically and as sports wear

HAI-RAHAN JR 04.03.77-US-774377

A83 F07 P21 P32 (A86 A96) (05.12.79) *DT2809-009 A41d-13 A61f-13

Body-protecting pad comprises an integrally-moulded foam pad on the external surface of a fabric sleeve and at least partially penetrating the sleeve.

Pref. the sleeve is a terry knit having internal terry loops of hydrophobic yarn and an external surface at least partially comprised of hydrophilic yarn. The foam pad is pref. hydrophilic. Pref. the hydrophobic yarn is acrylic and the external surface is of cotton and nylon. The foam pad is pref. of polyurethane.

The pad can be used for protective wear in sports or for application to heels or elbows of bed-ridden patients to prevent bed sores. 27.2.78 as 007772 (7pp393)

CUXS- ★ D22 88057B/49 ★GB 1557-168
Surgical dressing for finger - with absorbent pad on deformable non-resilient backing sheet holding pad in place when deformed

CUXSON GERRARD & CO 19.07.75-GB-030334

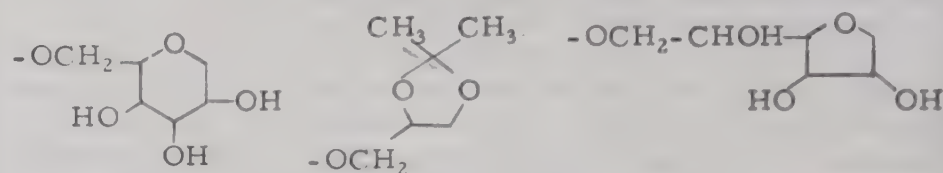
P32 (05.12.79) A61f-13/04

A dressing, comprises an absorbent pad reinforced by a backing of deformable non-resilient preformed sheet of stiffness such that it can be shaped by hand around the finger and then remain shaped without additional restraint. Sheet and pad are held together by being enclosed in a flexible pervious envelope.

The backing may be of perforated aluminium sheet or may consist of two or more deformable non-resilient mesh sheets. The dressing can also serve as a temporary split. 19.7.76 (3pp1358)

KAOS D22 09712Y/06 =GB 1557-225
Vinyl sulphoxide and sulphone derivs of allyl alcohol and acrylic acid - antimicrobials, prepd. by oxidising thio cpds. with peroxides
KAO SOAP KK 11.07.75-JA-084946 (10.07.75-JA-084707)
B05 C03 E19 (D21) (05.12.79) *DT2630-947 A01n-09/14 C07c-147 C07d-309/10 + A61k-31/10 C07d-317/24

Sulphinyl cpds. of formula $\text{RSO}-\text{CH}=\text{CHX}$ (I) are new. R is 1-20C alk(en)yl or aryl; and X is COY; Y is (a) $\text{O}(\text{CH}_2\text{CH}_2\text{O})_m\text{H}$ (where m is 0-12); (b) OM, where M is alkali(ne earth) metal or NH_4 ; (c) $\text{O}(\text{CH}_2\text{CH}_2\text{O})_m\text{R}_1$ (where R_1 is 1-20C alkyl; (d) an alkoxy gp. derived from a polyhydric aliphatic alcohol or a gp. of formulae (II)-(IV); or (e) NR_2R_3 , where R_2 is H, alkyl, or lower hydroxyalkyl,



and R_3 is H, alkyl or lower alkyl substd. by OH or SO_3M_1 (where M_1 is alkali metal).

(I) are used as germicides and sterilisers for non-medical use, and as antifungal agents and antiseptics. They are used as additives in cutting oils, detergents, cosmetic preps., paints, textile finishing agents, etc. They are active against Gram-positive and negative organisms. 1.7.76 as 027466 (56pp997)

COLG D22 11206Y/07 =GB 1557-273
Reinforced throw away babys nappy - with absorbent assembly between support sheets

COLGATE PALMOLIVE CO 08.10.75-US-620733

P21 + P32 (05.12.79) *BE-846-949 A41b-13/02

Disposable diaper comprises (a) an absorbent pad assembly including a sheet of flexible fluid impervious material covering a surface of an absorbent pad; (b) a tape fastener comprising pressure-sensitive adhesive tape strip having a section secured to an outer surface of the sheet with a portion of the tape strip extending beyond one side edge of the pad assembly and (c) adhesive means bonding the sheet to the pad in a region (I) beyond the area covered by the tape strip to a location spaced from the area in a direction in alignment with the length of tape strip and directed from the side edge towards a central lateral part of the pad assembly.

(I) includes a portion extending from the width of the strip section and is sufficiently satd. with (c) to minimise tearing of the pad assembly in the region when using the diaper. 27.9.76 as 039998 (6pp393)

BATE/ ★ D22 88076B/49 ★GB 2021-417
Air conditioning device supported on an electric light bulb - for vaporising deodorisers, insecticides, bactericides etc.

BATES W J 29.05.79-GB-018713 (11.04.78-GB-014237)

C03 E14 P34 (05.12.79) A61l-09/02

Device comprises a heat resistant support for connection to, or contact with, an electric bulb, and a reservoir for air-conditioning agent (I) that is volatilised on exposure to the heat from the bulb.

The device is used to condition an atmosphere in a controlled and prolonged manner. (I) includes deodorising agents, bactericides, fungicides, insecticides and disinfecting agents.

The device pref. has the support in the form of a clip having flexible prongs which grip the bulb. Pref. the support is an absorbent material and serves as a reservoir. Suitably the support locates on the metal bayonet of the bulb, or is a cylinder that fits over the neck of the bulb. Suitably the support is made of a porous synthetic fibre, an aluminium silicate chaina clay fibre prod. or asbestos. 29.5.79 as 018713 (4pp1248)

HISM ★ D22 88302B/49 ★J5 4138-124
Cataplasm with improved elasticity, adhesiveness and tackiness - comprising a-b-a type non-vulcanised elastic block polymer

HISAMITSU PHARM KK 19.04.78-JA-048198

A96 B07 (A12 A13) (26.10.79) A61k-09/70

Anovel cataplasm which comprises A-B-A type of non-vulcanised elastic block polymer as a base component. The

cataplast has improved elasticity, adhesiveness, tackiness or peeling properties.

The cataplast can be prepd. by dissolving a A-B-A type of non-vulcanised elastic block polymer in an oily substance at a high temp., adding a pharmaceutical cpd., applying the mixt. to a supporting material and solidifying the cataplast upon cooling to room temp.

Examples of the block A are non-elastic polymers of styrene or methylstyrene, having an av. mol. wt. of 2,000-10,000. Examples of the block B are elastic polymers of butadiene or isoprene, having an av. mol. wt. of 15,000-1,000,000, pref. 15,000-250,000. Suitable oily substances include olive oil, almond oil, camellia oil, peanut oil, sesame oil, soy bean oil, cotton seed oil, corn oil, sunflower oil, coconut oil, castor oil, oleic acid and liq. paraffin. As a pharmaceutical cpd., methyl salicylate, glycol salicylate, salicylic acid, menthol, peppermint oil, camphor, thymol, acrinol, benzyl nicotinate, red pepper extract, capsaicin, ibuprofen, indomethacin, alclofenac, ketoprofen, fenoprofen, corticosteroids, etc. can be used. Pref. wt. ratio of the polymer, the oily substance and the pharmaceutical cpd. is 15-25:60-80:5-15. 19.4.78 as 048198 (6pp33)

JAPE ★ D22 88405B/49 ★ J5 4138-693
Water-swellaable fibres e.g. for filter or sanitary towel - are prepd. by dipping polyacrylonitrile fibres in aq. soln. of alkali metal hydroxide

JAPAN EXLAN KK 18.04.78-JA-046058
A14 F06 J01 (A88 A96) (27.10.79) D01f-08/08 D01f-11/06
Fibres are prepd. by dipping polyacrylonitrile fibres in an aq. soln. of alkali metal hydroxide at $> 80^{\circ}\text{C}$. Pref. the conc. of aq. soln. is > 6 moles per 1000. The treated fibres comprises an outer layer of hydrogel and an inner layer of acrylonitrile polymer. The degree of swelling of the fibre is 3-300 cm^3/g . Pref. the volume rate of the outer layer in the fibre is $< 55\%$.

The fibres are superior in not only water swelling property but also strength, elongation and flexibility and are used for the prodn. of sanitary napkins, baby napkins, filters etc. 18.4.78 as 046058 (9pp142)

JAPG ★ D22 88644B/49 ★ J5 4139-981
Mfr. of composite water absorbing material e.g. diaper - by swelling powder obtd. by hydrolysing vinylic starch copolymer with water so that a continuous film is not formed

NIPPON ZEON KK 24.04.78-JA-048481
A96 F04 P73 (30.10.79) B32b-05/30 B32b-27/12
Mfr. of a composite water absorbing material having a water absorbing powder (I) fixed on a fibrous substrate, comprises swelling the powder with a quantity of water which is insufficient to form a continuous film, to thereby render the powder adhesive.

Pref. (I) is composed of a high molecular electrolyte obtd. by hydrolysing a copolymer of starch and acrylonitrile or of a copolymer of starch and a vinyl monomer contg. a hydrophilic gp. After (I) is swollen with water and fixed to the substrate, the assembly is pressed together and dried. The prod. may be embossed.

The material has a high water absorbing speed and capacity, a faster drying speed saving thermal energy for drying and an improved handle, and is useful for making diapers and sanitary napkins. 24.4.78 as 048481 (4pp120)

TOKE- ★ D22 88680B/49 ★ J7 9036-433
Bed-sore protection pad - prepd. by adding water to non-aq. plastics liq. together with foaming agent, viscosity-increasing agent, antiseptic etc., and stirring

TOKYO EIZAI KENKYUS 11.06.76-JA-068418
A96 P33 (09.11.79) A61g-07/04 B01j-13
100 pts. wt. water is added to 8-14 pts. wt. non-aq. plastics liq. together with foaming agent, viscosity increasing agent, antiseptic agent, etc. and the mixt. is stirred to produce a non-aqueous plastic hydrate gel having a great number of microcapsules of water cells. The hydrate gel is used for a pressure dispersion material. 11.6.76 as 068418 A61g-7/04, B01j-13/00 (9.11.79) TOKYO EIZAI KENKYUSHO KK (7pp76)(J52151289)

AVIC- D22 39731V/21 = J7 9036-641
Haemostatic adhesive dressing - having fibres of ionisable water insoluble partial acid salts of collagen
AVICON INC 04.12.72-US-312210
A96 F04 P31 + P34 (10.11.79) *US3810-473 A61l-15/* D04h-01/42 + A61k-09/70

Hemostatic adhesive dressing for several biological surfaces has a liq. laid non-woven web having hemostatic adhesive properties of fibres of ionisable water insoluble partial acid salts of collagen, the web having an absorbency of a mixt. of 90 vols. ethanol 10 vols. water of 100-300 wt. % and a porosity of 4-15 secs./6.45 sq. cm based on a web having a basis wt. of 175.5 lbs./3000 sq. ft. the fibres of the partial acid salts of collagen contg. from 50-90% of theoretical stoichiometric amt. of ionisable acid.

Dressing is flexible, non-flaking and has sufficient strength to permit application to wound without sepn. 4.12.73 as 135989 (clg. 4.12.72-US-312210) A61k-9/70, A61l-15/01, D04h-1/42 (10.11.79) AVICON IND (12pp) (J49086676)

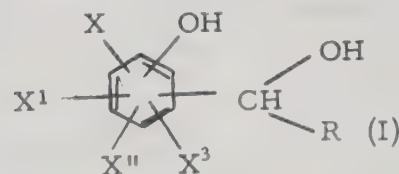
KAOS D22 73012Y/41 = J7 9036-646
Fatty acid amides used as algicides - on addn. to water
KAO SOAP KK 01.03.74-JA-024629
C03 P14 (D15) (10.11.79) *J50117-923 + A01n-09/20

The amides $\text{RCON}[(\text{CH}_2\text{CH}_2\text{O})_m\text{H}] (\text{CH}_2\text{CH}_2\text{O})_n\text{H}$ ($\text{R} = 12-16$ C alkyl, oleyl) 14-18C hydroxyalkyl opt. ($\text{CH}_2\text{CH}_2\text{O}$) subst. m and n = 0-7 but $m+n < 7$, and $r = 1-7$ have little toxicity to humans, fish and molluscs, but have strong algicidal activity in water. The growth of algae is inhibited by 10-100 ppm of these agents in rice paddies.

In an example, the addn. of lauric acid amide or lauric acid diethanol amide to a culture medium of Hydrodictyon reticulatum up to 20 ppm completely inhibited the growth within 20 days. 1.3.74 as 024629 A01n-9/20 (10.11.79) KAO SOAP KK (3pp)(J50117923)

CIBA D22 08652T/06 = J7 9037-205
Halogen-substd hydroxyphenyl-alkyl (or halogen substd-phenyl) - carbinols - prepn and use as broad-spectrum antimicrobial agents
CIBA GEIGY AG 23.07.70-CH-011172
B05 C03 E14 P34 (14.11.79) *DT2133-375 A01n-09/30 C07c-39/24 + C07c-29

Halogen- substd. monohydroxyphenyl carbinols of general formula (I) (where X=Hal, X' - X³ = H or Hal and R=C₁-8 alkyl, C₃-8 -cycloalkyl or Ph opt. subst. with Hal and/or Me or Et with at least 2 Hal atoms in the molecule are broad spectrum



antimicrobial agents and preservative agents against destructive, pathogenic and phytopathogenic organisms for organic substrates, wood, paper, leather, adhesives, gums, dye, pigment and printing paste's and organic substrates.

Prepn. is by reduction of the known hydroxyphenyl ketones with a hydride in an inert solvent, specifically NaBH_4 in water, MeOH, EtOH, iPrOH or dioxan, also by redn. with Al isopropylene in i-propanol. 23.7.71 as 055151 (clg. 23.7.70-CH-011172) A01n-9/30, C07c-29/00 39/24 (14.11.79) CIBA GEIGY AG (11pp)(J47003450)

INTO D22 41080Y/23 = US 4175-557
Polymeric sheet material for dressing wounds - comprising nonfibrous structure having textile like texture on at least one side
INT PAPER CO 01.11.76-US-735671 (24.11.75-US-634908)
A96 P32 P34 P78 (27.11.79) *NL7612-992 A61f-13 A61l-15/*
Drapable wound covering having a fabric texture on one surface comprises (a) a layer of cured high-release, non-sticking polymer forming one surface of the wound covering, (b) a layer of cured polymer having a tensile strength and tear strength for a 25 mil. thick cured film of ≥ 400 lbs./in.² and ≥ 20 lbs./in.², respectively, joined to the 1st. layer of polymer; and (c) a layer of fabric texture joined to (b) and forming the other surface.

The wound covering has a water vapour phase transfer rate of 2-10 mg./hr. cm^2 , two dimensional elongation of $\geq 100\%$ in each direction, and antimicrobial barrier layer

properties. At least one side of (c) comprises interbonded continuous polymeric ribs defining recessed portions on each surface. The open area between the ribs is 0-60%.

The coverings are esp. useful for burns where they serve as a temporary replacement for damaged or missing skin. 1.11.76 as 735671 C.i.p. 4034751 (27pp393)

HARN D22 21969Y/13 = US 4175-560
Surgical swab or tampon made by rolling instead of by knotting - to give more uniform density

HARTMANN PAG 21.11.75-DT-552172

P32 + P34 (27.11.79) *BE-848-577 + A61m-35

A swab comprises a strip of material having 2 spaced ends interconnected by spaced lateral edges. The strip is wound about an axis extending transversely to a longitudinal direction of the material so as to form individual layers one above the other. Each lateral edge of the layers of the swab is tucked into a centre of the wound strip.

The swab has, c.f. manually produced swabs, a greater bulk of material in its ends which are fashioned as annular pads so that they absorbency and the take-up capabilities for secretions and blood are also improved.

1.7.77 as 812435 (+22.11.76-US-743930) (5pp393)

HIRS/★ D22 89161B/49 ★US 4175-561
Improved sorption feminine hygiene pad - comprises fibrous rod with integral perforated protuberances to increase sorption area

HIRSCHMAN SZ 10.02.77-US-767586

P32 (27.11.79) A61f-13

A feminine hygiene pad includes a rod-shaped fibrous base with integral protuberances of sorptive cells equi-spaced and extending perpendicularly to the pad surface about its entire exterior to increase the effective sorptive surface area.

The protuberances have parallel side walls and some or all have outwardly opening holes to provide more sorptive area. The protuberances may have square, hexagonal or circular cross-section, and the outer end is arcuate. The pad may have longitudinal fluting for retention in the interlabial space without additional retainers. 10.2.77 as 767586 (7pp1358)

TEIJ D22 38759A/22 = US 4176-156
Thermal sterilisation of artificial kidneys - by connecting them to pressure buffer tank and heating to specified temp.

TEIJIN KK 26.05.77-JA-U66912 (05.11.76-JA-132301)

P34 (27.11.79) *DT2749-516 A61I-01 A61m-01/03

DUSC/★ D23 87680B/49 ★DL-137-585
Prepn. of 2-alkenyl-1-oxa-cycloalkene cpds. - from di:chloromethyl alkenyl ether and olefin cpds.

DUSCHEK C 04.07.78-DL-206500

B03 E13 (12.09.79) C07d-301/02 C07d-307/28 C07d-309/18

Prepn. of 2-alkenyl-1-oxacycloalkenes (I) is carried out by reacting a dichloromethyl alkenyl ether (II) with an olefin (III) at -20 to +50°C in the presence of Friedel-Crafts catalyst, and eliminating HCl from the product.

The process is esp. useful for preparing nerol oxide, i.e. 2-(2-methyl-1-propenyl)-4-methyl-3,6-dihydro-2H-pyran, and its analogues, which are useful as perfumes, biologically active cpds. and intermediates.

The process uses readily available starting materials, e.g. (II) can be prepd. by reacting the corresp. alkenyl formate with PCl_5 (and the by-produced POCl_3 does not have to be sepd. from the reaction mixt.) 4.7.78 as 206500 (10pp367)

ROUR D23 43866T/27 = DS 2162-820
Cis methyl dihydrojasmonate - as odour modifier for perfumes and cosmetics

ROURE BERTRAND DUPO 23.12.70-FR-046407

E15 (29.11.79) *BE-777-194 C07c-69/95 C11b-09

Dihydromethyljasmonate (I) contg. > 90% of the cis isomer is new. Cpd. (I) may be obtd. by hydrogenating (2-pentyl-3-keto-cyclopenten-1-yl)-acetic acid methyl ester in presence of a palladium-carbon catalyst and an aluminium al-

An artificial kidney, having permselective hollow filaments and include inlet and outlets for blood and dialyzant is sterilised by filling the kidney with water of water solution primer, connecting a pressure buffer tank to one of the inlet or outlets, sealing the remaining inlet and outlet heating the kidney to 80 to 130°C.

This is followed by moving gas and part of the primer which have expanded to the buffer tank, cooling the kidney and so returning the primer from the buffer to the kidney and aseptically sealing the inlet or outlet connected to the tank.

Pref. the final sealing is effected by welding. Artificial kidneys not requiring pretreatment can be supplied.

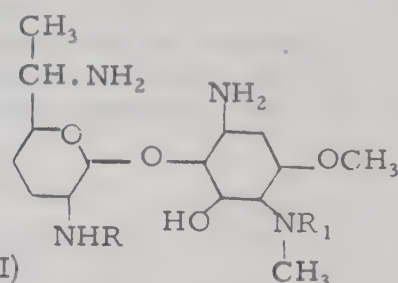
1.11.77 as 847619 (+9.11.76(2); 25.5.77-JA-133738/9; 066284) (12pp1376)

ABBO D22 49527B/27 = US 4176-17
2-Deoxy-N-substd.-fortimicin A and B cpds. - useful as broad spectrum antibacterials, preservatives, moth-proofing agents and intermediates

ABBOTT LABORATORIES 21.12.77-US-863011

B03 C02 E13 (27.11.79) *GB2010-823 A61k-31/71 C07h-15/22

Fortimicins of formula (I) and their salts are new:



(I) (where Y is lower alkyl).

Specific (I) are 2-deoxy-2'-N-glycylfortimicin B and A. (I) are antibiotics effective against Gram-positive and negative bacteria. (I) are used e.g. in antibacterial scrubbing solns. 21.12.77 as 863011 (9pp982)

See Also

D15 J7 9037074

D25 DL 137846

D25 DS 2705047

D23: OILS; FATS; WAXES

coholate at 3-10 kg/cm². Cpd. (I) is useful in perfume compns. 17.12.71 as 162820 (7pp068)

UNIL D23 45753U/33 = DS 2303-170
Unsatd fatty acid hydrogenation - using palladium catalyst supported on ion exchange resin carrier

UNILEVER NV 25.01.72-GB-003426

E17 (29.11.79) *DT2303-170 B01j-23/44 C07c-51/36 C11c-03/12

Unsatd. fatty acids and/or their esters with > 1 carbon-carbon double bond are selectively hydrogenated in the presence of a polar solvent and a supported palladium catalyst. The catalyst support is an ion exchange resin with ≥ 0.7 mg/g active centres which are accessible for large molecules. The divalent palladium is in salt form when a cation exchange resin is used and in hydroxy or neutral form with anion exchange resins.

The resin is pref. a polystyrene crosslinked with divinyl benzene. The acids and/or esters are selectively hydrogenated to the mono-unsatd. cpds. 23.1.73 as 303170 (16pp068)

SCHU/ D23 32935Y/19 = DS 2548-487
Stripping undesirable constituents from vegetable or animal oils - by tubular hydrolysis stage between contact reactor and expansion vessel

SCHUMACHER H 29.10.75-DT-548487

(29.11.79) *DT2548-487 + C11b-03/14

The mixt. of oil and condensed distn. auxiliary arising in a process for distilling accompanying materials out of oils

of vegetable or animal origin, is passed through a stage with an adjustable dwelling time, between the contact stage and the detenting stage.

Water is used as the distn. auxiliary, and is maintained in the fluid state by a pressure above that at which it boils, whilst being brought into contact at high temp. with the oil to be treated, in a pressurised contact vessel.

The extended dwelling time and the additional stage makes it possible to remove fatty acid-oxygen cpds. more efficiently, so that a rapid deterioration in smell and taste of the prod. is prevented. 29.10.75 as 548487 (4pp1045)

ASAIE ★ D23 88495B/49 ★ J5 4139-611
Hydrogenating fats or oils - using reaction prod. of nickel hydroxide and sodium hypophosphite
ASAHI DENKA KOGYO 20.04.78-JA-046916
(30.10.79) B01j-27/18 C11c-03/12

Hydrogenation of fats or oils is effected using a Ni-P cpd. (I) obt'd. by reacting 1 mole Ni hydroxide with 0.5-5 mole Na hypophosphite, as catalyst. The solid fat index of the hydrogenated fat is regulated by using the catalyst and by selecting the fat, the nature and amt. of catalyst, and the hydrogenation conditions. The gradient of the solid fat index curve becomes small when the no. of moles (h) of Na hypophosphite per mole Ni hydroxide in (I) for the catalyst is small. In this case, the plastic range of the fat is wide. When the value of h of the catalyst is large, the content of trans form prod. in the fat becomes larger. 20.4.78 as 046916 (3pp126)

NISB D23 45177A/25 = J7 9036-234
Skimmin used as perfume for tobacco - prepd. by culturing callus of hydrangea plant, extracting the obt'd. undifferentiated cells, and recovering skimmin from the extract

JAPAN TOBACCO & SALT PUB 27.10.76-JA-128258

E13 (D18) (08.11.79) *J53053-700 + C12d-13

Method comprises culturing the callus of the Hydrangea plant, extracting the obt'd. undifferentiated cells and recovering skimmin (= 7-β-D-glucosyloxy coumarin) from the extract.

Skimmin can be prepd. industrially and inexpensively in large quantities and also removes grassy smell and stimulus of tobacco material.

Examples of Hydrangeas used are Hyd. macrophylla Seringe var Thumbergii Makino, Hyd. macrophylla Seringe var Amagiana Makino and Hyd. macrophylla Seringe var Otaksa Makino. The culture is pref. carried out using irradiating white light or blue light $1-8 \times 10^4$ erg./sec. cm². The culture undifferentiated cells can then be sepd. from the cultured liquid by centrifuging. Thus sepd. undifferentiated cells are, either as they are or after refrigeration extracted with organic solvent or water of 0-100°C. As the organic solvent methanol, ethanol, ethylacetate, chloroform, dichloromethane, etc. can be applied singly or together, and the mixt. of methanol and chloroform can be pref. applied. The extn. is practised at 15-30°C for 0.5-1 hr. and the extn. is practised several times repeatedly. The obt'd. extract is conc. and crude skimmin can be refined by column chromatography using the adsorbent e.g. alumina, magnesium silicate, aluminium silicate, etc. 27.10.76 as 128258 C12d-13/00 (8.11.79)
JAPAN TOBACCO & SALT PUB (4pp)(J53053700)

HAAR D23 68932X/37 = J7 9036-657
Stable dichloro-cyclopropane derivs. - useful in perfume compsns. and cosmetics, detergents etc (NL240876)
HAARMANN & REIMER GMBH 22.02.75-DT-507778
E14 (D21 D25) (10.11.79) *DT2507-778 A61k-07/46

DAIL D23 38173W/23 = J7 9037-166
Epoxidized soybean oil purifn - by treatmn with peroxy-acetic acid and passing through ion exchanger
DAICEL KK 29.00.73-JA-002654
A60 (A14) (13.11.79) *J49090-738 + C09f-07
Soybean oil treated with peroxyacetic acid (I) is passed through a cation-exchange resin (H-form) or anion-exchange resin (Cl-form) column. The purified epoxidised soybean oil and PVC give a compn. with good resistance to initial discolouration. In an example, purified soybean oil was epoxidised with 1, evapd. under <200 mm pressure

to remove volatile materials, dild. to 50 vol% with EtAc, washed with water, and passed through a Amberlite IR-200C column at a rate of 10 l./1.-hr.

A compsn. of 50 parts of the above purified oil and 100 parts PVC was rolled 5 min at 155° and pressed 5 min at 170° and 100 kg/cm² to give a test piece with almost no discolouration. A similar PVC compn. contg. epoxidised soybean oil treated with cation-exchange resin in Na-form discoloured badly. The elute was evapd. at 150° and <50 mm to remove H₂O and EtOAc. 29.12.72 as 002654
C09f-7/00 (13.11.79) DAICEL LTD (4pp)(J49090738)

FIRM D23 04705A/03 = J7 9037-209
Modifying the characteristics of perfume or perfumed prod. - with cyclopentylidene esters

FIRMENICH SA 30.06.76-CH-008343

E15 (14.11.79) *DT2729-121 A61k-07/46 C07c-69/74

A method of improving reinforcing or modifying the characteristics of perfumes or of perfumed prods. comprises

adding a cyclopentylidene ester of formula (I) (where R₁ is (un)branched (un)satd. 1-6C hydrocarbonyl and R₂ and R₃ are each H or lower alkyl).

Some cpds. (I) e.g. alkylcyclopentylidene acetate (I) have a floral, fruity smell similar to benzoates or salicylates. When R₁=CH₃ and one of R₂ and R₃=CH₃ and the other is H, (I) has a particularly strong smell reminiscent of ylang-ylang oil and may be used as a stable substitute. 29.6.77 as 077705 (clg. 30.6.76-CH-008343)

A61k-7/46, C07c-69/74 (14.11.79) FIRMENICH SA (4pp)(J53003541)

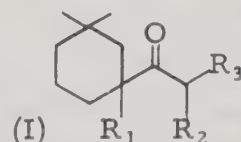
INFL D23 52578Y/30 = US 4175-569
Higher carbonyl cpds. having organoleptic properties - prepd. by reacting a subst. halide or subst. aldehyde with a carbonyl cpd. (NL 19.7.77)

INT FLAVORS & FRAGR INC 22.12.76-US-753617 (11.08.76-US-713429)

E15 P15 (D13) (27.11.79) *DT2700-688 A24b-03/12 A24d-01

Smoking tobacco compsn. comprises an intimate admixt. of smoking tobacco and a flavour compsn. comprising a subst. cyclohexane deriv. of formula (I)

(where R₁ is methallyl, R₂ is H and R₃ is H, or R₁ is H; R₂ is methallyl and R₃ is methallyl).



Also described, but not claimed, are perfumed articles, foodstuffs, foodstuff flavourings, medicinal prods., etc. contg. (I).

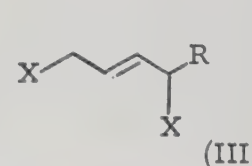
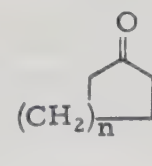
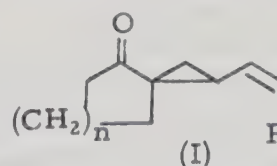
19.9.77 as 834501 Div.ex. 4081429; C.i.p. 4021480
(+22.12.76-US-753617) (17pp393)

FIRM D23 18353B/10 = US 4176-139
Spiro cpd. prodn. for use in perfumery industry - by reacting cyclopentanone or cyclohexanone with alkyl-di:halo-butene (NL 28.2.79)

FIRMENICH SA 26.08.77-CH-010435

E15 (27.11.79) *DT2836-477 C07c-49/54 + C07c-45

Unsatd. spiro derivs. of formula (I) are prepd. by treating a cycloalkanone (II) with a dihalo-alkene of formula (III) in the presence of a strong base (pref. alkali hydroxide, hydride, alkoxide or amide).



In the formulae, X is halogen, n is 1 or 2 and R is lower alkyl. Specifically produced are e.g. 1-(prop-1-en-1-yl)spiro-(2,4)heptan-4-one.

Cpds. are jasmine-like odorants for perfumery. 18.8.78 as 934828 (4pp974)

See Also

D14 SU 654239

D21 DT 2822907

D21 J5 4138134

D24: SOAP; SOAP DETERGENTS

NOTHING TO REPORT

D25: OTHER DETERGENTS

JEYE- ★ D25 B/49 ★ BR 7901-749

Deodorant tablet for toilet basin

JEYES GROUP LTD 21.03.78-GB-012184

P34 (20.11.79) A611-09/* C11d-01/86 C11d-03/37

BERG/ ★ D25 87648B/49 ★ DL-137-447

Foam regulator for washing powders - comprises aluminosilicate and polysiloxane having temp. dependent foam suppressing effect

BERGK K H 29.06.78-DL-206367

A97 E33 (A26) (05.09.79) C11d-03/08

Foam regulator for washing powders to provide temp. dependent control of foam development is a conventionally prepd. mixt. of (a) 60-90 wt. % aluminosilicate $\text{Na}_z(\text{AlO}_2)_x(\text{SiO}_2)_y \cdot x\text{H}_2\text{O}$ (I) (Z and y = 2-15, x=15-35) of particle size $\geq 500 \mu\text{m}$, (b) 10-40 wt. % polysiloxane (II) of viscosity 1800-2200 cSt and (c) 0-30 wt. % anionic or nonionic surfactant.

(I) is pref. crystalline, esp. a type A, X or Y zeolitic molecular sieve, or it is or aluminosilicate gel. Esp. the particle size distribution is about 90 wt. % 3-10 μm , < 5 wt. % < 100 μm and the balance $\geq 500 \mu\text{m}$. The nonionic surfactant is esp. an ethylene oxidealkanol condensate and the regulator is pref. added to the washing powder after spraying-drying.

Used for automatic washing machines. The compsn. allows adequate foaming at low temp. but suppresses excessive foaming at higher temp. without adversely affecting washing efficiency. Exact metering of the compsn. into the washing powder is possible and, after release of (II), the (I) will bind alkaline earth and heavy metal ions thus improving washing effect. 29.6.78 as 206367 (9pp1251)

KAUF/ ★ D25 87686B/49 ★ DL-137-599

Compsn. for thermo-regulated perfume release in washing powder - comprises perfume on hydrated aluminosilicate

KAUFMANN D 19.07.78-DL-206798

E33 (12.09.79) C11d-03/08

Compsn. for use in powdered washing agents to provide thermoregulated release of perfume during washing comprises (a) an aluminosilicate of formula $\text{Na}_z(\text{AlO}_2)_x(\text{SiO}_2)_y \cdot x\text{H}_2\text{O}$ (where z and y = 2-15, x = 15-35) with particle size 500 μm and (b) a standard perfume at wt. ratio 2-20:1.

Pref. the aluminosilicate is crystalline, esp. it is a type A, X or Y zeolitic molecular sieve, or an aluminosilicate gel. Esp. it has particle distribution about 90 wt. % 3-10 μm , < 5 wt. % 100 μm and the rest $\geq 500 \mu\text{m}$. Pref. the compsn is mixed with the washing agent after spray drying.

Used esp. in automatic washing machines. The perfume is storage stable in this form, and is completely released as the temp. is increased. The compsns. have no adverse effect on washing quality and can be exactly metered into the washing powders. The aluminosilicate binds alkaline earth and heavy metal ions so improved washing efficiency. 19.7.78 as 206798 (7pp1251)

FARF ★ D25 87768B/49 ★ DL-137-846

Disinfectant detergent compsn. contg. 2-mercapto benzothiazole - with rapid bactericidal and fungicidal activity

VEB CHEMIEKOMB BITT 17.07.78-DL-206754

E13 (D22) (26.09.79) C11d-03/34

Washing compsn. with disinfectant activity contains as active ingredient 2-mercaptobenzothiazole (I), opt. mixed with other active ingredients. When used alone (I) is pref. 0.05-1, esp. 0.3-0.7% of the compsn.

Other active ingredients are chlorinated condensed phenols, quat. ammonium, peroxy or trialkyltin cpds.

or HCHO adducts and total concn. of active ingredients is 0.2-1% at wt. ratio 0.5-2pts. (I) to 1 wt. pt. other active components.

Esp. used for chemical-thermal disinfection. (I) has low toxicity (oral LD_{50} in rats $> 4\text{g/kg}$), does not irritate the skin and has rapid bactericidal and fungicidal actions at relatively low concn. 17.1.78 as 206754 (11pp1251)

UGIN D25 54055Y/31 = DS 2705-047

(Alpha)-acyloxy (N)-acylamides useful as activators for per cpds. - esp. as low temp. bleach activators in washing agents

UGINE KUHMANN 10.02.76-FR-003580

E19 (D21 D22) (29.11.79) *BE-850-735 C07c-103/88 C11d-03/32 D061-03/02

Activators for per cpds. are α -acyloxy-N-acylamides of formula $\text{R}_1\text{-CO-O-CR}_2\text{R}_3\text{-CO-NR}_4\text{-CO-R}_5$ (where R_1 , R_4 and R_5 each are H, 1-11C linear alkyl, 3-12C branched alkyl or cycloalkyl, or 6-12C hydrocarbon contg. at least one benzene ring; R_2 and R_3 are as R_1 , R_4 and R_5 and also 2-11C alkylene; and the gps. may be substd. by -OH, halogen, - NO_2 , alkoxy, amino, carbonyl, nitrile, ester, amide or ether gps.).

The molar ratio of activator to per cpd. is pref. between 0.1 and 10. The activator may be α -acetoxy-N-acetylacetamide, α -acetoxy-N-acetylpropionamide etc. The per cpds. may be used to bleach textiles, oils, lubricants, hair, skin, etc. 8.2.77 as 705047 (5pp068)

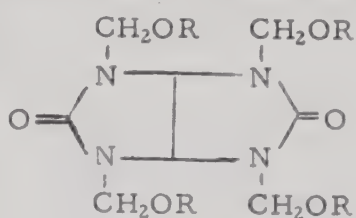
BADI ★ D25 87791B/49 ★ DT 2821-626

Foam inhibitors for detergents - comprising ether or ester derivs. of tetra:methylol-acetylene-di:urea

BASF AG 18.05.78-DT-821626

E13 (29.11.79) C07d-487/02 C11d-03/28

The use of acetylenediurea derivs. of formula (I) as foam inhibitors in detergent compsns. is claimed: (where 25-



(I)

100% of the R gps. are 7-22C alkyl or acyl, the rest being 1-4C alkyl).

Cpds. (I) are effective at very low concns. (0.1-10 wt. %, dry basis) and at high washing temps. (ca. 95°C), irrespective of the water hardness.

Cpds. (I) can be prepd. by reacting the corresp. mono-

to tetra(1-4C alkyl) ether with a 7-22C alcohol, alkanolic or alkanolic acid in a molar ratio of 1:1 - 1:4 in the presence of an acid catalyst. 18.5.78 as 821626 (18pp367).

CHEM= ★ D25 88812B/49 ★ SU-652-174

Surface-active alkyl sulphate cpds. prepn. - includes sulphonation of aliphatic alcohol(s) and alkali neutralisation in presence of higher fatty acids

CHEM IND RES INST 19.03.77-SU-483101

E17 (15.03.79) C07c-141/08 C11d-01/14

Surface-active alkylsulphates of improved quality are obtd. by sulphonation of aliphatic alcohols with subsequent alkali neutralisation in the presence of 17-20C aliphatic carboxylic acids used in quantity 20-25%.

Since the fatty acids evolve considerably less heat during neutralisation, they absorb part of the heat evolved by the sulphoesters leading to a decrease in decompn. and time of reaction.

Kotelnikov B. P., Kasavchenko A. I., Kotenok N. A. et al Bul.10/15.3.79 19.3.77 as 483101 (2pp1347)

ZN/ ★ D25 88975B/49 ★ SU-653-294
 anionic surfactant powder prepn. - by atomising oxyethylated
 surfactant on to carbamide, while mixing and dispersing
 REZNIKOV I G 24.02.76-SU-328579
 E16 (25.03.79) C11d-11/02

Non-ionic surfactant powder is obtd. by mixing oxyethyl-
 ated surfactant with crushed carbamide. To speed up and
 simplify the process, the oxyethylated surfactant is spray-
 ed on to the carbamide, with simultaneous mixing and dis-
 persion of the mixt. The oxyethylated surfactant and car-
 bamide are in ratio (by wt.) of 1:1 to 1:6.

This speeds up the process of prod. formation by red-
 ucing the reaction time between the carbamide and surfac-
 tant since the molecular interaction between the evenly-
 distributed interacting components, i.e. finely crushed
 carbamide and modified surfactant in a dispersed-drop
 state, takes place much more rapidly. This is also help-
 ed by the intensive mixing and simultaneous dispersion
 of the resulting prod. The technique of obtg. friable sur-
 factant is simplified, and working conditions are improv-
 ed, since no solvents are used, yet the prod. obtd. is
 of high quality.

Reznikov I.G., Kulikova A.V., Grebennikova A.I. et al.
 Bul.11/25.3.79 24.2.76 as 328579 (4pp18)

PROC ★ D25 89274B/49 ★ US 4176-079
 Granular detergent compsns. - contg. enzyme dispersed in separate
 water-soluble resin film

PROCTER & GAMBLE CO 20.04.77-US-789323
 A97 E19 (A18 A25 D16 E34) (27.11.79) C11d-17/06

Granular detergent compsn. comprises (a) 1-40% ≥ 1 H₂O-
 soluble anionic, nonionic, ampholytic or zwitterionic sur-
 face active agents (I); (b) 10-60% of a detergent builder
 (II); and (c) a non-dusting article (one dimension ≤ 20 mm.;
 thickness ≥ 50 mils.) consisting of an enzyme (III) dispers-
 ed in an H₂O-soluble resin (IV) film.

(II) is an Na or K polyphosphate, (bi)carbonate, silicate,
 polyacetate, (poly)carboxylate, or polyhydroxysulphonate.
 (III) is a proteolytic and/or amylolytic enzyme. (IV) is
 PVA, cellulose ether, polyethylene oxide, starch, PVP,
 polyacrylamide, polyvinyl methyl ethermaleic anhydride,

polymaleic anhydride and/or polystyrenemaleic anhydride.

The non-dusting (III)-contg. article is non-crushable,
 provides controlled release of (III) into wash water solns.,
 is leak-proof, and gives improved stability to (III). In addn.
 use of the article simplifies packaging equipment for deter-
 gent compsns., and allows unused (III)-contg. articles to
 be conveniently and efficiently recycled. 20.4.77 as
 789323 (16pp478)

PROC ★ D25 89275B/49 ★ US 4176-080
 Detergent compsns. for effective oily soil removal - contg. oily soil
 dissolving agent and solvent stripping agent

PROCTER & GAMBLE CO 03.10.77-US-839221
 A97 E19 (A25) (27.11.79) C11d-07/24

Cleaning prod. compsn. for removing oily soil from fab-
 rics in an aq. washing medium consists of: (1) a discrete
 oily soil dissolving agent comprising (a) 20-97% by wt.
 of an H₂O-insol. solvent (I), (b) 3-30% by wt. of an H₂O-
 in-oil emulsifier (II) soluble in (I), (c) 0-77% H₂O, and (d)
 0-77% detergency builders (III); and (2) a discrete unit(s)
 consisting of 10-80% by wt. of total prod. of a solvent
 stripping agent comprising 5-100% of an H₂O-soluble sur-
 factant (IV), 0-95% H₂O, and 0-95% detergency builder (V).

(I) may be a 10-18C alkane or alkene (flash pt. $\leq 65^\circ$
 (Tag closed cup); initial b.pt. $\leq 130^\circ$; solidification pt.
 $\geq 20^\circ$), or an ester R₁CO₂R₂ (R₁ = 7-17C alkyl; R₂ = 1-10C
 alkyl; total R₁+R₂ = 8-23C). (II) has HLB value 2-12, and
 consists of 25-100% of emulsifier cpds. with $\leq$ two 9-20C
 alkyl gps. each from (i) dialkyl sulphosuccinic acid (and
 NH₄, alkali(ne earth) metal, mono-, di-, and tri-(1-4C)
 alkyl and alkanolammonium salts); (ii) imidazolium quat.
 NH₄ cpds.; (iii) MOP(O)(O(C₂H₄)_mR₂)(O(C₂H₄)_nR₁) (R₁R₂ =
 alkyl; nm = 0-8; M = H or salt forming cation) (where un-
 less stated alkyl = 0-20C).

(III) and (V) are H₂O-soluble ortho- or poly-phosphates,
 phosphonates, (bi)carbonates, polyhydroxysulphonates, sil-
 icates, (poly)carboxylates, and H₂O-insol. aluminosili-
 cates, and mixts. (IV) may be any conventional anionic,
 nonionic, zwitterionic, amphoteric, or cationic surfactant,
 or mixts. 3.10.77 as 839221 (12pp478)

SeeAlso

D23 J7 9036657

CPI INDEXES

ALERTING PATENTEE INDEX (II)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

In Country Alerting Bulletin only

M22

*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502-292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or ≠ sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U A97D15M14
*645 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
*654 49862X A88H01Q4
*655 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A—M cumulations of from a quarter up to 5 years are available as COM.

CALI

Nitrile rubber smooth rolled sleeve for well impression packer - also contg natural rubber, hydrated 49862X/26 *US 3963-654

CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01

Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying earth in dams 49433X/26 *DT 2554-327

CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02

CANA

Emulsifying agents of microbial origin - used esp. for oil spills, are made by cultivating a species of 48076X/26 *CA -990-668

CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180
Europe	150
France	740
Germany, W. unexamined	1050
Japan unexamined	845*
Netherlands unexamined	240
PCT	40
Research Disclosure	20
South Africa	100
Sweden	260
United Kingdom unexamined	600
	<u>3325</u>

Slow publishing

Canada	450
Germany, E.	100
Germany, W. examined	465
Japan examined	340*
Netherlands examined	60
Soviet Union	1200
Switzerland	260
United Kingdom examined	300
United States	1200
	<u>4375</u>

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140
Denmark	120
Finland	60
Norway	80
Portugal	30
	<u>430</u>

Slow publishing

Austria	125
Czechoslovakia	180
Hungary	35
Israel	40
Italy	155
Rumania	25
	<u>560</u>

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MV
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

- ABBO 21.12.77 ABBOTT LABORATORIES B03 C02 D22 E13 = US 4176-178
2-Deoxy-N-substd.-fortimicin A and B cpds. - 49527B/27
- ABDA/ 28.02.78 BEN ABDALLAH A A95 C03 D13 H09 *FR 2418-005
Conversion of vegetable waste to combustible fuel blocks - 88005B/49
- ACUM- 15.12.76 ACUMETER LAB INC A81 D18 = CA 1066-582
Cut filter tips for cigarettes, prodn. - 02171A/02
- AGBR 11.02.66 AG FUR BRAUER EI IND D16 = IT 1033-004
Adsorbent for a stabilizing control of the protein content - 10083R/07
- AGEN 09.11.72 AGENCY OF IND SCI TECH D16 = J7 9036-229
Fixing microbial body contg. lipase - 42308Y/24
- AGEN 18.12.73 AGENCY OF IND SCI TECH D15 E16 = J7 9036-882
Metal recovery from mine waste water - 20558Y/12
- AGEN 01.12.77 AGENCY OF IND SCI TECH A96 B04 D16 F01 (A14) *J5 4138-624
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- AHLB- 24.05.78 AHLBORN E GMBH D13 *DT 2822-628
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- AIRR 30.05.78 AIRCO INC D12 *GB 2021-382
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- AJIN 09.10.72 AJINOMOTO KK B05 D16 E16 = J7 9037-235
Microbiological L-arginine prodn - 31147V/17
- AJIN 07.03.73 AJINOMOTO KK D16 E13 = J7 9037-240
Imidazolyl acetol fermentative prodn. - 31418W/19
- AJIN 15.03.74 AJINOMOTO KK B05 D16 E16 = IT 1033-255
Fermentative prodn. of L-leucine - 00588X/01
- AJIN 14.04.78 AJINOMOTO KK B02 D16 *J5 4138-193
5-Amino-4-imidazole-carboxamide ribotide prodn. - 88326B/49
- AJIN 17.04.78 AJINOMOTO KK B04 D16 *J5 4138-182
Rapid quantitative analysis of vitamin or amino acid - 88318B/49
- AJIN 18.04.78 AJINOMOTO KK B04 D16 J04 *J5 4137-396
Fluorimetric determ. of peroxidase activity - 88160B/49
- AJIN 18.04.78 AJINOMOTO KK B04 D16 *J5 4137-397
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- AKER- 13.04.78 AKERS MEK VERKSTED D15 *NO 7801-301
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- AKGO= 23.08.76 AS KIRG ORG CHEM D16 *SU -652-210
Microbial biomass from culture liquid sepn. - 88847B/49
- ALBE 31.05.74 ALBERTO CULVER CO D21 E19 *US 4176-176
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- ALEK/ 26.08.70 ALEKSANDROV B N D12 *SU -652-056
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- ALFA 20.04.78 ALFA-LAVAL AB D13 = DK 7901-464
Gravity pressure extrusion to mfr. blocks of cheese from curds - 64736B/36
- ALFA 20.04.78 ALFA LAVAL AB D13 = SW 7903-451
Gravity pressure extrusion to mfr. blocks of cheese from curds - 64736B/36
- ALFA 24.04.78 ALFA-LAVAL AB D15 J01 = GB 2021-444
Sludge centrifuge with automatic sludge discharge - 64574B/35
- ALFA 22.05.78 ALFA-LAVAL STALLTEC C04 D15 *DT 2920-540
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- ALKU 18.05.78 AKZO NV A96 D21 (A25) = NL 7903-278
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- AMAN 20.04.78 AMANO PHARM KK B04 D16 (B01) *J5 4138-188
Purificn. of enzyme for cholesterol analysis - 88321B/49
- AMAN 15.05.78 AMANO PHARM KK B04 D16 *DT 2917-891
Microbiological prodn. of acyl-coenzyme/A synthetase LCF-18 prodn. - 87919B/49
- AMCY 19.04.74 AMERICAN CYANAMID CO A96 D22 F04 = CA 1066-579
Flexible composite wound dressing - 63680W/38
- AMCY 18.04.78 AMERICAN CYANAMID CO A91 D15 (A14) = NO 7901-271
Dewatering lime disinfected sewage sludge - 56195B/30
- AMCY 18.04.78 AMERICAN CYANAMID CO A91 D15 (A14) = SW 7903-346
Dewatering lime disinfected sewage sludge - 56195B/30
- ANIS 02.07.76 ANIC SPA D15 J01 = DS 2729-891
Agglomerating mercury particles esp. in aq. effluent - 02088A/02
- ANKE/ 10.05.77 ANKERSMITH H J D15 H03 J01 (H05) = US 4176-068
Oil water sludge gravity sepn. - 84417A/47
- ANVR 22.02.78 AGENCE NAT VALORISATION B04 D16 J04 (D13) *FR 2418-462
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- ASAE 13.05.75 ASAH DENKA KOGYO D13 = J7 9036-662
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- ASAE 20.04.78 ASAH DENKA KOGYO D23 *J5 4139-611
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- ASAE 21.04.78 ASAH DENKA KOGYO D11 *J5 4139-612
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- ASAG 18.04.78 ASAH GLASS KK A88 D14 (A18 A97) *J5 4138-052
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- ASAH 18.04.78 ASAH CHEMICAL IND KK D13 *J5 4138-153
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- ASAH 18.04.78 ASAH CHEMICAL IND KK D13 *J5 4138-157
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- ASAH- 22.09.77 ASAHIMATSU KORIDOFU D14 = US 4175-482
prodn. of clean peeled soya beans etc. - 08059B/05
- *ASFA= 10.03.77 AS USSR FAR EAST SC B04 D16 *SU -653-265
Animal tissue glycosidase enzyme extract purificn. - 88955B/49
- *ATKI/ 22.05.78 ATKINSON A B04 D16 *GB 2021-594
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- ATLS 26.04.73 ATLANTIC RESEARCH D16 E15 = DS 2321-227
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- *AUBE/ 23.02.78 AUBERT M A88 D16 (D13 D21) *FR 2417-979
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- AUTO- 17.05.78 AUTO SYSTEMS LTD D12 #NL 7805-288
Appts. for sorting articles esp. chickens on conveyor - 07531B/04
- *AUTO- 17.05.78 AUTOSYSTEMS LTD D12 *NL 7805-289
Conveying system for suspended objects has weighing station - 88751B/49
- *AVDO/ 04.11.76 AVDONKIN A F D13 *SU -654-261
Thick tomato paste concentrator - 89045B/49
- AVIC- 04.12.72 AVICON INC A96 D22 F04 = J7 9036-641
Haemostatic adhesive dressing - 39731V/21
- BADI 17.11.71 BASF AG D18 E17 = US 4175-922
Depilating hides - 32262U/23
- *BADI 18.05.78 BASF AG D25 E13 *DT 2821-626
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- *BAKI= 15.11.77 BAKINO WATER SUPPLY D15 *SU -653-217
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- *BALN- 02.11.73 INST BALNEOLOG FIZ D15 *RU --66-522
Adaptable trap for mineral water gas - B/49
- *BALN- 03.01.74 INST BALNEOLOG FIZ D15 *RU --66-820
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- BAMA- 26.05.78 BAMACH BV D14 = DT 2921-310
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- BANY 22.10.73 BANYU PHARM CO LTD B02 D16 = J7 9037-238
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- BARH/ 19.05.78 BARHAM H N J C03 D13 = NL 7903-886
Cereal and seed grain modification - 86240B/48
- BARR- 07.05.71 BARREIROS HNOS SA D12 = J4 8001-157
Shell fish treatment - 14872U/11
- BARR- 07.05.71 BARREIROS HNOS FINA D12 = J7 9036-221
Shell fish treatment - 14872U/11
- *BASH= 28.12.76 BASHKIR AGRIC INST D14 *SU -654-236
Milk cooler for use under field conditions - 89040B/49
- *BATE/ 11.04.78 BATES W J C03 D22 E14 *GB 2021-417
Air conditioning device supported on an electric light bulb - 88076B/49
- *BAUE/ 29.06.78 BAUERFEIND G A97 D13 *DL -137-398
Plastic wax compsn. for coating cheese - 87625B/49
- *BAUM/ 28.06.78 BAUMGARTEN U D16 *DL -137-407
Gasifying system in fermentation reactor - 87632B/49
- BEAF 28.04.75 BEATRICE FOODS CO D13 = CA 1066-551
Synergistic combination cheese extender for mozzarella cheese - 20672X/11
- BEAF 20.05.78 BEATRICE FOODS CO D13 = DT 2822-150
Stabiliser, thickening agent etc. for food - 21993B/11
- BECT 07.04.75 BECTON DICKINSON CO B04 D16 = DT 2660-445
Stable carriers, esp for immunoabsorbents - 80578X/43
- BEDD/ 21.04.78 BEDDING P M J D25 (D16) = SW 7804-614
Cleaning soln. for soft contact lenses - 79480B/44
- BEDR- 28.02.76 BEDROSIAN & ASSOC A92 D13 (A11 A17) #FR 2418-175
Controlled atmosphere tomato package - 28703A/15
- *BERG 26.05.78 BERGWERKSVERBAND GMBH C03 D21 E13 (D13 D23) *DT 2822-907
Indole prodn. from 1,2,3,4-tetra:hydro-quinoline - 87855B/49
- BERG 26.05.78 BERGWERKSVERBAND GMBH C03 D21 E13 (D13 D23) = GB 2021-573
Indole prodn. from 1,2,3,4-tetra:hydro-quinoline - 87855B/49
- *BERG/ 29.06.78 BERGK K H A97 D25 E33 (A26) *DL -137-447
Foam regulator for washing powders - 87648B/49
- *BERG/ 10.07.78 BERGNER H C03 D13 *DL -137-662
Pig feed prodn. from ground straw - 87700B/49
- *BETT- 17.10.77 BETTCHER IND INC D12 *US 4175-321
Manually held and manipulated knife for e.g. meat - 89128B/49
- BIER- 11.08.77 BIER-DRIVE AG D16 = DL -137-566
Spherical storage tank mount - 16152B/09
- BIER- 11.08.77 BIER-DRIVE AG A92 D16 = DL -137-567
Reinforcement of joints in spherical GRP pressure vessels - 89699A/50
- BIER- 11.08.77 BIER-DRIVE AG A92 D16 = DL -137-571
Beer tank charging system - 16151B/09
- BIER- 11.08.77 BIER-DRIVE AG D16 = DL -137-572
Pressurised beer tank fitting - 16150B/09
- BOEF 09.08.74 BOEHRINGER MANNHEIM GMBH A96 B04 D16 = DS 2438-436
Shaped articles with an enzymatically active surface - 16265X/09
- *BOEH 03.06.78 BOEHRINGER SOHN CH B04 C03 D16 *BE -876-739
Antiviral compsn. contg. eucaryotic transfer-RNA - 87609B/49
- *BOEK/ 28.04.78 BOEKE J D15 J04 *WP 7900-998
Acidity and ion concn. control process streams - 89369B/49
- BOLI 27.02.76 BOLIDEN AB C03 D13 = US 4176-203
Alkali treatment of lignocellulosic materials - 63339Y/36

BONG-

- BONG- 18.05.78 FILS O BONGARD CI D11 =DT 2855-021
Bakery multi-tier electric oven of modular construction - 20056B/11
- BONG- 18.05.78 BONGARD O ET CIE D11 =NL 7811-263
Bakery multi-tier electric oven of modular construction - 20056B/11
- BONN- 12.04.73 BONNAND/LORNAC D11 =DS 2416-624
Automatic distribution appts. for cut lengths - 61481V/35
- *BOVA/ 31.07.78 BOVA ML D14 *US 4175-690
Slicing fruit, esp. water-melon, into wedge shaped portions - 89178B/49
- BREW 08.04.75 BREWING PATENTS LTD D16 =GB 1557-156
Introducing gases into fermentation liquids - 59311Y/33
- BRIA 29.10.74 MASCH FAB BRIEM-HEN D11 =DS 2451-326
Combined cutting and shaping machine for bakeries - 38210X/21
- BRIU 01.11.73 BRIDGESTONE GAS D16 H04 =J7 9036-676
Culture of Bacillus microbe - 68008W/41
- *BROV 23.05.78 BBC BROWN BOVERI AG D15 E36 J01 *DT 2825-125
Regeneration of activated carbon used for water treatment - 87900B/49
- BROV 23.05.78 BBC AG BROWN BOVERI CIE D15 E36 J01 =GB 2021-548
Regeneration of activated carbon used for water treatment - 87900B/49
- BRPE 27.11.75 BP CHEMICALS LTD C03 D13 E17 F09 #CA 1066-617
Antimicrobial, antifungal aliphatic carboxylic acid compsns. - 38085Y/22
- *BRPE 20.09.76 BRITISH PETROLEUM LTD D15 H01 J01 *GB 1557-067
Crude oil recovery from reservoir - 88052B/49
- BRTA 16.05.78 BRIT AMER TOBACCO LTD D18 =NL 7903-773
Tobacco smoke filter pref. for cigarettes - 71731B/40
- BRWI 11.11.75 BROWN & WILLIAMSON CORP D18 E37 =CA 1066-496
Tobacco substitute comprising tobacco mixt. - 19991Y/12
- *BRYA/ 10.01.78 BRYANT JJ D15 J01 *US 4176-012
Appts. for distn. of salt water - 89237B/49
- *BSNG- 27.04.78 BSN-GERVAIS DANONE B04 C03 D13 *WP 7900-993
Cytochrome C and protein prodn. from yeast - 89365B/49
- *BUDE/ 03.11.75 BUDEKA YUF D15 J01 M14 *SU -653-219
Metal ion removal from ferrous metal etching aq. wastes - 88911B/49
- *BURL/ 19.07.76 BURLAK VG D12 *SU -654-228
Animal e.g. rabbit slaughtering and dismembering equipment - 89033B/49
- *BUZZ- 14.01.72 BUZZI PSAS D13 *IT 1033-062
Chestnut dough glazing method - B/49
- *CALI- 22.02.78 CALIF PROCESS MACH D13 *FR 2417-949
Mechanised de-stoning of fruit, partic. peaches and apricots - 87999B/49
- CAMP- 10.01.78 CAMPBELL SOUP CO D13 =US 4175-486
Protein extrusion and surface texturisation - 58675A/32
- *CASH- 22.05.78 CASHIN SYST CORP D12 *GB 2021-725
Safety device for bacon press - 88129B/49
- CELA 15.07.69 CELANESE CORP A11 D18 (A97) =DS 2034-594
Synthetic tobacco - 06276S/03
- CELA 13.03.78 CELANESE CORP A88 D18 (A11 A32) =PT --69-315
Cellulose acetate foam cigarette filter rod - 68589B/38
- CELF- 11.08.77 CELFIL CO ESTAB D18 F09 =DL -137-663
Mfr. of paper band for cigarette filter tips - 89704A/50
- CESK 25.04.74 CESKOSLOVENSKA AKAD A89 B04 D16 J01 (A14) =CA 1066-847
Synthetic adsorbants for gel chromatographic sepn. of enzymes - 62236W/38
- CESK 22.02.78 CESKOSLOVENSKA AKAD A96 B04 D16 =FR 2418-245
Polymeric carrier activated for bonding of nucleophilic groups - 66684B/37
- *CHEM= 19.03.77 CHEM IND RES INST D25 E17 *SU -652-174
Surface-active alkyl sulphate cpds. prepn. - 88812B/49
- CHIR- 05.04.78 CHIRON SA D13 =PT --69-381
Uncooked food prod. contg. meat or fish and cereals - 73612B/41
- CHIS- 27.05.71 CHISSO ENG CO LTD D15 J04 =J7 9037-337
Decompsn of oil-contg colloidal solns and waters - 49448U/35
- CHIY 28.06.72 CHIYODA KAKO KENSET D15 =DS 2306-626
Purificn of water - 71026U/47
- CIBA 23.07.70 CIBA GEIGY AG B05 C03 D22 E14 =J7 9037-205
Halogen-substd hydroxyphenyl-alkyl(or halogen substd-phenyl) - 08652T/06
- CIBA 15.12.75 CIBA GEIGY AG D22 E14 F06 =CA 1066-618
Synergetic microbicide contg. halogenated hydroxy diphenyl ether - 43931Y/25
- CIBA 03.01.78 CIBA GEIGY CORP D15 E36 =US 4176-060
Removal of soluble cyanide complexes from waste waters - 51264B/28
- CIBA 24.02.78 CIBA GEIGY AG A97 D15 (A26) =FR 2418-203
Elimination of heavy metal ions from waste waters - 63162B/35
- CIGA 21.04.78 CIGARETTE COMPONENT LTD D18 F07 =SW 7903-445
Cigarette filter additives carried on preimpregnated threads - 64740B/36
- *CIMP- 06.07.79 CIMPAM COM IND MAQ D11 *BR 7904-260
Dough shaping and dividing machine - B/49
- CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 =DT 2920-978
Anaerobic effluent treatment tank with reaction and settlement zones - 85962B/48
- CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 =DT 2921-070
Supply system for anaerobic biological treatment tank - 85963B/48
- CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 =GB 2021-549
Anaerobic effluent treatment tank with reaction and settlement zones - 85962B/48
- CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 =GB 2021-550
Supply system for anaerobic biological treatment tank - 85963B/48
- COLG 08.10.75 COLGATE PALMOLIVE CO D22 =GB 1557-273
Reinforced throw away babys nappy - 11206Y/07
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 F07 =BR 7901-805
Disposable tampon or towel - 56316B/31
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 =BR 7901-818
Absorbent pad for sanitary towel, disposable napkin, etc. - 69951B/39
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 =BR 7901-821
Mfg. absorbent pad for sanitary towel, disposable napkin, etc. - 69952B/39
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 F07 =PT --69-357
Disposable tampon or towel - 56316B/31
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 =PT --69-375
Absorbent pad for sanitary towel, disposable napkin, etc. - 69951B/39
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 =PT --69-378
Mfg. absorbent pad for sanitary towel, disposable napkin, etc. - 69952B/39
- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) =NL 7903-828
Detergent compsn. for washing powders contg. specified clays - 69974B/39
- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) =NL 7903-832
Detergent compsn. for washing powder contg. meta-kaolin - 69975B/39
- COLG 19.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25) =DT 2918-166
Transparent gel dentifrice of specified compsn. - 71735B/40
- COLG 25.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25 E33) =DT 2918-132
Dentifrice paste compsn. contg. calcium carbonate - 71767B/40
- COLL- 22.05.78 COLLARD VALLEY RES C03 D13 #DT 2822-272
Ruminant feed contg. ppte. dust from Portland cement - 87767A/48
- *COMS 22.02.78 COMMISS ENERGIE ATOMIQUE A89 B04 D16 J04 *FR 2418-457
Device for sepg. e.g. antibodies in radioimmunology - 88041B/49
- CONC- 24.08.70 CONCETRADOS MACIONA D13 =IT 1033-051
Chewing gum - 07121T/05
- CORG 24.02.78 CORNING GLASS WORKS D15 E17 J01 (E36) =FR 2418-007
Porous hydrophobic inorganic membrane - 65097B/36
- CORG 24.02.78 CORNING GLASS WORKS D15 =FR 2418-204
BOD determ. and processing of organic waste in aq. medium - 65107B/36
- CORP 13.11.68 CPC INTERNATIONAL INC D16 (D13 D17) =IT 1033-034
Pullulane prod using starch as c-source for - 32400S/19
- CORP 04.04.78 CPC INTERNATIONAL INC D17 E13 #BR 7802-098
Powdered beta:dextrose prodn. - 25240A/14
- COST/ 11.01.77 COSTA R D13 =IT 1033-017
Food kneading machine - 51881A/29
- COST/ 03.06.77 COSTA R D13 =IT 1033-018
Food kneading machine - 51881A/29
- COST/ 10.10.77 COSTA R D11 =IT 1033-019
Kneading machine for food e.g. bread dough - 29985B/16
- COST/ 07.03.78 COSTA R D11 =IT 1033-020
Kneading machine for food e.g. bread dough - 29985B/16
- COUS/ 14.01.74 COUSIN C D23 =IT 1033-115
Fat compsn. with quasi-vitreous structure - 47687W/29
- *CSIR 27.02.78 COMMONWEALTH SCIENTO A91 D15 *FR 2418-252
Amphoteric ion-exchange resin capable of thermal regeneration - 88029B/49
- CUSI- 13.11.75 LAB CUSI SA A96 B07 D21 =DS 2607-849
Glycol-based excipients for pharmaceutical compsns. and cosmetics - 38369Y/22
- *CUXS- 19.07.75 CUXSON GERRARD & CO D22 *GB 1557-168
Surgical dressing for finger - 88057B/49
- *DAIG 17.04.78 DAIGO EIYO KAGAKU KK B05 D16 *J5 4138-189
Purificn. of urokinase for treating thrombosis - 88322B/49
- DAII 02.09.76 DAIICHI KOGYO SEIYA D11 =J7 9037-219
Powdery surfactant compsn. for incorporating into food prods. - 33911A/19
- *DAII- 18.04.78 DAIICHI NOZAI KK D13 E31 *J5 4138-146
Preservative for vegetables, fruit and flowers - 88313B/49
- DAIL 29.00.73 DAICEL KK A60 D23 (A14) =J7 9037-166
Epoxidized soybean oil purifn - 38173W/23
- DAVY 07.07.72 DAVY INT AG D15 E16 =DS 2233-377
Industrial effluent purificn - 07481V/05
- DEAK 21.02.72 AKAD WISSENSCHAFT DDR D17 (D13) =SU -652-219
Hydrolysed starch prods of low dextrose equivalent - 51953U/36
- *DEAK 15.09.75 AKAD WISSENSCHAFT DDR D13 (D16) *DL -137-783
Enzymatic carrot juice prodn. - 87741B/49
- DEAK 20.10.77 AKAD WISSENSCHAFT DDR D16 =DL -137-807
Microorganism cultivation plant - 33606B/18
- *DEAK 29.06.78 AKAD WISSENSCHAFT DDR C03 D13 *DL -137-399
Recovering proteins by isoelectric pptn. with acid - 87626B/49
- *DEAK 29.06.78 AKAD WISSENSCHAFT DDR D13 (D12) *DL -137-400
Strengthening structured protein articles, esp. fibres - 87627B/49
- *DEAK 18.07.78 AKAD WISSENSCHAFT DDR B01 D16 *DL -137-840
Pharmaceutical intermediate androstene di:one prepn. - 87763B/49
- DEGS 23.02.78 DEUTSCHE GOLD & SILBER B04 D16 #FR 2418-238
Lipase stabilisation in enzyme preparations - 63319B/35

- DEGS 10.03.78 DEUTSCHE GOLD & SILBER D25 E34 = BR 7900-966
Sodium percarbonate particles coated with dehydrated sodium perborate - 66331B/37
- DEGS 31.03.78 DEUTSCHE GOLD & SILBER D21 M26 = BR 7901-814
Low gold content alloy for baking on dental porcelain - 06146B/04
- DELM 29.12.75 DELMAR CHEM LTD A97 D22 E36 (A14) *CA 1066-614
Germicidal and bactericidal compsn. - 87615B/49
- DESA- 05.10.78 DESAL-CHEM INC D15 J03 *US 4176-023
Brine desalination process - 89241B/49
- DHVR- 18.05.78 DHV RAADGEVEND ING D15 = NL 7805-358
Lowering the phosphate content of effluent water - 71739B/40
- DIAC- 19.04.78 DIA CHEMIPHAR KK D13 E36 G04 *J5 4138-489
Deoxidation indicator for checking activity of oxygen adsorbent - 88332B/49
- DIST 29.04.77 DISTILLERS CARBON D16 = GB 1557-123
Bitter essence extn. from hops - 63484A/36
- DMVC- 19.05.78 DMV-CAMPINA BV D13 = NL 7805-463
Cooking fat giving good browning - 84175B/47
- DNIN 17.04.78 DAINIPPON INK CHEM KK D13 E23 *J5 4138-156
Blue chewing gum, coloured by phycocyanine - 88316B/49
- DOLI/ 26.03.79 DE OLIVEIRA A S D16 (D14) *PT --69-393
Conversion of tomato concentrate plants to alcohol prodn. - B/49
- DORO 24.05.78 DORR OLIVER INC D15 J04 = DT 2920-664
Flow distributor for fluid bed reactor - 86324B/48
- DOWC 23.05.78 DOW CHEMICAL CO C03 D13 #DT 2822-488
Feed compsns. contg. malic acid as ruminant feedstuff - 86136A/48
- DOWO 07.03.74 DOW CORNING CORP A96 D21 (A26) = IT 1033-394
Hardenable dental cast mixt. - 62539W/38
- DPAL/ 28.02.75 DI PALMA G B07 D13 = IT 1033-331
Sweets and pills coating machine - 69111X/37
- DRAG- 22.02.78 DRAGOCO GERBERDING D23 E15 = FR 2418-214
Fixative for perfume compsns. - 64806B/36
- DROU/ 22.02.78 DROUET J C D11 = FR 2417-944
Loading and unloading trolley for multistage baking oven - 64932B/36
- DUSC/ 04.07.78 DUSCHEK C B03 D23 E13 *DL -137-585
Prepn. of 2-alkenyl-1-oxa-cycloalkene cpds. - 87680B/49
- DUVE/ 22.02.78 DUVERNE J C M D15 *FR 2418-205
Solidifying mud etc. for infilling building foundations - 88025B/49
- DYNN 19.05.78 DYNAMIT NOBEL AG B04 D16 = NL 7903-946
Regeneration of enzyme immobilisates - 71746B/40
- ECAL/ 08.01.71 ECAL M J F D16 = IT 1033-061
Grape must pretreated to destroy the polyphenol oxydase - 77647T/49
- ELIL 09.04.73 ELI LILLY & CO B02 D16 = RU --64-209
Fermentative deacetoxycephalosporin c prodn - 69735U/46
- ELPA- 24.06.77 EL PASO ENVIRONMENT D15 J01 *US 4176-057
Recovering liquid and solid constituents from waste waters - 89258B/49
- ENGE 25.05.78 GEC DIESELS LTD D15 *GB 2021-547
Flocculation of gelatinous sludges - 88089B/49
- ENTI 26.04.78 ENTOLETER INC D17 J09 *WP 7900-990
Appts. for processing bagasse - 89364B/49
- EQUI- 21.02.77 EQUIPOS IND LLOYD D11 = GB 1557-025
Continuous oven for baking bread - 45908A/26
- ETHI 18.11.74 ETHICON INC D22 = CA 1066-581
Surgical needle-suture combination - 86179W/52
- EURT 01.10.73 EUROC ADMINISTRATION AB D16 = IT 1033-099
Decomposing domestic refuse - 24637W/15
- EYGE- 23.05.78 EGYESULT MUSZAKI D15 #DT 2822-497
Purificn. of esp. oil polluted water - 72835A/41
- EZAK 26.05.76 EZAKI GLICO D13 = J7 9036-216
Sugar-coated fried nuts prepn. - 05679A/03
- FABR/ 05.06.75 FABRE H S D11 *FR 2417-945
Bakery dough moulder for cylindrical stick loaves - 87998B/49
- FARB 30.03.72 BAYER AG A96 B04 D16 (A14) = IT 1033-414
Water-insoluble protein prepn. - 62769U/42
- FARB 11.04.78 BAYER AG B04 D16 J04 (B05) = J5 4138-538
N-Carboxy:acyl aminoacid ester derivs. - 75673B/42
- FARB 18.04.78 BAYER AG D21 E14 = DK 7901-563
Cosmetic light-protective compsn. - 80936B/45
- *FARB 26.05.78 BAYER AG D15 J01 *DT 2823-057
Semipermeable membrane unit - 87868B/49
- *FARE= 09.11.76 FAR-EAST POLY D12 *SU -654-233
Automatic three grade fish sorter - 89038B/49
- *FARF 17.07.78 VEB CHEMIEKOMB BITT D25 E13 (D22) *DL -137-846
Disinfectant detergent compsn. contg. 2-mercapto benzothiazole - 87768B/49
- FARH 01.06.73 HOECHST AG B03 D13 E13 = DS 2327-804
3,4-Dihydro-1,2,3-oxa-thiazin-4-ones prepn - 88133V/51
- FARH 23.10.74 HOECHST AG A82 D23 G02 M21 = CA 1066-832
Chromic acid oxidn of bark waxes - 81691W/50
- FARH 24.07.76 HOECHST AG C03 D16 (D13) = SU -652-901
Bacterial cell mass protein source for nutrition - 08585A/05
- FARH 25.07.77 HOECHST AG A60 D22 E16 M25 (D21) = DL -137-581
Non-symmetrical sec. ether-amine derivs. - 10263B/06
- FARH 02.11.77 HOECHST AG A14 D21 G03 (A81 A96) = PT --68-540
Preparing vinyl ester-crotonic acid copolymer - 37255B/20
- FARH 07.04.78 HOECHST AG B04 D16 = J5 4138-186
Coagulating fermented biomass suspensions - 75297B/42
- FARH 14.04.78 HOECHST AG D25 E16 = J5 4138-512
Colourless tetra:acetyl-ethylene di:amine prepn. - 79391B/44
- FARH 24.04.78 SOC FRANC HOECHST A21 D15 (A97) = WP 7900-975
Quaternised melamine glyoxal resins - 84590B/47
- FARH 22.05.78 HOECHST AG D25 E36 = DT 2822-231
Granular compsn. used as detergent auxiliary - 85940B/48
- *FARH 26.05.78 HOECHST AG A97 D12 (A11 A21 A92) *DT 2822-886
Tubular packing film, esp. sausage skins - 87852B/49
- *FERM= 12.08.77 FERMENT PRODUCTS D16 *SU -652-213
Continuous alcoholic fermentation of molasses - 88848B/49
- FIND- 08.05.78 PRODUITS FINDUS SA D14 = WP 7901-038
Meat and cheese block mincing machine - 86247B/48
- *FIPO 17.03.78 FISCHER PORTER D15 E36 J04 *US 4176-031
Calculating hypochlorous acid concn. in chlorinated water - 89244B/49
- FIRM 30.06.76 FIRMENICH SA D23 E15 = J7 9037-209
Modifying the characteristics of perfume or perfumed prod. - 04705A/03
- FIRM 26.08.77 FIRMENICH SA D23 E15 = US 4176-139
Spiro cpd. prodn. for use in perfumery industry - 18353B/10
- FIRM 17.04.78 FIRMENICH SA D23 E13 = J5 4138-550
3-Norbornyl-glycidate alkyl ester derivs. - 79412B/44
- FIRM 11.05.78 FIRMENICH SA D23 E15 = GB 2021-574
Unsatd. cyclopentenyl ketone perfume components - 84404B/47
- *FISH= 01.11.76 FISHING FLEET DES D12 *SU -654-232
Device for removal of internal organs from fish in processing - 89037B/49
- FISO 27.07.74 FISONS LTD A97 C02 D16 (C03) = CA 1066-530
Atrazine herbicide suspensions - 13359X/08
- *FOOD= 25.08.77 FOOD IND EXTRAMURAL INST D16 *SU -652-215
Fruit-berry juice alcoholic fermentation - 88850B/49
- *FORS- 26.10.77 FORSYTH DENTAL INFI A96 B04 D21 F01 (A11 B07) *US 4175-326
Hollow fibre device contg. indicator or therapeutic agent - 89129B/49
- FRAN/ 21.06.76 FRANKLIN G C D15 J02 #CA 1066-822
Submersible vertical liquid aeration tube - 57753X/30
- FRAN/ 22.02.78 FRANCES C03 D13 = FR 2417-948
Animal feed compsn. - 47782A/27
- *FREN 21.04.78 FREUND INDUSTRY LTD B04 D14 J04 *J5 4138-871
Appts. for prodn. of granules e.g. pharmaceutical tablets - 88442B/49
- *FRID/ 07.07.75 FRIDMAN S G D13 E34 *SU -653-215
Cooking salt from sea water extn. - 88907B/49
- FRNG 22.12.75 FRINGS H F A D16 = J7 9036-679
Vinegar prodn. with high acetic acid concn. - 47311Y/27
- FRNG 24.02.78 FRINGS H F A D16 J01 = FR 2418-010
Ultrafiltration circuit with recirculation - 64839B/36
- *FUJI 17.04.78 FUJISAWA PHARM KK B05 D16 *J5 4138-191
Coenzyme/Q:9 prodn. on an industrial scale - 88324B/49
- *GANN/ 24.04.78 GANNON J J D13 *WP 7900-982
High protein food product made from grain - 89362B/49
- GAUS- 21.10.77 GAUSEWITZ CARR & RO D15 = US 4176-063
Water purification plant - 33615B/18
- GCDE- 15.12.75 G-C DENTAC IND A96 D21 E14 (A14 A25) = J7 9036-953
Resinous compsns. for repair or construction of dental crowns - 50642Y/29
- GENO 07.03.74 GENERAL FOODS CORP B05 D13 E16 = IT 1033-489
Dry, free-flowing, stable and soluble synthetic sweeteners - 62563W/38
- GENO 22.05.78 GEN FOODS LTD D13 #DT 2822-319
Soluble coffee solids powder prodn. - 15665B/08
- GESL 28.11.75 KERNFORSCHUNGS KARLSRUHE A97 D15 K07 L01 = GB 1557-261
Radioactive effluent solidification in matrix - 41885Y/24
- GISL- 01.11.76 GUMMIFABR GISLAVED A88 D15 J01 (A18 J04) = GB 1556-955
Large surface area plastic elements - 38754A/22
- GIVA 25.03.70 GIVAUDAN L & CIE SA B05 D23 E17 = IT 1033-052
Citronellal, improved production from citral - 63064S/39
- GLAX 25.04.79 GLAXO LTD A97 B04 D16 = GB 2021-640
Acremonium chrysogenum strains for cephalosporin prodn. - 80819B/45
- GOLD- 27.08.77 GOLDSAAT F DORING D14 = DS 2738-698
Refrigerator and fan for preserving granular foodstuffs - 20158B/11
- GRAC 24.05.78 GRACE W R CO D21 E36 = DT 2920-906
Dentifrice contg. hydrated silica gel polishing agent - 71785B/40
- GROB/ 24.10.74 GROBLER J J A91 C03 D15 #US 4176-058
De-silting of water - 03698W/02
- *GYOG 23.05.78 GYOGYSZERKUTATO INT B04 D16 *DT 2921-022
Nebramycin antibiotic complex microbiological prodn. - 87983B/49
- HAAR 22.02.75 HAARMANN & REIMER GMBH D23 E14 (D21 D25) = J7 9036-657
Stable dichloro-cyclopropane derivs. - 68932X/37

- *HAHN/ 15.12.75 HAHNEFELD H B04 C03 D16 *DL-137-785
Vaccine prodn. esp. for human larynx papillomatosis - 87743B/49
- *HAIM 23.05.78 ALPMA ALPENLAND-MAS D13 *DT 2822-513
Reversible moulds esp. for large area cheese blocks - 87825B/49
- *HALL- 30.06.78 VEB STRASSEN HALLE D15 *DL-137-456
Sand trap for clarifying plant e.g. for sewage - 87655B/49
- HANR/ 04.03.77 HANRAHAN JR A83 D22 F07 (A86 A96) = GB 1557-140
Protective garment with moulded-on cushions - 65660A/37
- HARN 21.11.75 HARTMANN PAG D22 = US 4175-560
Surgical swab or tampon made by rolling instead of by knotting - 21969Y/13
- HATS 25.02.77 NHK SPRING KK A26 C03 D21 G02 (G03) = J7 9037-040
Sulphonate-contg. polyurea - 63804A/36
- HAUN 08.01.69 HAUNI-WERKE KORBER KG D18 = DS 1900-701
Cigarette producing machine - 74438V/43
- HAYA- 22.09.76 HAYASHKANE SANGYO D13 = J7 9036-213
Sterilising and packaging food materials - 35968A/20
- HAYA/ 25.02.74 HAYASHIT D11 = IT 1033-150
Bread dough prepn machine - 59165W/36
- HAYB 23.01.68 HAYASHIBARA BIOCHEM D17 = SU -652-883
Maltitol prodn - 82559R/44
- HAYB 16.12.70 HAYASHIBARA T D17 = J7 9037-211
Saccharose-starch syrup without reducing sugars - 42078T/26
- HAYB 20.02.71 HAYASHIBARA KEN D13 E13 = IT 1033-064
Use of maltobionic acid as seasoning agent - 59799T/38
- HENK 17.04.78 HENKEL KG AUF AKTIEN B01 D16 = DK 7901-570
17-C-Steroid alpha-propionic acid derivs. prodn. - 79388B/44
- HENK 17.04.78 HENKEL KG AUF AKTIEN B01 D16 = NO 7901-247
17-C-Steroid alpha-propionic acid derivs. prodn. - 79388B/44
- HENK 20.05.78 HENKEL KG AUF AKTIEN D18 E17 (E33) = DT 2822-072
Replacing waste water polluting auxiliaries in leather mfr. - 86279B/48
- *HENK 20.05.78 HENKEL KG AUF AKTIEN D18 E33 *DT 2822-076
Use of water-insoluble aluminosilicate cpds. in leather mfr. - 87805B/49
- *HENK 24.05.78 HENKEL KG AUF AKTIEN D22 E14 *DT 2822-608
Hand disinfecting solns. for use before operating - 87832B/49
- HIEJ 14.05.76 HITACHI PLANT ENG CONST D15 = J7 9036-412
Treating river water etc., to make it potable - 01179A/01
- *HIRS/ 10.02.77 HIRSCHMAN SZ D22 *US 4175-561
Improved sorption feminine hygiene pad - 89161B/49
- *HISM 19.04.78 HISAMITSU PHARM KK A96 B07 D22 (A12 A13) *J5 4138-124
Cataplasm with improved elasticity, adhesiveness and tackiness - 88302B/49
- HITA 20.09.74 HITACHI KK D15 J01 = DS 2541-902
Collection and sepn of solid bodies - 26774X/15
- *HITA 21.04.78 HITACHI KK D15 J01 K07 *J5 4139-257
Desalination filter for high temp. water from nuclear reactor - 88475B/49
- *HITF 17.04.78 HITACHI SHIPBLD ENGG KK D15 L02 *J5 4137-851
Bentonite- and cement-contg. waste liquor treatment - 88218B/49
- *HITK 17.04.78 HITACHI METAL KK D15 J09 *J5 4137-850
Chromium-contg. sludge treatment - 88217B/49
- *HITK 21.04.78 HITACHI METAL KK D15 J09 *J5 4139-261
Treating chromium-contg. sludge - 88477B/49
- HOEY- 19.05.78 HOEYER O G AS D13 = GB 2021-381
Frozen sweets extraction device - 86191B/48
- HOFF 22.08.69 HOFFMANN-LA ROCHE AG D13 = IT 1033-045
Non cerogeric sugar substitute for food - 16862S/09
- HOFF 14.08.70 HOFFMANN-LA ROCHE AG B04 C03 D16 = J7 9036-232
Antibiotic x-5108 - 13520T/09
- HOFF 14.09.77 HOFFMANN-LA ROCHE SA D21 E16 (E13) = PT --68-547
Cosmetic compsn. having anti-seborrhoea activity - 22379B/12
- HOFF 27.02.78 HOFFMANN-LA ROCHE SA A96 B04 D16 J04 = FR 2418-464
Immunochemical assay of LDH-1 isoenzyme in serum - 65128B/36
- *HOKK- 19.05.78 HOKKO YUSHI KK D21 E19 *DT 2822-021
Detergent compsns. for skin cleansing - 87800B/49
- HONG- 01.12.70 HONG KONG SOYA BEAN D13 = IT 1033-058
Cheese product - 39733T/25
- HOTA- 13.04.78 HOTACO A/S D15 = NO 7901-165
Appts. for biological purification of waste water - 79396B/44
- *ICHI- 19.04.78 ICHIMARU BOEKI KK A96 D21 *J5 4138-131
Cosmetic skin powder prepn. - 88307B/49
- *ICHI- 19.04.78 ICHIMARU BOEKI KK A96 D21 *J5 4138-132
Skin cosmetic base - 88308B/49
- ICIL 24.02.78 IMPERIAL CHEM INDS LTD D25 E16 F06 = FR 2418-220
Quat. ammonium cpd. mixt. used as softening agent - 63152B/35
- *ICIL 27.02.78 ICI AUSTRALIA LTD A91 D15 *FR 2418-252
Amphoteric ion-exchange resin capable of thermal regeneration - 88029B/49
- ICIL 30.03.78 ICI AMERICAS INC D17 E17 = BR 7901-809
Mannitol-rich solns. prepn. from glucose - 75700B/42
- ICIL 30.03.78 ICI AMERICAS INC D17 E17 = BR 7901-810
Mannitol-rich soln. mfr. from glucose and mannose and/or fructose - 75701B/42
- ICIL 08.05.78 IMPERIAL CHEM INDS LTD C02 D13 = DT 2908-845
Treatment of ruminants with aplasmomycin or related cpds. - 52996B/29
- INFL 11.08.76 INT FLAVORS & FRAGR INC D23 E15 (D13) = US 4175-569
Higher carbonyl cpds. having organoleptic properties - 52578Y/30
- INFL 19.04.78 INT FLAVORS & FRAGR INC D23 E13 = J5 4138-567
Prodn. of perfume cpds. esp. isochroman derivs. - 59738B/32
- INOZ 30.11.73 INOUE JAPAX RES INC D15 J03 = J5 0084-469
Electrolytic cell for treating waste water - 88734B/49
- *INOZ 30.11.73 INOUE JAPAX RES INC D15 J03 *J7 9037-103
Electrolytic cell for treating waste water - 88734B/49
- INPL 17.05.78 INT PLAYTEX CORP A11 D22 (A96) = DT 2920-019
Particulate water-insoluble CMC prepn. - 84161B/47
- INPL 17.05.78 INT PLAYTEX CORP A11 D22 (A96) = NL 7903-775
Particulate water-insoluble CMC prepn. - 84161B/47
- INTE- 13.05.75 INTEROX CHEM LTD A60 D25 E14 F06 = CA 1066-717
Bleaching agents for domestic, fabric-washing detergent compsns. - 88804X/48
- INTE- 23.03.78 INTEROX CHEMICALS D16 M25 = BR 7901-755
Bacterial leaching of ores, esp. ferrous sulphide ores - 72162B/40
- INTE- 23.03.78 INTEROX CHEMICALS D16 M25 = PT --69-331
Bacterial leaching of ores, esp. ferrous sulphide ores - 72162B/40
- INTE- 17.04.78 INTEROX D25 E37 F06 (E14 F09) = J5 4138-004
Washing and bleaching compsn. contg. carbonate and peroxy cpd. - 77163B/43
- INTO 24.11.75 INT PAPER CO A96 D22 = US 4175-557
Polymeric sheet material for dressing wounds - 41080Y/23
- INTT 28.02.78 ITT INDS INC D11 = FR 2417-946
Edible moisture-barrier coating for doughnuts - 66560B/37
- IONI- 17.01.75 IONICS LYO PROD CO A96 D22 (A25) = CA 1066-466
Polyurethane foam surgical dressing - 71903X/38
- *ISEH- 14.04.78 ISEHAN HONTEN KK A96 D21 (D23) *J5 4138-134
Fragrant nail enamel - 88310B/49
- *ISHI/ 19.04.78 ISHIGAKI Z D15 J01 *J5 4138-883
Sponge material for sepn. of oil and water - 88452B/49
- *ISOM- 29.03.79 ISOMECANICA CONSTR D14 *PT --69-404
Conveyor system for cleaning and freezing food products - B/49
- *IZAW/ 20.04.78 IZAWA T D13 E19 (D12) *J5 4138-136
Preventing putrefaction of foods, esp. fish - 88312B/49
- JAOR 09.03.72 JAPAN ORGANO KK D15 E34 J01 = J7 9037-104
Treatment of anion exchanger regeneration waste - 33466V/18
- *JAPE 18.04.78 JAPAN EXLAN KK A14 D22 F06 J01 (A88 A96) *J5 4138-693
Water-swellable fibres e.g. for filter or sanitary towel - 88405B/49
- *JAPG 24.04.78 NIPPON ZEON KK A96 D22 F04 *J5 4139-981
Mfr. of composite water absorbing material e.g. diaper - 88644B/49
- *JEYE- 21.03.78 JEYES GROUP LTD D25 *BR 7901-749
Deodorant tablet for toilet basin - B/49
- JEYE- 21.03.78 JEYES GROUP LTD A97 D25 = PT --69-374
Preparing tablets for cleaning lavatories - 54534B/30
- JOHJ 03.02.75 JOHNSON & JOHNSON D21 M23 (M26) = CA 1066-567
Brazing alloy for dental prostheses made of non noble metals - 61937X/33
- JOHJ 15.12.75 JOHNSON & JOHNSON A96 D21 E14 (A14) = GB 1557-263
Dental sealing compsn. - 43933Y/25
- JOHJ 03.04.78 JOHNSON & JOHNSON D22 E12 (E16) = J5 4139-614
Liq. toilet compsns. of reduced irritating potential - 75719B/42
- JOHJ 17.04.78 JOHNSON & JOHNSON A96 D22 = SW 7903-005
Surgical drape with liquid collection bag - 75107B/41
- JOHJ 05.05.78 JOHNSON & JOHNSON A97 D21 E11 (D25) = BR 7902-725
Novel phospho-betaine(s) and phosphitane(s) - 80842B/45
- *JOHJ 29.06.78 JOHNSON & JOHNSON D21 M26 *US 4175-953
Non-precious dental alloy - 89212B/49
- *JOHN- 22.07.77 JOHNSON PRODUCTS CO A96 D21 *US 4175-572
High ph hair conditioning compsns. - 89163B/49
- KANE 23.08.76 KANEBO KK D13 = J7 9037-220
Prepn. of storage stable porous hard chewing gum - 29828A/16
- KANE 21.09.76 KANEBO KK A97 D13 = J7 9037-221
Bubble-contg. hard chewing gum mfr. - 35977A/20
- KANE 23.02.78 KANEBO KK A96 D21 E17 = FR 2417-980
Lipstick having core and sheath - 65092B/36
- KAOS 01.03.74 KAO SOAP KK C03 D22 (D15) = J7 9036-646
Fatty acid amides used as algicides - 73012Y/41
- KAOS 10.07.75 KAO SOAP KK B05 C03 D22 E19 (D21) = GB 1557-225
Vinyl sulphoxide and sulphone derivs of allyl alcohol and acrylic acid - 09712Y/06
- KAOS 13.01.78 KAO SOAP KK D11 = J5 4098-366
Prodn. of cake e.g. short-cake - 88671B/49
- *KAOS 13.01.78 KAO SOAP KK D11 *J7 9036-223
Prodn. of cake e.g. short-cake - 88671B/49
- *KAOS 20.04.78 KAO SOAP KK D15 *J5 4139-264
Purifying surfactant-contg. waste water - 88478B/49
- KARL/ 08.03.74 KARLSSON H D23 = IT 1033-381
Piston of block candle press using paraffin powder - 62566W/38

- KARL/ 08.03.74 KARLSSON H D23 =IT 1033-382
Paraffin powder press for making block candles - 62567W/38
- *KAUF/ 19.07.78 KAUFMANN D D25 E33 *DL -137-599
Compsn. for thermo-regulated perfume release in washing powder - 87686B/49
- KAWA/ 10.09.76 KAWASAKI R D18 =GB 1557-356
Opt. nicotine-contg. tobacco substitute prepn. - 34465A/19
- *KAWI 18.04.78 KAWASAKI STEEL KK D15 *J5 4137-853
Purificn. of waste water from dry distn. of wood - 88220B/49
- KAYA 16.01.74 KAYAKU ANTIBIOTIC RES B04 D16 =J7 9037-239
Antibiotic K13-1 fermentative prepn. - 33252Y/19
- *KDFO= 25.12.76 KRASD FOOD IND RES D18 E12 *SU -654-241
Preventing mould growth in tobacco leaves - 89044B/49
- KEND 24.06.77 KENDALL CO D22 E13 =CA 1066-477
Sterilisation using ethylene oxide-contg. gas mixt. - 00433B/01
- *KEVA= 17.10.77 KAZA EAST VASKHNIL B04 D16 *SU -652-216
Microbial culture medium for bio-preparation mfr. - 88851B/49
- *KHFA= 02.02.77 KHARK FATS RES INST D14 (D23) *SU -654-239
Device for breaking open sunflower seeds for vegetable oil prodn. - 89042B/49
- *KIBU- 28.10.77 KIBUN KK D16 *J7 9036-236
High activity koji mfr. - 88673B/49
- *KIBU- 18.04.78 KIBUN KK D13 E12 *J5 4138-085
Treating coagulated salt of arginine acid - 88284B/49
- *KIBU- 18.04.78 KIBUN KK D13 E12 *J5 4138-086
Producing coagulated salt of arginine acid - 88285B/49
- *KIBU- 18.04.78 KIBUN KK D13 *J5 4138-135
Vegetable protein comps. prepn. - 88311B/49
- *KIBU- 18.04.78 KIBUN KK A97 D13 *J5 4138-154
Mfg. pressure-resistant watery food prods. - 88315B/49
- *KIFO= 11.02.76 KIEV FOOD IND TECHN D17 *SU -653-134
Sugar-beet pulp dewatering press - 88899B/49
- *KIFO= 13.12.76 KIEV FOOD IND TECH D17 *SU -652-218
Treatment of condensate from sugar juice evaporator - 88852B/49
- *KIFO= 15.03.77 KIEV FOOD IND TECHN D11 *SU -654-227
Bread-baking oven - 89032B/49
- *KIGU- 14.04.78 KIGUCHI YG D21 E16 *J5 4138-130
L-Cysteine-contg. cosmetics - 88306B/49
- *KIKK 22.04.78 KIKKOMAN SHOYU KK D13 *J5 4139-613
Solid, oily foodstuff - 88497B/49
- KIMB 06.03.78 KIMBERLY CLARK CORP D18 =GB 1557-253
Denitrated reconstituted tobacco prepn. - 68333B/38
- *KIRI 17.04.78 KIRIN BREWERY KK B04 D16 *J5 4138-115
Anticancer agents - 88295B/49
- KITA 15.04.76 KITASATO RES INST B02 D16 =GB 1557-041
Nanaomycin A derivs. used as antibiotics - 91038Y/51
- *KITA- 19.04.78 KITAOSAKA SEISO KK D15 M25 (M11) *J5 4138-801
Recovery of valuable metals from plating waste sludge - 88419B/49
- KLOC 19.05.78 KLOCKNER WERKE AG D15 =NL 7903-772
Sewage sludge pasteurisation - 50951B/28
- *KLOC 27.05.78 KLOCKNER WERKE AG D15 *DT 2823-237
Sewage purificn. tank with combined activation of effluent and sludge - 87895B/49
- *KOEI 21.04.78 KOEI CHEM IND KK D21 E13 *J5 4139-930
Dye comps. contg. di:amino:pyridine derivs. - 88613B/49
- KOKU- 28.10.77 KOKUZEICHO-CHOKAN D16 =J5 4064-697
High activity koji mfr. - 88673B/49
- *KOKU- 28.10.77 KOKUZEICHO-CHOKAN D16 *J7 9036-236
High activity koji mfr. - 88673B/49
- *KOMP= 30.03.77 KOMPLEKS POULTRY D12 *SU -654-231
Poultry processing plant feathers remover - 89036B/49
- KOND/ 16.02.74 KONDOS G CH D16 =IT 1033-122
Press, esp. for grapes and agricultural prods. - 57478W/35
- *KOND/ 16.05.78 KONDIC-DELNON V D12 *DT 2917-077
Sausage-making press with stack of rectangular frames - 87916B/49
- KONT/ 19.04.78 KONT G D22 =SW 7804-429
Disinfection of hospital equipment with hot damp air - 64720B/36
- KROY/ 02.03.78 KROYER K A81 D22 F04 =J5 4138-672
Binder-contg. fibrous sheet mfr. - 52566B/29
- KURK 12.02.76 KURITA WATER IND KK D15 E33 =J7 9036-421
Organic waste water treatment - 69539Y/39
- *KURS 20.04.78 KURARAY KK A81 D15 J01 *J5 4138-874
Repairing leaking hollow fibre membrane-filled module - 88444B/49
- KYOW 13.01.72 KYOWA HAKKO KOGYO B03 D16 =J7 9037-236
Megalomycins prodn. - 43112U/31
- KYOW 17.04.78 KYOWA HAKKO KOGYO KK B04 D16 J04 =J5 4138-533
Cholinesterase activity determination - 77672B/43
- *KYOW 19.04.78 KYOWA HAKKO KOGYO KK A96 B04 D16 *J5 4138-194
Antibiotics colistin, bacitracin, polymyxin and gramicidin - 88327B/49
- *KYOW 19.04.78 KYOWA HAKKO KOGYO KK B04 D16 *J5 4138-592
Antibiotic XK-201-IV - 88373B/49
- KYOW 20.04.78 KYOWA HAKKO KOGYO KK B04 D16 =J5 4138-501
Antibiotic DC-11 from Micromonospora sp. NRRL 11289 - 79569B/44
- LAIT- 02.03.78 LAITERIES TRIBALLAT A97 D13 =BR 7901-176
Acidulation of milk using cationic resin followed by acid - 68506B/38
- *LANG/ 24.07.78 LANGE L D16 E31 J04 *DL -137-860
Appts. for determining potassium ferrocyanide needed to clarify wine - 87773B/49
- *LENI 29.12.75 LENINGRAD LENS OVET TECH D15 J01 M25 *SU -652-959
Inorganic electron-ion exchanger prepn. - 88879B/49
- LEPE 01.03.74 GRUPPO LEPETIT SPA D23 E15 =IT 1033-236
Methyl jasmonate (analogues) prepn. - 47747W/29
- *LIED/ 04.07.78 LIEDLOFF B D21 E34 *DL -137-573
Prod. of Maddrell's salt from sodium mono:phosphate - 87673B/49
- LIND/ 05.09.75 LINDWALD S D12 #SU -654-148
Removing the skin from fish, esp fish fillets - 75911X/41
- LIOY 06.11.75 LION FAT & OIL KK A35 D16 (A25 A97) =J7 9036-674
Microbial decomposition of polyoxyethylene nonionic surfactants - 44417Y/25
- *LIOY 14.04.78 LION FAT & OIL KK A96 D21 (A11) *J5 4138-133
Hair cosmetic comps. - 88309B/49
- LOMS 26.05.78 LAB OM SA B04 D16 =DT 2917-730
Prevention and treatment of respiratory tract infections - 75331B/42
- LOMS 26.05.78 LAB OM SA B04 D16 =GB 2021-415
Prevention and treatment of respiratory tract infections - 75331B/42
- *LORE/ 05.07.78 LORENZ S A96 D21 *DL -137-527
Viscose fibre reinforced plastics dentures - 87661B/49
- *LORE/ 05.07.78 LORENZ S A96 D21 *DL -137-528
Dentures with fibre reinforced base - 87662B/49
- *LOTT 17.04.78 LOTTE KK D13 E23 *J5 4138-156
Blue chewing gum, coloured by phycocyanine - 88316B/49
- LUMM 15.05.78 LUMMUS CO A41 D15 E16 (A35) =GB 2021-425
Treatment of aq. effluent from prodn. of nitrile s) by ammoxidation - 86187B/48
- MACA- 25.11.77 MACANDREWS & FORBES B05 D13 E19 =US 4176-201
Low calorie food sweetener comps. - 42700B/23
- *MACA- 14.09.78 MACANDREWS & FORBES B03 D13 E12 *US 4176-228
Potassium-magnesium-calcium glycyrrhizin - 89343B/49
- MACA/ 09.09.76 MACASKILL D C04 D17 J09 L02 #GB 1557-248
Two stage fluid bed calcination - 96005X/51
- MANC/ 24.02.78 MANCHAK F D15 #FR 2418-004
Treating waste sludges with calcium oxide - 28632A/15
- *MART/ 06.03.75 MARTINI A D16 *IT 1033-486
Microenzyme for coagulating milk - B/49
- *MATU 18.04.78 MATSUSHITA ELEC IND KK A89 B04 D16 J04 *J5 4137-395
Appts. for analysing urea, glucose etc. - 88159B/49
- *MATU 21.04.78 MATSUSHITA ELEC IND KK A89 B04 D16 J04 *J5 4139-792
Electrode for determ. of concn. or activity of enzymes - 88552B/49
- *MATU 21.04.78 MATSUSHITA ELEC IND KK A89 B04 D16 J04 *J5 4139-793
Electrode for determ. of concn. or activity of enzymes - 88553B/49
- *MATU 24.04.78 MATSUSHITA ELEC IND KK D16 E16 J04 *J5 4140-594
Enzymic electrode for selective determ. of tri:methylamine - 88669B/49
- MCDO- 05.01.76 MCDONALDS CORP D12 #CA 1066-553
Marinating chicken portions quickly before frying - 24483X/14
- *MCGR 18.05.78 MCGRAW EDISON CO D11 *US 4175-483
Doughnuts moulded between heated plates - 89150B/49
- *MEAT= 13.01.68 MEAT IND RES INST D13 *IT 1033-007
Liquid smoking agent prodn. - B/49
- MECH- 24.05.78 STICHT INS MECH ARB D15 =DT 2921-063
Scroll filter press for sepg. water from organic fibres - 85955B/48
- *MELN/ 15.04.77 MELNIKOVA I A D16 *SU -653-295
Microorganisms cultivation appts. - 88976B/49
- MERI 19.04.76 MERCK & CO INC B02 C02 D16 =DL -137-727
Macrolide parasiticide and pesticidal cpds. - 78836Y/44
- MERI 15.09.77 MERCK & CO INC B02 C02 D22 E13 =PT --68-527
N-Subst. -thienamycin S-oxide and S-di:oxide derivs. - 26433B/14
- MERI 03.04.78 MERCK & CO INC D22 E13 H07 M21 =J5 4138-587
Microbe resistant metal working fluids - 35102B/18
- MERI 19.04.78 MERCK & CO INC B04 D16 #DK 7801-713
Syncytial respiratory virus vaccine prepn. - 60477A/34
- METG 17.04.78 METALLGESELLSCHAFT AG A88 D15 =J5 4139-881
Appts. for treating cooling water with hypochlorite - 79418B/44
- METR- 15.01.76 METRAPLAN-SPAA D18 =GB 1557-341
Skin stacking machine - 52554Y/30
- MIEL 09.03.77 MIELE & CIE D21 L02 M11 =GB 1557-047
Pretreatment for ceramic coating - 67205A/38
- *MILE 22.05.78 MILES LABORATORIES INC D16 (D13) *DT 2901-542
Reducing thermal stability of microbial Mucor rennin - 87909B/49
- *MIME= 16.12.76 MINSK MEAT DAIRY D12 *SU -654-229
Poultry feeding system for slaughter conveyor - 89034B/49
- *MIME= 06.10.77 MINSK MEAT DAIRY D12 *SU -653-181
Suspension conveyor for animal head processing plant - 88905B/49
- MINN 17.03.78 MINNESOTA MINING CO A96 B07 D22 G03 (A14 A81) =DT 2910-412
Control of bleeding of internal mammalian lesions - 79535B/44
- MINN 19.04.78 MINNESOTA MINING CO A81 D22 G03 (A14 A96) =J5 4139-946
Tacky, pressure-sensitive adhesive tape - 79544B/44
- MINN 19.04.78 MINNESOTA MINING CO A81 D22 G03 (A14 A96) =SW 7903-274
Tacky, pressure-sensitive adhesive tape - 79544B/44

- MINN 22.05.78 MINNESOTA MINING CO A96 D21 G03 (A14) =DT 2920-842
 Readily mixed surgical cement for dentistry - 86437B/48
- *MIRA- 19.02.75 MIRAJ INTR COSMETIC D21 *RU --65-015
 Nutrient night cream - B/49
- *MIRA- 27.06.75 MIRAJ INTR COSMETIC D21 *RU --65-072
 Hydrating emulsion restoring fat balance - B/49
- *MIRA- 27.06.75 MIRAJ INTR COSMETIC D21 *RU --65-073
 Skin toning and cleansing lotion - B/49
- *MIRA- 27.06.75 MIRAJ INTR COSMETIC D21 *RU --65-074
 Skin toning lotion - B/49
- *MIRA- 27.06.75 MIRAJ INTR COSMETIC A96 D21 *RU --65-075
 Hydrating emulsion restoring fat balance - B/49
- *MIRA- 27.06.75 MIRAJ INTR COSMETIC D21 *RU --65-076
 Tonic lotion restoring fat content - B/49
- *MIRA- 27.06.75 MIRAJ INTR COSMETIC A96 D21 *RU --65-077
 Beauty mask compsn. restoring fat content - B/49
- MIRK- 05.05.78 MIRKOZ DIESEL HUTOT D15 J01 =GB 2021-430
 Flotation separator partic. to skim surface oil from sewage - 68156B/38
- MITC 22.02.78 MITSUI PETROCHEM IND KK A88 D15 J01 (A14 A17) =FR 2418-014
 Speg. alcoholic beverage from fermentation liquor - 63445B/35
- MITK 04.03.75 MITSUI TOATSU CHEM INC A97 D15 H05 J01 #IT 1033-406
 Waste water oil removal - 00668X/01
- MITN 16.04.75 MITSUBISHI GAS CHEM IND A97 D16 E17 =J7 9037-234
 L-dextro-rotatory-tartaric acid and salt prepn. - 81621X/44
- MITN 23.08.76 MITSUBISHI GAS CHEM IND D15 (D16) =J7 9036-422
 Amylase anti-bulking agent for activated sludge - 29849A/16
- MITU 14.03.73 MITSUBISHI CHEM IND KK D16 =J7 9037-233
 Cystein desulphhydrase prodn. - 31426W/19
- *MITU 18.04.78 MITSUBISHI CHEM IND KK B01 D16 *J5 4138-192
 Androstane cpd. prodn. in absence of antioxidant - 88325B/49
- *MITW 18.04.78 MITSUBISHI STEEL MFG KK A81 D15 E37 J01 (A14) *J5 4137-490
 Water-treatment process adsorbent - 88196B/49
- MOBI 04.10.73 MOBIL OIL CORP D22 E13 H07 M14 =IT 1033-101
 Amine salt anti-oxidants and corrosion inhibitors for lubricants, - 27870W/17
- *MOFO= 11.07.77 MOSC FOOD IND TECHN D14 J02 *SU -651-844
 Viscous coagulating material crusher - 88769B/49
- *MOLD= 25.12.76 MOLDTABAKPROM TRUST D18 E12 *SU -654-241
 Preventing mould growth in tobacco leaves - 89044B/49
- MOLI- 21.04.78 MOLINIER SA A96 D22 =SW 7903-431
 Composite surgical bandage of tubular stretchable fabric - 81092B/45
- *MOMA= 25.08.77 MOSC MAGARACH WINE D16 *SU -652-215
 Fruit-berry juice alcoholic fermentation - 88850B/49
- MONA- 05.05.78 MONA INDS INC A97 D21 E11 (D25) =BR 7902-725
 Novel phospho-betaine(s) and phosphitane(s) - 80842B/45
- MONS 10.01.77 MONSANTO EUROPE SA D15 E11 M14 =DS 2800-457
 Di:ethylene-tri:amine penta:methylene phosphonic acid compsn. - 49687A/28
- MORG 26.12.75 MORINAGA MILK KK D16 (D13) =J7 9036-235
 Protein decomposition product prepn. - 58412Y/33
- MORG 08.10.76 MORINAGA MILK KK D13 (D16) =GB 1556-987
 Stable milk-based beverage contg. Lactobacillus microorganisms - 43209A/24
- MORI/ 24.02.78 MORIT B04 D13 =FR 2417-986
 Foodstuff with strengthening effect - 66547B/37
- *MOSU 06.05.76 MOSCOW LOMONOSOV UNIV D15 E11 *SU -653-261
 Methylene-di:phosphonic or -phosphonic phosphonous acid deriv. - 88951B/49
- *MOSU 02.08.77 MOSCOW LOMONOSOV UNIV A97 D16 E17 *SU -652-214
 Continuous microbiological prodn. of propionic and acetic acids - 88849B/49
- MOUX 28.02.78 MOULINEX SA D14 =FR 2417-965
 Double whisk electric domestic beater support - 65095B/36
- *MUTI/ 15.11.77 MUTIN FI D15 H05 J01 *SU -654-264
 Water deoxygenation unit for petroleum industry, etc. - 89048B/49
- *MUTI/ 23.01.78 MUTIN FI D15 H03 J01 *SU -653-218
 Petroleum container washing waste water purifier - 88910B/49
- NATT 15.05.78 NAT STARCH & CHEM CORP A11 D13 F09 (A97) =NL 7903-827
 Reagent soln. for efficient, pollution-free starch phosphorylation - 67935B/37
- NEST 26.02.74 SOC PROD NESTLE SA D14 =IT 1033-170
 Batch cooking and sterilisation of solid particle foodstuffs - 60774W/37
- NEST 25.03.74 SOC PROD NESTLE SA D13 =IT 1033-346
 Granular cheese prods with good keeping props - 67275W/41
- NIAU- 29.04.78 NIHON AUTOMATIC MAC C04 D15 L02 =BR 7902-701
 Treatment of waste water contg. (in)organic impurities - 82817B/46
- *NICH- 01.12.77 NICHIBI KK A96 B04 D16 F01 (A14) *J5 4138-624
 Immobilised enzyme fibre prodn. - 88389B/49
- *NICO- 30.04.75 NICOLAU S S INST B04 C03 D16 *RU --65-129
 Prophylactic vaccine preventing still-birth of ovine foetus - B/49
- *NICO- 20.04.78 SHIN NIPPON CORE KK A88 D15 (A14) *J5 4138-078
 Honeycomb structure for waste disposal use - 88279B/49
- NIIO 16.10.75 NIPPON SANSO D15 E36 (D22) =J7 9037-074
 Ozone-contg. air, prodn. - 38735Y/22
- NIMA- 11.03.75 JAPAN MAIZE PROD KK D15 (D16) =J7 9036-997
 Treatment of waste liquor from agricultural processes - 81911X/44
- NIMA- 11.03.75 JAPAN MAIZE PROD KK D15 (D16) =J7 9036-998
 Sludge treatment with increased filtration rate - 81872X/44
- *NIOF 17.04.78 NIPPON OILS & FATS KK A96 B07 D21 G02 (A25 A82) *J5 4138-129
 Thermally stable gelatinous or creamy compsn. - 88305B/49
- *NIPE- 21.04.78 NIPPON PEROXIDE KK A91 D15 *J5 4139-258
 Organic sludge treatment - 88476B/49
- *NIRA 19.04.78 UNITIKA KK D15 J01 *J5 4137-852
 Treating heavy metals-contg. industrial waste - 88219B/49
- NISB 27.10.76 JAPAN TOBACCO & SALT PUB D23 E13 (D18) =J7 9036-234
 Skimmin used as perfume for tobacco - 45177A/25
- NISB 30.08.77 JAPAN TOBACCO & SALT PUB D18 E13 =J7 9037-135
 Tetra:hydro:furan derivs. - 34355B/18
- *NISR 17.04.78 NISSUI SEIYAKU KK B04 D16 *J5 4138-185
 Medium for examination of biological properties of microorganisms - 88319B/49
- *NISR 17.04.78 NISSUI SEIYAKU KK B04 D16 *J5 4138-187
 Medium for examination and detection of microorganisms in intestines - 88320B/49
- NISY 11.11.71 NIPPON SYNTH CHEM IND A14 D16 (A60) =J7 9036-227
 Poly(vinyl alcohol) resin decomposing enzymes - 68007U/45
- NISY 11.11.71 NIPPON SYNTH CHEM IND A14 D16 (A60) =J7 9036-228
 Poly(vinyl alcohol) resin decomposing enzymes - 68008U/45
- NORQ 29.03.73 NORIINSHO KK D13 =J4 9118-852
 Soya protein food prodn. - 88703B/49
- *NORQ 29.03.73 NORIINSHO KK D13 *J7 9036-664
 Soya protein food prodn. - 88703B/49
- NOVO 11.07.75 NOVO INDUSTRI A/S D16 =GB 1557-005
 Conditioning collagen for gelatin extraction - 05642Y/04
- NOVO 19.04.78 NOVO INDUSTRI A/S A96 B04 D16 =DK 7901-417
 Immobilising glutaraldehyde-sensitive enzymes - 77179B/43
- NOVO 19.04.78 NOVO INDUSTRI A/S A96 B04 D16 =SW 7903-357
 Immobilising glutaraldehyde-sensitive enzymes - 77179B/43
- *NUKE 26.05.78 NUKEM NUCLEAR-CHEM GMBH D22 E36 J01 *DT 2823-115
 Deodorisation of sulphurous and nitrogenous gas - 87874B/49
- NUTR 14.05.71 NUTRILITE PROD INC B02 D13 E13 (B03) =IT 1033-065
 Metal salts of dihydrochalcones - 78745T/50
- NUTR- 22.02.78 NUTRIDAN ENG A/S D12 =FR 2417-947
 Removing blood colour by sudden pressure drop - 63360B/35
- *ODPR= 22.11.76 ODESS PROVIS EQUIP D14 *SU -654-240
 Converting root vegetables into food products - 89043B/49
- OREA 30.06.75 L'OREAL SA A97 B07 D21 =DS 2629-100
 Prodn. of aq. dispersions of lipid spherules - 03895Y/03
- *OREA 02.03.77 L'OREAL SA A96 D21 (A14) *FR 2417-981
 Protective compsn. for treating the hair - 88003B/49
- *PACI= 22.02.78 PACIFIC OCEAN FISH D16 J08 *SU -653-489
 Water heating and cooling unit - 89010B/49
- *PAPI- 26.05.78 VU PAPIERU CELULO C03 D16 F09 (D13) *DT 2823-123
 Conversion of waste paper by enzymatic hydrolysis - 87877B/49
- *PARK 17.04.78 PARKE DAVIS & CO B07 D13 *J5 4138-119
 Coloured gelatin capsules prodn. - 88298B/49
- *PELL/ 20.06.79 PELL WH D16 E33 *GB 2021-546
 Stabilisation of aq. bentonite suspensions - 88088B/49
- PENN 13.05.70 PENNWALT CORP D18 E17 =DS 2119-083
 Leather lubrication using sulphonated fatty oils alkenyl subst - 75581S/48
- PERS 12.06.74 PERSONAL PRODUCTS CO D22 E19 =CA 1066-624
 Amino acid-contg. compsns. - 00043X/01
- *PESQ- 28.03.79 INST PESQUISAS MARI C03 D22 *BR 7901-868
 Slow-releasing insecticidal compsns. - B/49
- PETO 27.02.74 PEDIGREE PETFOODS L C03 D13 =IT 1033-140
 Feed products from whey protein - 46108W/28
- PFIZ 28.01.77 PFIZER INC B04 D16 =DS 2803-044
 Identification of microorganisms in sub-samples - 57116A/32
- PHIM 30.07.73 PHILIP MORRIS INC A14 D18 (A97) =DS 2436-472
 Low polymers e.g. of 1-menthyl 1,1 dimethylalkenyl-carbonates - 11988W/07
- PLAT- 24.01.76 PLATE KOFASIL GMBH C03 D16 E19 (D13) =GB 1557-340
 Ensilaging agent for fodder plants - 52182Y/30
- *PONO/ 15.10.76 PONOMARENKO V S D15 J01 *SU -654-265
 Waste water cleaning filter - 89049B/49
- PREU 04.11.75 PREUSSAG AG A97 D15 =GB 1557-282
 Removing nitrate from water to make it drinkable - 18207Y/11
- *PRIM/ 28.09.78 PRIMUS DR D15 *US 4175-872
 Adaptor for liq. manure vacuum agitator - 89189B/49
- *PROC 20.04.77 PROCTER & GAMBLE CO A97 D25 E19 (A18 A25 D16 E34) *US 4176-079
 Granular detergent compsns. - 89274B/49

- PROC 03.06.77 PROCTER & GAMBLE CO D13 E13 =DT 2857-000
Dry mix for forming dietetic carbonated instant beverage - 88223A/49
- *PROC 03.10.77 PROCTER & GAMBLE CO A97 D25 E19 (A25) *US 4176-080
Detergent compsns. for effective oily soil removal - 89275B/49
- *PROT= 16.01.76 PROTIEN BIOSYNTHESI D16 E17 H07 M21 (E11) *SU -652-203
Lubricant for metal treatment by pressure - 88840B/49
- PROT= 20.10.77 PROTEINS BIOSYNTHESIS D16 =DL -137-807
Microorganism cultivation plant - 33606B/18
- *PROV= 15.05.78 PROVISIONS EQUIP D12 *DT 2919-594
Small crustaceans processing system - 87930B/49
- *PUGL- 22.03.78 PUGLIESE MAQUINA D13 *BR 7801-783
Coffee beans roasting machine - B/49
- PURD 27.02.78 PURDUE RESEARCH FOUNDATI A97 D16 J01 =FR 2418-006
Dialysis compsn. for blood purification in artificial kidney - 63170B/35
- QPPP 31.05.77 Q.P. CORP D11 E17 =J7 9037-213
Brightening agent for bread and confectionery - 10889B/06
- *QUAK 31.10.75 QUAKER OATS CO D11 *CA 1066-552
Cutting food extrudate with upward cutting stroke - 87614B/49
- QUAK 02.02.76 QUAKER OATS CO D13 =CA 1066-550
Centre-filled food bar - 57437Y/32
- *QUAT- 08.06.78 QUATIC CHEMICALS LT A97 D15 E16 M13 *US 4176-059
Corrosion- and scale-inhibiting additive for aq. systems - 89259B/49
- RAFT 08.07.69 RAFFINERIE TIRLEMONTTOISE D17 =RU --63-870
Saccharose recovery from sugar refinery - 95748R/51
- RALS 03.11.66 RALSTON PURINA CO D12 =IT 1033-006
Poultry product in the form of a roast which may be - 21970R/14
- *RALS 22.08.77 RALSTON PURINA CO D13 (D12) *US 4176-202
Replacement for fish in kamaboko - 89331B/49
- *REDP- 13.01.78 REDPATH SUGARS D16 (D17) *US 4176-006
Immobilised enzymes esp. for isomerisation reactions - 89234B/49
- *REFR= 13.08.76 REFRIG IND RES INST D13 J01 *SU -654-238
Liquid prod. e.g. milk, blood, serum etc. concentration - 89041B/49
- *REUT/ 26.06.78 REUTER G B04 D16 *DL -137-403
Mfr. of reagent for detecting mycosis antibodies - 87629B/49
- *REZN/ 24.02.76 REZNIKOV IG D25 E16 *SU -653-294
Nonionic surfactant powder prepn. - 88975B/49
- RHON 14.03.78 RHONE-POULENC INDUSTRIES D25 E12 =PT --69-334
Sequestrant for washing compsns. contg. peracid salts - 68133B/38
- RHON 14.03.78 RHONE-POULENC INDUSTRIES A35 D15 E36 J02 =PT --69-335
Contactor for substances in different phases - 68134B/38
- RITP 11.05.70 SYBRON CORP D13 (D16) =DS 2123-375
Gas content of liquid determination - 22821U/17
- ROHG 25.03.78 ROHM GMBH A11 D18 F01 G03 =BR 7901-801
Collagen extn. from ossein, hides and pelts - 75424B/42
- *ROSC/ 20.06.78 ROSCHKE M D15 *DL -137-699
Deodorisation and nitrification of waste waters - 87709B/49
- ROSE- 04.10.74 ROSENLEW OY W AB D17 E13 F09 =SU -652-902
Splitting polysaccharides contained in row mats by acid hydrolysis - 28607X/16
- ROUR 23.12.70 ROURE BERTRAND DUPO D23 E15 =DS 2162-820
Cis methylhydrojasmonate - 43866T/27
- ROUS 07.04.78 ROUSSEL UCLAF B02 D22 =GB 2021-561
Amino:thiazolyl-acetamido cephalosporin derivs. - 73624B/41
- RUHL 20.04.77 DR RUHLAND NACHF D22 =DS 2717-537
Sterilisable inner bag for surgical suture material - 78529A/44
- *SAMB/ 18.11.76 SAMBORSKII IV A91 D15 J01 M25 *SU -653-268
Polyampholyte mfr. from chloromethylated styrene contg. polymer - 88958B/49
- SANW- 31.01.74 SANWA YUKO KK D16 H04 =J7 9036-601
Petroleum desulphurisation by *Pseudomonas haconensis* - 42228Y/24
- SANY 27.07.72 SANKYO KK D12 =J4 9031-853
Deodorisation and blood-removal of meats and fish eggs - 34152W/20
- SANY 27.07.72 SANKYO KK D12 =J7 9036-222
Deodorisation and blood-removal of meats and fish eggs - 34152W/20
- *SANY 24.05.78 SANKYO KK B04 D16 *DT 2921-085
Anti:mycobacterial peptide antibiotic mycoplanecin - 87986B/49
- SANY 24.05.78 SANKYO KK B04 D16 =GB 2021-558
Anti:mycobacterial peptide antibiotic mycoplanecin - 87986B/49
- SCGR 24.02.78 SOC CHIM GRANDE PAROISSE D15 E16 F09 H01 (D22) =FR 2417-987
Bactericidal treatment of polluted media - 68498B/38
- SCHC 27.06.68 SCHERICO LTD B04 D16 =IT 1033-250
Antibiotic 66-40 prepn - 41744F/00
- SCHR- 22.02.78 SCHREIBER-KLARANLAG D15 =FR 2418-202
Bar screen cleaning rake used in waste water treatment - 54637B/30
- SCHU/ 29.10.75 SCHUMACHER H D23 =DS 2548-487
Stripping undesirable constituents from vegetable or animal oils - 32935Y/19
- *SCHU/ 00.00.77 SCHULTZ J D15 J01 *DT 2822-361
Filter with self-cleaning action - 87818B/49
- *SCHU/ 30.06.78 SCHUTZER D15 E31 M11 *DL -137-436
Reduction of chromic ions in waste waters - 87639B/49
- SCMZ 17.04.78 SCM CORP D23 =J5 4138-003
Hydrogenating crude glyceride oils using nickel catalyst - 31554B/17
- *SEAF 15.05.78 SEA FISHERY RES INST D12 *DT 2919-594
Small crustaceans processing system - 87930B/49
- SEIW- 18.07.75 SEIWA KASEI KK D12 =J7 9036-665
Euphausia pacifica fat:free dried powder prodn. - 18798Y/11
- *SEKI 21.04.78 SEKISUI CHEMI IND KK A88 D15 J01 (A14 A25) *J5 4139-887
Semipermeable membrane prepd. from crosslinked acetal modified PVA - 88592B/49
- SEKI/ 23.12.75 SEKIT D15 =J7 9036-413
Polluted water treatment - 56682Y/32
- *SELW- 29.07.78 SELWIG & LANGE MASC D17 *DS 2833-348
Preliminary liming plant for raw sugar beet juice - 87781B/49
- SENP 24.04.78 SENJU SEIYAKU KK D25 E16 =J5 4140-553
Aq. hypertonic cleansing soln. for contact lenses - 79355B/44
- SETB 13.05.76 SERVICE EXPL IND TABACS A97 D18 #US 4175-996
Adhesive for tobacco prods. - 72205X/39
- SHEL 04.03.74 SHELL INT RES MIJ BV A97 D22 E19 (A14) =IT 1033-376
Gelified air freshener compsn. contg. terpene or salicylate gellant - 62201W/38
- *SHEL 12.11.75 SHELL INT RES MIJ BV A97 D15 E17 H03 (A25) *GB 1557-182
Dispersing compsn. for oil slicks - 88059B/49
- SHII- 29.01.76 SHI-ICHI JOZO KK D16 =J7 9036-240
Brown vinegar prodn. - 67556Y/38
- SHIO 23.02.78 SHIONOGI KK B02 C02 D22 =FR 2418-235
7-Beta 5-oxo-4-phenyl-imidazolidine-1-yl 3-chloro 3-cephem-4-acids - 49025B/27
- SHIS 17.03.78 SHISEIDO KK D21 =GB 2021-411
Gel compsn. for cosmetics - 70301B/39
- *SHUI- 17.04.78 SHUI-ICHI SUZUKI B04 D16 *J5 4138-182
Rapid quantitative analysis of vitamin or aminoacid - 88318B/49
- *SIFI= 09.03.77 SIBE FISHING RES D12 *SU -654-234
Meat and fish blanching equipment - 89039B/49
- SIMC 15.04.78 SIMON ENGINEERING LTD C03 D15 (D13) =NO 7901-027
Removal of metallic impurities from sewage sludge - 79430B/44
- *SIMO- 28.07.78 SIMON-JOHNSON INC D12 *US 4175-302
Rotary feather picking unit with sealed bearings - 89126B/49
- SKFK 19.04.78 SVENSKA FLAECTFABRI D22 =DK 7901-393
Disinfection of hospital equipment with hot damp air - 64720B/36
- *SLOA/ 05.07.78 SLOAN A H D15 J01 *US 4176-066
Gravitational flow separator for water and solids - 89264B/49
- *SMEL= 11.02.76 SMELYANSK MECH ENG WKS D17 *SU -653-134
Sugar-beet pulp dewatering press - 88899B/49
- SMHL 25.05.78 SIMON HARTLEY LTD D15 =DT 2905-213
Thickening activated sludge - 40664B/22
- SMIN 03.12.76 SMITH & NEPHEW RES A96 D22 L02 (A93) =DL -137-823
Poly:carboxylate based cement contg. water soluble glass - 27008A/15
- SNAM 28.01.72 SNAMPROGETTI SPA D17 =IT 1033-063
Glucose isomerisation - 46008U/33
- SNAM 21.02.75 SNAMPROGETTI SPA D13 E19 =CA 1066-696
Phenolic cpds and oligosaccharides extn from plant protein - 68717X/37
- SNAM 12.07.77 SNAMPROGETTI SPA D14 =DL -137-661
Sterilising milk and other liquid foods with hydrogen peroxide - 04054B/03
- SNAM 23.05.78 SNAMPROGETTI SPA B05 D16 E19 =DT 2920-963
Prepn. of D-aminoacids - 85938B/48
- SNAM 24.05.78 SNAMPROGETTI SPA D14 J01 (D23) =DT 2920-974
Continuous solid-liq. extn., esp. of vegetable material - 85965B/48
- SNAM 24.05.78 SNAMPROGETTI SPA D14 J01 (D23) =GB 2021-436
Continuous solid-liq. extn., esp. of vegetable material - 85965B/48
- SNKM 12.05.75 SANKIN KOGYO KK A96 D21 =J7 9036-791
Acrylic resin dental compsn. - 00951Y/01
- SNLE 00.00.77 STANLEY DENKI KK D15 J03 =J7 9037-102
Industrial effluent purification - 03539V/02
- SNOW 10.11.73 SNOW BRAND MILK PRODUCTS A97 D13 =J5 0076-249
Multilayer pudding mfr. - 88743B/49
- *SNOW 10.11.73 SNOW BRAND MILK PRODUCTS A97 D13 *J7 9037-218
Multilayer pudding mfr. - 88743B/49
- SOLV 30.04.74 SOLVAY & CIE A14 D25 (A91 A97) =IT 1033-355
Salts of poly alpha hydroxy acrylic acids - 76777W/46
- SOMA- 00.00.76 SOMAR KOGYO KK C03 D15 E14 F09 =J7 9036-647
Paper pulp industry slime controlling agent - 95124X/51
- SONC/ 05.03.76 SONCINIA D12 =IT 1033-011
Pneumatic power machine to extract ham bones - 21961Y/13
- *SPIL- 10.03.78 SPILLERS LTD D11 *GB 2021-792
Removing dough from hopper and dividing into pieces - 88136B/49
- SQUI 28.07.70 SQUIBB E R & SONS INC B04 D22 E16 (E13) =DS 2124-451
Enzyme-inhibiting peptides - 10351T/07
- STAH/ 00.00.76 STAHLER T D15 =DT 2822-347
Aerobic sewage treatment - 86284B/48
- STAL 19.04.78 STALEY A E MFG CO D23 E11 =J5 4138-143
Highly water-dispersible lecithin prepn. from oil:seed - 79365B/44

- STAM 22.03.78 STAMICARBON BV A41 D15 E13 = BR 7901-771
Melamine removal from waste water - 72146B/40
- *STEF/ 08.05.78 STEFFEN S L D13 *US 4175-418
Establishing predetermined temp. through wet stored grain - 89138B/49
- *STER 05.06.78 STERLING DRUG INC B05 C01 D22 *BE -876-680
Arylalkyl and aryloxy-alkyl di:alkyl phosphonate(s) - 87592B/49
- STER= 10.11.77 STERLITAMAK PETROCH A41 D22 E17 #GB 1556-962
Gaseous formaldehyde recovery from aq. soln. - 51887B/28
- STIC- 13.02.70 STICHTING BEDRIJVEM D25 G04 = IT 1033-049
Cleansing compn for dairy appts - 55605S/34
- *STOP/ 06.03.78 STOPKA K D15 E36 J03 *US 4176-061
Domestic appts. for treating water with ozone - 89260B/49
- STRK 17.02.75 STORK AMSTERDAM BV B07 D14 J08 L02 #IT 1033-123
Spray drier for foodstuff chemicals - 67164X/36
- *SUGA- 15.05.78 SUGARDALE FOODS INC D12 *US 4176-199
Extn. of protein from beef bones - 89329B/49
- SUHL/ 08.07.77 SUHLING P D14 = DL -137-660
Appts. for making batches of sliced food prod. - 04520B/03
- *SUMH 24.04.78 SUMITOMO HEAVY IND A88 D15 J01 (A32) *J5 4139-886
Semipermeable tubular membrane for ultrafiltration appts. - 88591B/49
- SUMO 12.05.78 SUMITOMO CHEMICAL KK B04 D16 = GB 2021-412
Fibrinolytic enzyme urokinase lyophilisate stabilisation - 86170B/48
- *SUMO 25.05.78 SUMITOMO CHEMICAL KK D16 (D17) *DT 2921-380
Glucose isomerase extraction from cells - 87995B/49
- SVEN/ 08.05.78 SVENGREN A G D14 = WP 7901-038
Meat and cheese block mincing machine - 86247B/48
- SVFL 19.04.78 SVENSKA FLAKTFAB AB D22 = NO 7901-173
Disinfection of hospital equipment with hot damp air - 64720B/36
- SYMH/ 20.02.74 SY M H C03 D13 = IT 1033-202
Bait for cockroaches including non-coagulated egg powder - 58997W/36
- SYNT 24.11.78 SYVA CO B04 D16 J04 = J5 4139-794
Immunoassay method for component of ligand anti:ligand pair - 77640B/43
- TAKE 05.07.72 TAKEDA CHEMICAL IND KK D13 = J4 9026-465
Gelled foodstuff prodn - 06047V/04
- TAKE 05.07.72 TAKEDA CHEMICAL IND KK D13 = J7 9037-217
Gelled foodstuff prodn - 06047V/04
- TAKE 24.03.78 TAKEDA CHEMICAL IND KK B02 C02 D16 = PT --69-382
20-Demethyl-maytansinoid derivs. - 72173B/40
- *TAKE 17.04.78 TAKEDA CHEMICAL IND KK B05 D16 *J5 4138-189
Purificn. of urokinase for treating thrombosis - 88322B/49
- *TAKR 19.05.78 TAKARA KOHSAN KK D21 E19 *DT 2822-021
Detergent compsns. for skin cleansing - 87800B/49
- TEEP 18.04.78 TEE PAK INC A32 D12 (A11 A97) = SW 7901-123
Forming fibrous tube for sausages - 64645B/35
- TEEP 21.04.78 TEE PAK INC A97 D12 (A11) = BR 7901-842
Tough, artificial casings of fibrous structure - 64701B/36
- TEEP 21.04.78 TEE PAK INC A97 D12 (A11) = SW 7901-311
Tough, artificial casings of fibrous structure - 64701B/36
- TEIJ 05.11.76 TEIJIN KK D22 = US 4176-156
Thermal sterilisation of artificial kidneys - 38759A/22
- *TEIJ 19.04.78 TEIJIN KK D13 E36 G04 *J5 4137-491
Oxygen collecting compsn. for preventing oxidn. of foods - 88197B/49
- *TEIJ 22.05.78 TEIJIN KK A88 D15 J01 *DT 2920-772
Semipermeable water-desalination membrane - 87961B/49
- TENU/ 26.05.78 TENUTA A D13 #DT 2822-934
Mechanised prodn. of deep frozen peeled tomatoes - 72810A/41
- TEXC 28.01.74 TEXACO DEV CORP D25 E19 = IT 1033-118
Biologically decomposable builders for washing compsns. - 52720W/32
- TEXC 30.07.76 TEXACO INC D15 H01 = US 4175-312
Sapg. mixt. of oil, water and solids - 80044A/44
- TEXC 27.02.78 TEXACO DEV CORP D25 E12 H01 = FR 2418-224
Detergent and surfactant ether sulphonate cpds. prepn. - 67361B/37
- *THOM/ 26.05.78 THOMSEN W D12 *DT 2822-854
Prawns or shrimps mechanically crushed between bolts or rolls - 87844B/49
- *TOAE- 24.04.78 TOYO AEROSOL KOGYO B03 D13 E12 G04 (D17) *J5 4139-894
Cooling agent for bruises, foods or medicines - 88598B/49
- *TOBE/ 23.06.78 TOBEY F S D14 *US 4175-484
Domestic food smoking appts. with automatic wood feed - 89151B/49
- TOKE- 11.06.76 TOKYO EIZAI KENKYUS A96 D22 = J5 2151-289
Bed-sore protection pad - 88680B/49
- *TOKE- 11.06.76 TOKYO EIZAI KENKYUS A96 D22 *J7 9036-433
Bed-sore protection pad - 88680B/49
- TOXN 20.11.72 TOYO JOZO KK B02 D16 = J7 9037-237
Alpha-aminocephalosporin from 7-aminocephem cpds. - 78241V/45
- TOXN 21.06.74 TOYO JOZO KK B03 D16 = J7 9036-678
4-Carbamoyl-1-beta-D-ribofuranosyl-imidazolium-5 oleate prepn. - 13937X/08
- *TOXN 25.05.78 TOYO JOZO KK B02 C02 D16 *DT 2917-000
Neplanocin purine nucleoside antibiotics from Ampullariella spp. - 87915B/49
- TOXN 25.05.78 TOYO JOZO KK B02 C02 D16 = GB 2021-582
Neplanocin purine nucleoside antibiotics from Ampullariella spp. - 87915B/49
- TOYJ 20.04.78 TOYO SODA MFG KK D17 (D13 D15 D16) = SW 7903-415
Allose-contg. polysaccharide produced by pseudomonas viscogena - 81095B/45
- TROM- 01.03.74 LIUMFAB TROMMELEN C D15 (D18) = IT 1033-313
Purifying waste water contg. lime and protein - 60744W/37
- TROU/ 24.04.78 TROUVE C A21 D15 (A97) = WP 7900-975
Quaternised melamine glyoxal resins - 84590B/47
- UGIN 10.02.76 UGINE KUHMANN D25 E19 (D21 D22) = DS 2705-047
(Alpha)-acyloxy (N)-acylamides useful as activators for per cpds. - 54055Y/31
- *UMAS/ 29.05.78 UMASEN A91 D15 E34 (A14 E33) *GB 2021-551
Compsn. for flocculating hydrophilic colloidal particles - 88090B/49
- *UMEA= 05.04.76 UKR MEAT DAIRY IND D12 *SU -654-230
Sausages heat treatment line - 89035B/49
- *UMWE- 14.04.78 GES UMWELTSCHUTZANL D15 *J5 4137-480
Treating and maturing pretreated waste and pptd. sludge - 88190B/49
- UNIC 17.04.78 UNION CARBIDE CORP B02 D16 E17 #J5 4138-184
Glutaraldehyde sterilisation of fermentation media - 76297A/43
- UNIL 30.03.66 UNILEVER NV D13 = DS 1692-388
Frozen dessert prodn. - 61680Z/00
- UNIL 08.04.71 UNILEVER NV D13 E16 = DT 2265-549
Cheese products - 70323T/44
- UNIL 25.01.72 UNILEVER NV D23 E17 = DS 2303-170
Unsatd fatty acid hydrogenation - 45753U/33
- UNIL 15.09.77 UNILEVER NV D24 E17 = PT --68-558
Soap tablets contg. at least one per cent free carboxylic acid - 20034B/11
- *UNIL 19.09.77 LEVER BROTHERS CO D13 *US 4176-200
Reducing surface discolouration of food spreads on drying - 89330B/49
- UNIL 23.03.78 UNILEVER NV D25 = BR 7901-751
Cleaning powder pack - 72171B/40
- UNIL 16.05.78 UNILEVER NV A97 D25 = DT 2919-513
Deodorant compsn. contg. abrasive, bleach, wax or polymer carrier - 86309B/48
- UNIL 16.05.78 UNILEVER NV A97 D25 = NL 7903-763
Deodorant compsn. contg. abrasive, bleach, wax or polymer carrier - 86309B/48
- *UNIL 31.05.78 UNILEVER NV D13 *BE -876-699
Fat mixt. for low temp.-spreadable margarines, etc. - 87596B/49
- *UNIL 31.05.78 UNILEVER NV D12 *BE -876-700
Preparing coherent flesh product from pieces of flesh - 87597B/49
- *UNIL 31.05.78 UNILEVER NV A97 C03 D13 *BE -876-701
Stable liquid animal feed, e.g. milk substitute for calves - 87598B/49
- *UNIL 06.09.78 UNILEVER NV A96 D21 *PT --68-518
Prodn. of hair spray compsns. - B/49
- UNVO 26.03.76 UOP INC A88 D15 J01 (A26) #CA 1066-465
Composite semipermeable membrane for reverse osmosis - 76077Y/43
- UPJO 28.12.70 UPJOHN CO B04 C03 D16 = DS 2164-664
Lincomycin free of lincomycin b - 44777T/28
- *UPJO 17.11.75 UPJOHN CO B02 D16 (B05) *US 4176-123
Hexa:hydro indanone(s) and corresp. hemiacetal(s) - 89296B/49
- UPJO 15.05.78 UPJOHN CO B03 D22 E13 F09 (D15) = NL 7903-771
Alpha-amino-3-chloro-alpha-isoxazoline-5-acetic acid and analogues - 84158B/47
- *USAS 09.02.78 NAT AERO & SPACE ADMIN D16 *US 4176-007
Determin. of bacterial concn. in a test fluid - 89235B/49
- USPL 18.11.75 CHAMPION INT CORP D15 = CA 1066-821
Activated sludge dehydration - 38396Y/22
- VBER- 15.05.78 VAN DEN BERGH ENGL D13 = NL 7903-825
Steam peeling fruit and vegetables - 84667B/47
- *VINC/ 27.04.78 VINCHON G B04 C03 D13 *WP 7900-993
Cytochrome C and protein prodn. from yeast - 89365B/49
- *VLEU- 18.05.78 VAN DE LEUR BANKET D13 *NL 7805-360
Confectionery prods. for diabetics - 88753B/49
- VOIJ 23.02.78 VOITH J M GMBH D15 = FR 2418-201
Measuring the BOD of sewage - 64818B/36
- WAGB 19.05.78 WAAGNER BIRO AG D16 = GB 2021-639
Preserving yeast culture during continuous alcoholic fermentation - 71748B/40
- WAGB 19.05.78 WAAGNER BIRO AG D16 = NL 7903-589
Preserving yeast culture during continuous alcoholic fermentation - 71748B/40
- WARN 21.09.77 WARNER-LAMBERT CO A96 D21 = US 4175-322
Prosthetic denture - 26559B/14
- WASS/ 08.05.73 WASSMANN K D15 = DS 2323-004
Effluent aeration tank comprising vertical adjacent tubes - 67909V/39
- *WATE= 12.01.73 WATER SUPPLY CANALS D15 *SU -652-122
Reagent purificn. control system for cyanide contg. effluents - 88779B/49

- * WEIS/ 22.05.78 WEISS G D14 *DT 2822-252
Rapid food smoking cabinet - 87812B/49
- * WELA 27.05.78 WELLA AG D21 E12 (E33 E34) *DT 2823-243
Solid hair-straightening compsns. - 87896B/49
- WELL 26.05.78 WELLCOME FOUNDATION LTD B05 C03 D13 = DT 2831-507
Compsns. contg. eicosa:penta:enoic acid - 85978B/48
- * WERN 19.05.78 WERNER & PFLEIDERER D11 *DT 2821-846
Dough mixing and kneading machine - 87795B/49
- WESE 11.07.74 WESTINGHOUSE ELEC CORP D15 J03 = US 4176-038
Alternating current agglomeration of colloidal solids in suspension - 14618Y/09
- WEST/ 13.05.77 WEST C W D14 = US 4176-082
Closed-circuit smoke generator for smoking food - 84349A/47
- * WIDM/ 06.10.77 WIDMANN L B07 D21 *DL -137-784
Lipid system contg. oil and ethoxylated surfactant - 87742B/49
- WINK/ 25.01.74 WINKLER B D12 = US 4176-204
Pleating appts. for tubular membranes - 76151W/46
- * WOJA/ 27.10.78 WOJAHN H F D14 *US 4175-485
Portable food smoker - 89152B/49
- WYSS 01.03.78 ESCHER WYSS AG A32 D14 J02 = BR 7901-192
Calender with stack of flexible sleeve cylinders - 66516B/37

- * YAMA- 19.05.78 YAMAHATSU SANGYO KA D21 E17 (E37) *DT 2920-163
Permanent wave preparation for warm setting - 87939B/49
- YAMS 27.02.78 YAMASA SHOYU KK B04 D16 (D13) = FR 2418-239
L-Lysine-alpha-oxidase prodn. from Trichoderma viride - 64923B/36
- * YUAS 19.04.78 YUASA BATTERY CO KK A88 D15 J01 *J5 4138-873
Separator for solute in liq. - 88443B/49

- ZAID 15.10.75 ZAIDAN HOJIN BISEIB B02 D16 = GB 1557-271
Neothramycins A and B and methylneothramycins - 12856Y/08
- * ZIMM/ 23.06.78 ZIMMER L D11 *DL -137-397
Dosing and spreading viscous heterogeneous toppings and fillings - 87624B/49
- ZNEM- 19.05.78 ZUID NEDER MELKIND D13 = GB 2021-629
Cooking fat giving good browning - 84175B/47

1744-F	BD	63064-S	BDE	US 3819-484	V27+	45753-U	DE	US 3847-742	V47+	82887-V	DE	NL 7500-254	W31	IT 1033-376	B49+
NL 6909-642	Q00+	BE -764-840	S39	CA -974-470	W40+	DT 2303-170	U33	GB 1377-339	V50+	DT 2321-227	V48	J5 0102-603	W41		
CA -942-299	V09+	NL 7103-957	S41	SU -576-052	A35	NL 7300-978	U33	ZA 7302-614	W02	J5 0137-954	W52	DK 7500-058	W42	62236-W	ABDJ
DS 1932-309	V26+	DT 2114-211	S42	J7 9037-211	B49	BE -794-530	U33	OE 7409-442	W35	GB 1458-440	X51	FR 2282-809	X24	BE -828-373	W38
NL -155-886	A11+	J4 6003-215	S44			FR 2169-216	U47	OE 7409-444	W35	DS 2321-227	B49	GB 1496-213	A01	NL 7504-877	W46
BE -735-057	Q01	FR 2087-835	T12	43866-T	DE	J4 8081-808	V02	OE 7409-441	W35+			CH -603-064	A37	DT 2518-352	W46
DT 1932-309	R05	CA -927-400	U25	BE -777-194	T27	FR 2202-727	V29	CH -565-246	W38+	88133-V	BDE	OE 7500-196	A40	J5 0144-688	X02
ZA 6904-484	R18	GB 1340-409	U50	NL 7117-479	T28	ZA 7300-443	V43	OE 7409-443	W44	NL 7407-076	V51	US 4145-452	B14	FR 2268-824	X07
FR 2011-732	R22	CH -546-720	V17	DT 2162-820	T29	US 3865-853	W08	CA -985-648	X14+	BE -815-868	V51	SU -651-651	B48	SW 7504-655	X09
DL --80-968	S28	US 3860-657	W04	J4 7013-417	T31	GB 1422-774	X05	IL --42-050	X42+	DT 2327-804	W02	CA 1066-127	B48	CS 7402-957	X45
DL --83-011	S39	J7 6023-483	X33	ZA 7108-447	T41	GB 1424-183	X07	SU -582-772	A42+	FR 2231-676	W12	IT 1033-115	B49	OE 7503-135	Y44
GB 1274-518	T20	DS 2114-211	Y29	FR 2119-177	T48	CH -577-025	X29	RU --64-210	A50	J5 0030-895	W21			GB 1492-829	Y47
CH -529-833	U04	IT 1033-052	B49	GB 1320-284	U24	CH -578-892	X39	RU --63-439	B03+	ZA 7403-234	W27	47747-W	DE	US 4171-412	B43
CH -529-743	U04			CH -561-168	W21	SW 7603-910	X46	RU --63-944	B20	US 3926-981	W52	BE -826-150	W29	CA 1066-847	B49
CA -931-515	U34	75581-S	DE	CA -967-979	W22	CA 1003-433	Y05	RU --64-183	B29+	OE 7404-472	X28	DT 2508-295	W37		
J7 4001-559	V05	DT 2119-083	S48	SU -440-823	W30	DS 2303-170	B49	RU --64-209	B49	GB 1456-689	X48	NL 7502-396	W38	62539-W	AD
SU -430-530	W14	US 3668-124	T25	SW 7500-526	W41					CA 1015-755	Y35	SW 7502-310	W43	DT 2508-560	W38+
SU -559-658	A37+	US 3784-400	V03	CH -570-454	X07	46008-U	D			CH -613-960	B45	J5 0123-645	W48	BE -826-397	W39+
IT 1033-250	B49+	CA -963-206	W11	NL -149-483	X24	NL 7300-963	U33	71026-U	D	DS 2327-804	B49	DK 7500-756	W50	FR 2262-955	W52+
		DS 2119-083	B49	US 3978-108	X37	BE -794-432	U33	FR 2169-136	U47+			FR 2279-717	X20	GB 1492-616	Y47+
10083-R	D			J5 4090-155	B35	DT 2303-872	U35	DT 2306-626	V06+	03698-W	ACD	US 4014-919	Y14	IT 1033-394	B49+
GB 1181-435	R07+	07121-T	D	DS 2162-820	B49	FR 2169-105	U47	J7 5039-429	X03	ZA 7300-922	W02	FR 2330-668	Y32		
FR 1583-708	R27	FR 2079-005	T05			ZA 7300-606	U48	GB 1422-413	X05	US 4176-058	B49+	IT 1033-236	B49	62563-W	BDE
CA -879-091	S35	NL 7111-069	T11	44777-T	BCD	J4 8082-084	V02	GB 1422-412	X05+					DT 2509-257	W38
DS 1717-085	V08	J7 2023-680	T27	NL 7117-563	T28	DL -102-411	V10	GB 1422-412	X05+					NL 7502-646	W39
DS 1517-888	X17+	IT 1033-051	B49	DT 2164-664	T32	GB 1361-963	V31	CA 1025-425	A07	11988-W	AD	DT 2459-225	W32	SW 7502-534	W44
J7 6032-599	X41+			J4 7014-388	T34	CS 7300-668	W39	US 4131-565	B02+	NL 7409-553	W07	BE -824-772	W32	FR 2262-922	W52
NL -153-601	Y28+			US 3697-380	T43	CH -569-793	X02	DS 2306-626	B49+	DT 2436-472	W10	J5 0108-308	W43	J5 0160-463	X05
IT 1033-004	B49+			FR 2120-924	T49	HU T011-099	X12			US 3887-603	W24	FR 2259-149	W46	US 3962-468	X25
				NL -156-441	A17	IL --41-242	X18			GB 1444-295	X31	US 4039-464	Y32	GB 1478-947	Y27
				DS 2164-664	B49	OE 7300-725	X20			US 4002-179	Y04	GB 1491-072	Y45	CH -603-073	A37
21970-R	D					RU --61-188	Y02			J7 7030-509	Y35	US 4071-476	A07	CA 1052-622	B20
US 3503-755	R14			59799-T	DE	J7 9001-795	B08			CH -593-635	A02	IT 1033-118	B49	IT 1033-489	B49
CA -859-665	S01			DT 2207-734	T38	IT 1033-063	B49			CA 1051-453	B14				
IT 1033-006	B49			J4 7020-372	T43					DS 2436-472	B49				
				FR 2125-612	U02										
82559-R	D			GB 1311-829	U13										
ZA 6900-481	R44+			US 3829-583	V34										
SU -652-883	B49			IT 1033-064	B49										
95748-R	D														
BE -752-442	R51														
NL 7009-938	S03+														
DT 2032-744	S08														
FR 2054-307	S32														
DL --82-679	S36														
US 3687-727	T37														
GB 1310-255	U11														
CA -924-714	U18														
SU -479-301	X23														
DS 2032-744	X52+														
J7 9006-616	B17+														
NL -160-613	B26+														
RU --63-870	B49+														
06276-S	AD														
BE -753-482	S03														
NL 7010-283	S04														
DT 2034-594	S05														
FR 2054-990	S32														
ZA 7004-463	T14														
CA -904-704	T30														
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16862-S	D														
BE -755-115	S09														
DT 2040-999	S10														
NL 7011-905	S11														
ZA 7005-682	S19														
FR 2059-077	S36														
DL --84-799	S50														
CH -524-319	T37														
GB 1318-424	U22														
HU T010-500	W43														
US 3914-434	W44														
DS 2040-999	X09														
NO 7601-462	X27														
IT 1033-045	B49														
32400-S	D														
GB 1232-130	S19														
CA -901-503	T24														
DT 1957-416	T48														
IT 1033-034	B49														
55605-S	DG														
BE -762-816	S34														
DT 2106-618	S35														
NL 7002-091	S35														
J4 6001-183	S37														
FR 2078-542	T05														
GB 1301-784	U01														
GB 1312-606	U14														
NL -151-127	X46														
IT 1033-049	B49														

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US 4176-204 B49	24483-X D BE -834-552 X14 DT 2546-004 X18 SW 7511-494 X23 BR 7506-703 X42 US 4012-808 Y13 GB 1491-576 Y45 CA 1066-553 B49+	72205-X AD BE -841-472 X39 BR 7602-816 X48 NL 7604-787 X48 DT 2619-708 X48 J5 1139-699 Y03 FR 2310-396 Y09 CH -598-343 A19 GB 1550-693 B33 US 4175-996 B49+	FR 2317-345 Y16 J5 2036-700 Y18 BR 7604-505 Y33 US 4064-008 A01 GB 1557-005 B49	33252-Y BD J5 0100-295 Y19 J7 9037-239 B49	47311-Y D DT 2657-330 Y27 J5 2079-092 Y33 FR 2336-479 Y43 BR 7608-616 A04 US 4076-844 A11 DS 2657-330 A13 OE 7609-255 B09 CA 1063-053 B41 J7 9036-679 B49	67556-Y D J5 2094-500 Y38 J7 9036-240 B49	SF 7702-238 A16 ZA 7704-434 A29 GB 1526-599 A39 PT --66-843 A47 US 4166-004 B37 DL -137-121 B43 SU -652-901 B49
76426 W BD J5 0069-293 W46 J7 9037-238 B49	26774-X DJ DT 2541-902 X15 DS 2541-902 B49	75911-X D DT 2510-711 X41 GB 1463-262 Y05+ NL 7509-623 Y09+ US 4020-528 Y19+ SU -654-148 B49+	09712-Y BCDE DT 2630-947 Y06+ J5 2010-219 Y10 J5 2010-220 Y10 CH -595-338 A12+ GB 1557-225 B49+	38085-Y CDEF BE -848-712 Y22 NL 7612-828 Y24+ NL 7612-827 Y24 DT 2653-449 Y24 SW 7612-195 Y27 SW 7612-196 Y27+ DT 2653-448 Y28+ NO 7603-789 Y29 NO 7603-788 Y29+ J5 2070-993 Y30 DK 7605-303 Y33 DK 7605-302 Y34 SF 7603-154 Y34 SF 7603-155 Y34+ FR 2332-764 Y36 J5 2110-286 Y43 BR 7607-815 Y44 DL -127-475 Y51 GB 1505-388 A13 ZA 7606-293 A25 CA 1066-617 B49+	50642-Y ADE DT 2656-847 Y29 J5 2072-749 Y31 J7 9036-953 B49	69539-Y DE J5 2097-255 Y39 J7 9036-421 B49	73012-Y CD J5 0117-923 Y41 J7 9036-646 B49
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-Patents	4 DEC 79	4,176,407 - 4,177,521

*Printed patents actually published late November, 1979

**Also includes missing patents from 30 AUG 79 and 5 SEP 79

***Includes numbered Basics from Weeks B30, B35, B38 and B42

Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Other Classes	Publication Date	Main CPI Class for Section	Latest Priority	Earliest Disclosure Basic Patent	Accession No	Earliest Priority	Patent No	IPC
MEDA-				A89			69369W/42		=US 3964-992	
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)										
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)										
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26										

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

MORG D11 06160Y/04 =DS 2631-863
Continuous pastry rolling machine - with coiling roller, stop and serrated plate facing belt conveyor
MORINAGA & CO LTD 19.05.76-JA-058429 (19.07.75-JA-088955)
(06.12.79) *DT2631-863 A21c-15

The winding cylinder runs at a slower speed than the belt transporting the flat cakes from the oven in which they have been baked, and are not yet cooled, to the delivery point for the wound bread rolls, of a machine working continuously and automatically.

The flat cakes pressed by the belt, curve round the surface of the winding cylinder until their leading edges contact a stop, so that a partly rolled bread cake results.

Attached to the stop and parallel to the conveyor belt, a rail is provided which works with the belt to roll the cakes into a full circle, cleanly, uniformly and without damage. 15.7.76 as 631863 Add in 2759095 (10pp1045).

SPEY- ★ D11 89808B/50 ★EP ---5-977
Oral admin. of large doses of anticholesterolaemic carbohydrate gums - as bread or crisp-bread stabilised with additional gluten
SPEYWOOD LABS LTD 02.10.78-GB-039008 (30.05.78-GB-024163)
A96 B04 (A97) (12.12.79) A21d-02/18
D/S: E(BE, CH, DT, FR, IT, NL, OE, SW).

Bread comprises flour, 5 to 50% non-absorbable, non-toxic carbohydrate gum and sufficient gluten to stabilise the structure of the bread. The carbohydrate gum is guar gum, locust bean gum, pectin or a water-soluble non-toxic alkyl-cellulose.

The bread provides a means of administering the large amts. (10-30g) of carbohydrate gum required each day to reduce blood cholesterol and glucose levels. It is preferably in the form of a crispbread rather than ordinary bread, as this has a longer shelf life.

25.5.79 as 300957 (13pp916).

(E) ISR:—

AMFI ★ D11 89912B/50 ★GB 2021-919
Packaged hamburger buns with opposed slits - separated by diagonal bridge forming frangible web
AMERICAN FILTRONA CORP 02.06.78-US-911855
P62 (12.12.79) A21c-15/04 B26d-03/12

Hamburger buns are slit by advancing them past a pair of contrarotating blades lying in a common plane. After the blades have penetrated the bun, a thin web remains to link the upper and lower portions of the bun. Pref. the bun is sandwiched between a pair of conveyor belts which prevent its rotation while being engaged by the blades.

The bun is packaged and may be subsequently divided into halves to receive a hamburger patty. The halves of the bun may be toasted but the remnants of the web do not char. 14.2.79 as 005171 (4pp295)

HEIG- ★ D11 89917B/50 ★GB 2021-964
Dough mixer with temp. controlled jacket - together with multi-vaned mixing device
HEIGHT INC 31.05.78-JA-065491
J02 (12.12.79) B01f-07/16 B01f-15/06

Mixer includes a mixing device comprising a plate mounting a central, rotatable shaft having vanes. Each vane includes an upper portion, fixed to the shaft by radially-extending arms, and pointing in the forward direction of rotation. The lower portion of the vanes is fixed via a vertical plate to the plate, the lower portion defining a trailing end. Scraping vanes are provided around the periphery of plate.

The mixing device is mounted within a temp-regulated tub.

The mixer enables the rapid formation of the glutenous state of bread dough, and by using a cooling jacket avoids over-heating of the dough. 29.5.79 as 018710 (10pp1050)

KEMP/ ★ D11 B/50 ★IT 1033-821
Bread dough pieces prepn. appts.
KEMPER K 05.08.74-DT-U26564
(10.08.79) A21c

FMIC- ★ D11 B/50 ★IT 1033-905
Fragile food products sorting and bundling appts.
FMIC FAB ITAL MACCH 27.06.75-IT-012672
(10.08.79) A21b

MIYA/ ★ D11 90075B/50 ★J5 4140-752
Storage-stable rice powder noodles mfr. - by mixing rice powder with flour protein and powdered flour and/or starch and then with (salt) water contg. sodium(hydrogen) phosphate
MIYATAKET 21.04.78-JA-047286
(01.11.79) A231-01/16

Rice powder is mixed with flour protein and flour powder and/or starch and then mixed with salt water or mineral water contg. a small amt. of sodium monohydrogen phosphate or sodium phosphate, followed by conventional procedure for prepn. of noodles. The amt. of flour protein used is 10 to 15 pts. wt. per 100 pts. wt. rice powder. The amt. of flour powder and starch used is twice the wt. or the same wt. as the flour protein. Conc'n. of phosphate in salt water or mineral water is 0.5 to 2%.

In an example, 100 pts. wt. rice powder, 15 pts. wt. flour protein and 15 pts. wt. flour powder are mixed. To the mixt. is added 50% mineral water contg. 1.5% sodium monohydrogen phosphate, followed by kneading and conventional procedure for prepn. of noodles. 21.4.78 as 047286 (2pp2)

HIRA/ D11 70795B/39 =J7 9038-185
Bread mfr. using flour and rice powder - with hot water extract of yeast and emulsifier(s) added to dough to improve quality
HIRANUMAY 03.02.78-JA-010529
(19.11.79) *J54105-255 A21d-02/36

The method comprises fermenting, kneading the main dough fermenting the main dough, finishing, roasting and burning. The dough is prepd. from flour 95-80 w/w %, rice powder 5-20 w/w %, yeast, water, etc. The dough is combined with 0.3-2.5 w/w % of the hot water extract of yeast and 0.2-1.0 w/w % of 1 emulsifier selected from glycerin fatty acid ester, sucrose fatty acid ester and sorbitan fatty acid ester.

Excellent bread can be prepd. without using viscosity increasing agent such as gluten, natural gum etc. The prepd. break is voluminous and of excellent colour, gloss, form, texture, taste and flavour, tissue etc. 3.2.78 as 010529, A21d-2/36 (19.11.79) HIRANUMAY (7pp) (J5 4105255)

KIFO= ★ D11 90819B/50 ★SU -655-375
Working chamber of bread-baking oven - has upper and lower hot gas ducts contg. corrugated reinforcing elements to increase their rigidity
KIEV FOOD IND TECHN 07.02.77-SU-452165
(09.04.79) A21b-01/10

Working chamber of bread-baking oven consists of upper and lower hot gas ducts with longitudinal corrugations. Construction is improved and labour required to mfr. the chamber is reduced, by making the corrugations with a V-shaped profile and disposing them on the outer walls of the heated gas ducts, with the apexes of the profiles connected to the inner walls of the gas ducts.

The screens thus divide the cavities of the gas ducts across their width so as to ensure some lengthwise rigidity in the chamber construction. The advantages of the design in the reduction of effort during construction are mentioned briefly.

Mikhelev A.A., Sigal M.N., Shulgin I.M. et al. Bul.13/5.4.79 7.2.77 as 452165 (3pp29)

UFOO= ★ D11 90835B/50 ★SU-655-418
Blender for homogenised pasty food mixes etc. - contains vaulted chamber with auger screw forcing mixture through tubes with angular nozzles of adjustable orientation

UKR FOOD MECH ENG 27.05.77-SU-489591
(05.04.79) A21d-10 B01f-05/10

The cylindrical vaulted working chamber of the food blender giving improved quality pasty food mixes contains auger screw which scoops the components from the bowl and forces them through the inlet of tubes mounted in even number around the circumference of the dome of the chamber.

Each tube at its outlet end contains deflecting nozzle clamped to it by a screw in adjustable orientation. The nozzle consists of a trough having two sections inclined to one another at an angle of 130-150°. The outlets of the nozzles on adjacent tubes are oriented in opposite direction.

Dagaev Yu. A., Kozlenko N. A., Shatunova Z. I., et al.
Bul. 13/5.4.79 27.5.77 as 489591 (3pp135)

MAMA/ ★ D11 90873B/50 ★SU-655-547
Glazing mouldable materials, clay, dough, etc. - by dipping cold mould into glazing liquid to form ice-type layer which is transferred onto shaped prod.

MAMAIII 14.07.77-SU-508590
102 P64 (09.04.79) B28b-11

Method for applying glazed coatings to the surfaces of articles made from plastic materials for use in the building, ceramic and food industries includes freezing the covering layer to the surface.

The quality of the coating is improved by applying the covering, prior to the article being shaped, on to the surfaces of a previously cooled mould.

The shaping surface is cooled to -10 to -20°C and a liquid material is applied to its surfaces. This is the material intended to be eventually coated on the shaped article by placing the latter into the mould. A thin crust of ice forms on the mould. The plastic prod. is put into the mould, and because its temp. is considerably higher than that of the mould, the incrustation melts on the mould surface, and a uniformly thin layer of the liquid forms on the prod. The thickness of the ice layer is regulated by the mould temp. and the immersion time.

Mamai I. I., Bul. 13/5.4.79 14.7.77 as 508590 (2pp29)

AUTO- ★ D11 90939B/50 ★US 4176-590
Doughnut frying appts. having conveyor through oil bath - with doughnuts inverted by paddles rotated by conveyor flights

AUTOMATED DONUT SYS 07.08.78-US-931387
P28 (04.12.79) A47j-37/12

Doughnuts are cooked in an elongated bath of hot oil through which they are carried by a conveyor with trans-

verse flights. A set of baffles extends from a shaft which extends transversely across the upper run of the conveyor and is engaged by the conveyor to rotate the shaft. The baffles receive a doughnut on their upstream face and lift it out of the bath before redepositing it inverted on the downstream side of the baffles. A doughnut is sandwiched between a railing and a leading baffle with the trailing baffle being longer than the leading baffle.

The appts. cooks doughnuts and inverts them during the cooking operation. 7.8.78 as 931387 (6pp295)

POWE/ ★ D11 90940B/50 ★US 4176-5
Cooking pan for baking pizza pies etc. - has perforated base reducing cooking time by direct heating of pizza portions

POWER D P 10.04.78-US-894744

P28 (04.12.79) A21b-03/13 A47j-27 A47j-36

A pan for cooking pizzas has a flat base with a surrounding wall. The base is perforated with holes each having a dia. of 1/4 inch and altogether the holes occupy 15-40% of the area of the base.

The base of the pan is 0.050 inch thick and each perforation is generally cylindrical apart from the upper end which is rounded. Pref. the pan is made of Al alloy and the side wall extends at an angle of 45° to the base.

A pizza dough is placed in the pan and is cooked. The perforations provide direct contact between portions of the pizza and the hot cooker. Moisture from the dough escapes through the perforations and prevents bubbling of the dough. 10.4.78 as 894744 (8pp295)

AMMA ★ D11 90989B/50 ★US 4177-030
Dough dividing by pushing through grid - by reciprocating piston with two stroke action purging dough from cylinder

AMF INC 01.05.78-US-901410

(04.12.79) B29c-01

A dough divider includes a reciprocating piston which advances dough through a dividing grid into receiving pocket in a movable head. Dough is stored in a hopper above the piston and feeds the cylinder when the piston is retracted. A cut-off knife disconnects the hopper dough from the cylinder and is activated when the piston is making its dough-dividing advance stroke.

After completing the dividing stroke the piston enters a purging stroke during which the cut-off knife is left in the open position while the piston is advanced. This purges unused dough from within the cylinder and returns it to the hopper where it mixes with fresh dough.

The apparatus divides dough into lumps of predetermined size. The purging stroke removes dough from the cylinder and prevents stagnation of dough within the cylinder. 1.5.78 as 901410 (6pp295)

D12: MEAT; FISH PROCESSING

MILE ★ D12 89424B/50 ★BE-878-109
Food product, esp. sausage, not requiring cooking oil - contg. elastic gluten modified by a reducing agent

MILES LABORATORIES INC 13.10.78-US-951196
(03.12.79) A23I

The product with autogenous cooking fat comprises modified hydrated elastic gluten obtd. by contact of a hydrated elastic gluten with a reducing agent and an oil. By 'with autogeneous cooking fat' is meant liberating appreciable amts. of fat or oil in cooking and therefore not requiring the addn. of oil in prepn.

Prepn. of sausage type meat analogues comprises (a) forming a mixt. comprising 25-93% of modified hydrated gluten obtd. by contact of a hydrated elastic gluten with 0.002-0.01 pt. of an edible reducing agent per pt. of dry gluten, 5-50% oil, 2-15% of flavourings and colourants, 0-40% of textured vegetable protein, 0-30% of non-denatured protein, 0-0.6% of vegetable gums and 0-25% of water and (b) heating the mixt. to give it a stable physical form

The treatment of the gluten renders it suitable for direct

incorporation in the mixt. whereas in its natural state it is not. The prods. obtd., which do not show any sepn., has excellent cooking properties. 6.8.79 as 878109 (13pp597)

BATT ★ D12 89452B/50 ★CH-614-351
Protein-contg. foodstuff film - produced by stretching on rollers and scraping from final roller to give fan-folded prod.

BATTELLE DEV CORP 10.05.74-CH-006392
(30.11.79) A23j-03

In the prodn. of a protein-contg. foodstuff, a mixt. of protein and water is processed into a film by passing it through a series of smooth, parallel, touching, rotating rollers, the film being passed successively from one roller to the next, each successive roller having a higher speed of rotation and an opposite direction of rotation to the preceding roller, and the film being removed from the last roller by means of a scraper set at an angle to the surface of the last roller. The mixt. of protein, water and other additives has a water content of 35-80 wt. %. the film is subjected to a stretching of ≥40% and on removal o

the film by the scraper, fan shapes are formed in which smaller folds are super-imposed on larger folds.

Used in prodn. of protein-contg. foodstuffs with a fibre-like structure, e.g. textured vegetable protein. Simple and economical process gives a prod. with good organoleptic properties with a texture closely resembling meat. 20.5.74 as 006392 (9pp280)

TECH = ★ D12 89526B/50 ★DT 2823-878
Fish filleting machine - with two roller supported cup-shaped cutters and spreader

TECH RYBPROM PROD 31.05.78-DT-823878
(06.12.79) A22c-25/16

This fish filleting machine has two cup-shaped filleting cutters, each supported on three back-up rollers. The cutting edges at the rim of each cup are directed opposite to the motion of the fish; they are coaxial and concentric to the side faces of a spreader which enters into a ventral cut.

This is a simple machine which produces fish fillets of high quality from which the backbone, side fishbones and dorsal fins are completely removed. 31.5.78 as 823878 (13pp39)

TAIY- ★ D12 89598B/50 ★DT 2855-127
Removing internal organs esp. kidneys of fish - using water jets as split fish passes horizontally between twin belts
TAIYO SEISAKUSHO MF 29.05.78-JA-063393
(06.12.79) A22c-25/14

Machine consists of a pair of horizontal conveyor belts, a splitting needle between the belts composed of two relatively flat metal sheets, tapering to form the point at each end of the needle with a rectangular aperture between the metal sheets in the centre. Fish are fed horizontally to the needle along a guide bar from a feed table.

The rectangular aperture in the splitting needle contains nozzle jets for jetting water to flush out the internal organs from the fish. In the central region between the upper and lower belts there is a pair of clamping devices and additional clamping devices are provided near the ends adjacent to the inlet rolls, and discharge rolls. These clamping devices apply pressure onto the conveyor belts via the support rolls. A lateral guide plate holds the fish in position against the force of the jets.

Used esp. for the prepn. of salmon or trout, specifically for canning. 20.12.78 as 855127 (16pp236)

FARH D12 87852B/49 =EP ---5-765
Tubular packing film, esp. sausage skins - of cellulose hydrate reinforced with fibres coated with a binder and an optically active substance

HOECHST AG (KALL) 26.05.78-DT-822886
A97 Q34 (A11 A21 A92) (12.12.79) *DT2822-886 A22c-13
D/S: E(BE, DT, FR, GB).

A tubular packing film of opt. chemically plasticised cellulose hydrate has a fibrous insert in the walls. At least part of the fibres are coated (partially) with a compsn. comprising a major proportion of a synthetic hydrophilic resin precondensate as binder and a minor proportion of an optically active chemical substance.

The fibrous insert is e.g. a paper fibre web coated with a compsn. comprising a urea-formaldehyde, melamine-formaldehyde or epichlorhydrin-polyamine-polyamide binder resin and an optically active substance such as a dye or light-protective agent. The web is coated with viscose soln., treated with a coagulating liq., opt. treated with a chemical plasticiser and dried.

The prods. are fibre reinforced cellulose hydrate materials with excellent strength properties. Formation of the cellulose hydrate structure is not hindered as in some prior-art processes where the optically active material is added to the viscose. The walls of the tube are comprised only of cellulose hydrate and opt. the plasticiser. The prods. are esp. useful as sausage skins.

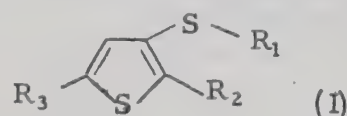
17.5.79 as 101510 (17pp513)
(G) ISR: US3378379; FR2322973; FR2224088; DT2312385;
FR2209513

INFL D12 84895X/45 =GB 1551-326
Substd. 2-pyrazinyl 3-furyl-sulphides - useful in enhancing meaty flavours of foodstuffs

INT FLAVORS & FRAGR INC 29.05.75-US-581962

E13 (30.08.79) *US3988-510 +C07d-213/32 C07d-241/18
C07d-307/64 C07d-405/12

3-Furyl sulphide of formula (I) are new.



In (I), R₁ is aralkyl, nitrogen heterocyclyl, alkenyl or alkylthioalkyl; R₂₋₃ are each H or CH₃, ≥ 1 of R₂₋₃ being CH₃. Pref. R₁ is 2-pyridylmethyl, 3,6-dimethyl-2-pyrazinyl, 3-isobutyl-2-pyrazinyl, allyl, 2-methyl-2-propenyl, methylthiomethyl, benzyl or 2-butenyl.

(I) give meaty, alliaceous or vegetable flavour to foodstuffs. Pref. compsn. contains a flavour adjuvant.

19.5.76 as 020618 (37pp982)

CAMP- D12 57439Y/32 #GB 1552-093
Textured protein pieces prodn. - by extrusion in tubular form with steam injection

CAMPBELL SOUP CO 31.12.75-US-645614 (07.07.77-GB-028527)
(05.09.79) *US4039-691 +A23j-03

A puffy randomly texturised protein prod. is mfd. by mixing dry untextured protein and water to form a dough contg. 40-60% solids, feeding the dough to a die at a temp. below the texturisation temp, extruding the dough to form a semi-rigid tubular shell, injecting a heated gas into the tubular shell to blow the shell into discrete irregularly shaped pieces of randomly texturised protein, and passing the protein/gas mixt. through a device which maintains a back-pressure disposed at the end of the treating zone. 7.7.77 as 028527 (8pp1376)

CAMP- D12 91774Y/51 #GB 1552-094
Texturising protein by centrifugal spinning - comprises injecting steam into an aqueous slurry of protein then spinning into monofilaments

CAMPBELL SOUP CO 31.12.75-US-645615 (07.07.77-GB-028528)
F01 (05.09.79) *US4062-987 A23j-03 +D01d-05/18

Texturised monofilaments of protein are mfd. by treating protein slurry with heated gas at an elevated pressure, centrifugally spinning the protein to form monofilaments, and recovering the monofilaments.

The protein pref. contains ≥ 70% protein. The slurry pref. contains 40-50% solids, and the protein is a mixt. of soy flour and soy protein isolate. Alternatively, the protein is a mixt. of 80% comminuted meat and 20% non-meat protein binder. The gas is pref. steam at a pressure of 80-150 psi. The temp. of the slurry is pref. 310-350°F. 7.7.77 as 028528 (12pp1376)

WOLR D12 33717A/19 =GB 1557-385
Animal carcass skinning machine - with slotted drum housing clamping device for skin flap and scraper blade

WOLVERINE WORLD WID 29.10.76-US-736710
(12.12.79) *DT2746-350 A22c-17/12

Skin and retained hair are removed from a hog carcass by killing and bleeding a hog suspended from a conveyor, manually removing skin from the rear hock and head; slitting the skin along the teat strip to produce a skin flap, placing the skin flap between a gripper extending from a ditch opening in a drum; retracting the gripper into the ditch; clamping the flap in the drum; rotating the drum; and scraping the skin from the hog as the skin is pulled around the drum.

The skin can be removed undamaged and without need of dehairing. 17.10.77 as 043102 (25pp1376)

WOLR D12 33717A/19 =GB 1557-386
Animal carcass skinning machine - with slotted drum housing clamping device for skin flap and scraper blade

WOLVERINE WORLD WID 29.10.76-US-736710
(12.12.79) *DT2746-350 A22c-17/12

Hog carcass skinning appts. for removing skin from a hog which has a preliminary slit along the teat strip includes a support frame; a drum rotatable on an axis slightly inclined to the vertical; a skin clamp positioned at a ditch which extends along the drum and opens through the peripheral surface to clamp a skin flap from the teat strip; a skin scraper floatably mounted on the frame to exert pressure

to hold the skin on the drum and scrape the skin from the carcass as the skin is pulled around the drum; and a device to vary the scraper position in response to variations in pressure. 17.10.77 as 32222/78 Div. ex. 1557385 (24pp1376)

NMHB ★ D12 89901B/50 ★GB 1557-600
Tool cutting and cleaning fish abdominal cavity - with circular rotating blade sandwiched between blunt toothed discs
NORDISCH MASCH R BAADER 09.12.77-GB-051278
P62 (12.12.79) B26b-25

Tool comprises a circular knife with a peripheral cutting edge sandwiched between a pair of toothed discs. The swept dia. of the discs is about 2 mm less than the dia. of the circular knife and pref. spacing washers are interposed between the discs and knife to establish their separation. Pref. the cutting edge of the circular knife is formed by chamfering both its edges and it may also be interrupted by radially extending notches. The teeth of the discs have blunt faces and may be undercut. Pref. the discs and knife are locked together by a rod which passes through them.

The tool slits and cleans the abdominal cavity of a fish. The toothed discs do not cause injury to the belly cover yet accomplish the clean removal of the guts of soft fish. 9.12.77 as 051278 (4pp295)

COPE- ★ D12 89911B/50 ★GB 1557-886
Chilling poultry carcasses in tank - with impeller advancing carcass to succeeding tank

COPE WHELOH & CO 17.11.76-GB-047904
Q75 (12.12.79) F25d-13/06

A chilling tank is filled with water which additionally washes poultry carcasses placed in the tank. The carcasses are advanced through the tank and discharged via a chute by an impeller which positively advances the carcasses at a predetermined rate. The impeller drive remains above the water in the tank. Pref. the impeller comprises sets of rods which project from a chain drive to advance the carcasses. In another embodiment the impeller comprises paddles which project from a drive shaft which extends transversely above the tank.

The appts. washes and chills poultry to a predetermined temp. The impeller provides positive movement to the carcasses and thus ensures a uniform residency in the tank. 17.11.76 as 047904 (8pp295)

MONO- ★ D12 B/50 ★HU T017-280
Modular table construction for the food, esp. meat, industry - with hygienic and antiseptic properties
MONORI MEZOGAZDASAG 24.05.77-HU-MO0982
(28.11.79) A22c-17/02

LOMB/ ★ D12 B/50 ★IT 1033-503
Meat juice for food products
LOMBARDO F 03.03.71-IT-009390
(10.08.79) A23/

UNIC ★ D12 90032B/50 ★J5 4123-390
Casing used as foodstuff container - is coated with a film made of caramel and tackifying inhibitor
UNION CARBIDE CORP 28.02.78-US-882613
A92 + Q31 (25.09.79) A22c-13 B65b-09/16

A casing useful as container of foodstuffs consists of a cellulose material contg. buried fibrous web or an anticorrosive collagen, and ≥ 1 of its internal surface and its external surface is coated with a film consisting of caramel and tackifying inhibitor and the coated surface has a brownish coloured appearance analogous to smoke treated surface. The tackifying inhibitor is a hydrophobic material involving a mineral oil, a silicone oil, a vegetable oil and a surfactant contg. a molecule having hydrophobic chain. The surfactant is chosen from polyoxyethylene (20) sorbitan-monooleate or dioctyl ester of sodium sulphosuccinate.

The film coated casing is used as a container for beverage or syrup. 27.2.79 as 021480 (8pp15)

NIPK ★ D12 90078B/50 ★J5 4140-767
Agent for preventing degradation of dried fish prods. - contains ethanol, fatty acid ester and other additives e.g. seasoning
NIPPON KAYAKU KK 24.04.78-JA-047834
(01.11.79) A23b-04/04

Inhibitor for degradation of dried fish prod., comprises 1-

99.95% of ethanol, $\geq 0.05\%$ of fatty acid ester and 98. to 0% of liq. which can be added to foodstuffs, the amt. the fatty acid relative to ethanol being 0.005-0.7%. Degradation of taste, flavour, etc. of dried fish prods. for storage can effectively be inhibited.

The fatty acid ester usable includes glycerin ester, sorbitan ester, propylene glycol ester, sugar ester, etc. The fatty acid has 6-15C atoms, pref. 8-10C. The liq. which can be added to foodstuffs includes water, which contain seasoning agent. The dried fish product is treated with the compsn. at suitable stage of prepn. of the prod. A typical compsn. consists of 80 g of ethanol and 20 g of glycerine caprylate. 24.4.78 as 047834 (4pp22)

TANA ★ D12 90079B/50 ★J5 4140-767
Salted fish egg prepn. - involves immersing fish egg in aq. soln. contg. vitamin/e, organic acid and protein hydrolysate
TANABE SEIYAKU KK 21.04.78-JA-048020
(01.11.79) A23b-04/02 A23l-01/32

In the prepn. of salted fish egg, the fish egg is immersed in an aq. soln. contg. vitamin E, organic acid and hydrolysate of protein. The organic acid is used in an amt. of 0.1-1 wt. pt. relative to 1 wt. pt. of vitamin E, and the hydrolysate of protein is used in an amt. of 1-10 wt. %. The salted fish egg has clear colour. The organic acid includes malic, citric, ascorbic acid, etc., or their sodium salts. The hydrolysate of protein includes acid or enzymatic hydrolysate of gelatin, which has molecular wt. of about 500-5000. The three components are dispersed in water and desirably dextrin, etc. is added. Fish egg is immersed in the compsn. together with table salt.

In an example, 1 kg of fish egg is washed with water, and 150g of table salt is added. 85 ml of a compsn. contg. 60 mg of red colouring agent, 4.2 mg of yellow colouring agent, 1 mg of a mixt. of vitamin E, citric acid and gelatin hydrolysate of MW of 2000 (5:1:5) and 85 ml of water is then added, followed by standing for 4 hrs. 21.4.78 as 048020 (4pp22)

DESC= ★ D12 90576B/50 ★SU -653-186
Suspended rod conveyor for animal carcasses on trolleys - has frame with stops and auxiliary rod with pushers, attached to frame by levers

DES-CONS BUR 21.11.77-SU-546480
Q35 (28.03.79) B65g-25

The conveyor comprises guides on brackets with scale beam between them and working rod with pushers for the trolleys. In order to enable weights to be set on the beam and packs of trolleys with carcasses to be taken off it, the conveyor has a frame with stops and an auxiliary rod with pushers, connected to the frame by turning levers and the rod of a drive.

Smalyuk F.G., Tochilin V.M., Bul. 11/25.3.79 21.11.77 as 546480 (2pp18)

SEAF ★ D12 90605B/50 ★SU -654-23
Continuous fish smoking process - using periodically reverse smoke stream directed against sides of fish for reduced chamber size and uniform smoke distribution
SEA FISHERY OCEANOGRAPHY 17.02.77-SU-455116
(30.03.79) A23b-04/04

Fish is smoked in a chamber, into which a smoke-evolving agent is introduced; the smoke passes the chamber through its whole free cross-section, perpendicularly to the longitudinal axis of the fish.

The size of chamber is reduced and the smoking process accelerated by periodically (30-120 sec) reversing the direction of the smoke stream. The stream is directed perpendicularly to the side of the fish with a speed of 0.5-6.0 m/sec.

Popov M.V., Turban S.S., and Bunin D.Kh., Bul. 12/30.3.79 17.2.77 as 455116 (2pp70)

MOME= ★ D12 90624B/50 ★SU -654-500
Trough from meat loaf box removal mechanism - has cassette with turning flaps in lower section, and horizontal chain conveyor mounted above it

MOSC MEAT IND PRODN 09.02.77-SU-455869
Q31 (30.03.79) A22c-17 B65b-69

Unit for extracting troughs from meat loaf boxes comprises feed mechanism, mechanism for inverting the box.

vertical chain conveyor, extraction mechanism and take off unit for meat loaf and boxes.

A cassette is incorporated with turning flaps in its lower section, and a horizontal chain conveyor with guides mounted above it which ejects the empty boxes. The flaps are turned by a mechanism which has eccentric discs connected via sprocket transmission to chain conveyor drive shaft. The box inversion mechanism has turning rollers with several bent guides. The whole machine is driven via 2.8 kW motor gear box unit turning at 960 revs. per min.

Vladimirov O.N., Lobaghev D.P., Timoshin V.I. et al
Bul.12/30.3.79 9.2.77 as 455869 (4pp962)

MURM=★ D12 90820B/50 ★SU-655-376
Machine for washing fish before drying and smoking - in which the fish of different kinds and sizes are placed in perforated trays, washed, drained and tipped on to a mesh conveyor
MURMANSK GIPRORYBFL 07.09.76-SU-405608
(09.04.79) A22c-25

Device is used for processing fish, e.g. washing, pickling prior to drying and curing. It comprises perforated trays to which a reciprocating motion is imparted, plus a conveyor. The prod. quality and the productivity are increased by placing the conveyor alongside the trays, each of the latter being fastened, at the end adjacent to the conveyor, on a spindle so that it is able to be rotated. The trays are moved by a chain transmission supporting wedge-shaped projections. On the free end of each tray is another wedge-shaped piece which comes into contact with the projections on the transmission unit. The trays also have spring shock absorbers.

Dorovskikh V.N., Nikolaenkov V.K., Vorobei O.V. et al
Bul.13/5.4.79 7.9.76 as 405608 (4pp29)

See Also

D13 GB 1552092

D13: OTHER FOODSTUFFS

AMPO- D13 30668R/18 =DS 1692-581
Dehydrated potato products

AMERICAN POTATO CO 03.05.66-US-547195
(06.12.79) *GB1190-624 A231-01/21

Dried potato pieces are prepd. Potato powder and unswollen starch are mixed with water to a dough contg. 25% solids composed of at least 80% undamaged, cooked, potato cells and at most of 20% ungelatinised raw starch. The dough is treated first with steam and then divided while hot into pieces of thickness 3.2mm. The pieces are predried at 82-93°C and then further dried to a moisture content of 7.5%. The prod. can be brought to a normal fluid content in a very short time. 28.4.67 as 692581 (4pp068).

THAL D13 56199S/35 =DS 2056-896
Fats and proteins recovery from vegetablesoi
VEB SCHWERMASCH THALMANN (SCH-) 18.02.70-DL-145726
(06.12.79) *DT2056-896 A23j-01/14 C11b-01

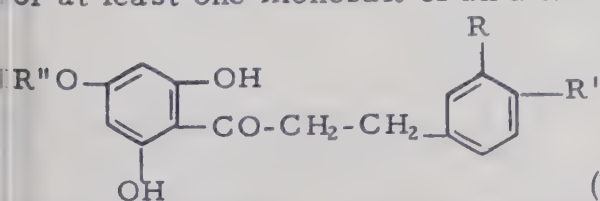
Fat, protein and byproducts are recovered from oil-contg. vegetable matter, e.g. oilseeds. The crushed vegetable matter in aq. electrolyte is finely comminuted and the resulting compsn. is mixed with a 2-25% salt soln. as displacement liquid in a ratio of displacement liquid to vegetable matter of 15:1 to 5:1. The mixt. is then sepd. into a conc. fat phase a protein soln and solid residue. The fat phase is broken either by mixing with 10-40% (based on wt. of fat phase) of technical ethanol or its homologues or by intensive mixing at 50-100°C under vacuum or normal pressure. The protein is pptd. by addn. of acid. The displacement liquid is recovered and reused.

The process yields fat and protein of high quality without complicated machinery. 19.11.70 as 056896 (3pp068).

NUTR D13 32821T/21 =DS 2155-321
Use of dihydrochalcone derivs - for preservation of aroma of natural or synthetic ethereal oils in chewing gum and sweets
NUTRILITE PRODUCTS INC 14.10.71-US-189374 (09.11.70-US-088144)

E14 (06.12.79) *DT2155-321 A23g-03/30

Chewing gum or sweets contain natural and/or synthetic essential oils, e.g. peppermint oil, as flavouring and, as flavouring and preserving agent, 0.0025-0.5 wt. % (based on total compsn.) of at least one dihydrochalcone of formula (I) (where R is H or OH; R' is H, OH or 1-3C alkoxy; R'' is β-rutinosyl, neohesperidosyl or β-D-glucosyl) and/or at least one monosalt of an alkali or alkaline earth metal.



al. The monocalcium salt of neohesperindihydrochalcone is pref.

The prod. has

(I) improved storage stability and taste. 6.11.71 as 155321 (8pp068).

VICT D13 20361W/12 =DS 2344-884
Trace element depot tablets - for treatment and control of deficiencies

GEWERKSCHAFT VICTOR 06.09.73-DT-344884
B05 C03 (06.12.79) *NL7411-704 A61k-09/26

Depot tablets for suckling piglets, used for prophylaxis of deficiencies consist of pressed active agents provided with a coating layer, and other known additives.

In the improvement, the coating layer is made of thermoplastic polymers based on vinylidene chloride-acrylic acid ester copolymers or on vinyl chloride-vinyl propionate copolymers.

Used esp. for treating deficiencies of trace elements, e.g. Fe, Cu, Mn, Zn, Se, F and Co, and is included in the feed of young animals. 6.9.73 as 344884 (6pp997).

DSOM- D13 05693Y/04 =DS 2638-307
Continuous cheese making appts. with vertical mixer column - has tanks supplying U tube each side of mixer, agitator at base
DSO MLETSCHNA PROM 06.09.75-BG-030935
P13 (06.12.79) *BE-845-877 A01j-25

The container for the milk and that for the fermentation material are connected by pumps to a mixer, from which, "U"-form pipes for coagulation extend to the upper end of a collector, in an installation for producing a cheese mass.

The vertical collector is fitted with an arrangement for cutting the thickened milk and mixing the cut up coagulate. At the bottom of the collector, a horizontal, motorised agitator connects to a vertical delivery pipe. The product is a coagulate of uniform structure, well suited to the mfr. of white cheese and other sorts of soft cheese. 25.8.76 as 638307 (4pp1045).

ROQF D13 21793A/12 =DS 2703-374
Natural yellow dye for foods - consisting of a protein-rich by/product from maize starch extrn.

ROQUETTE FRERES SA 15.09.76-FR-027711
E24 (06.12.79) *DT2703-374 A231-01/27

A dye for foods such as baked goods, cheeses, creams and desserts is a powdered mixt. with solids content greater than 85(90)%, of which 1/3. is starch and 2/3. is protein, obtd. as byproduct in the prodn. of maize starch (so called protein milk). The mixt. has the following properties (1) particle size distribution 100 wt. % has particle size less than 200μm, 95(98)wt. % has particle size less than 147μm and 60(75)wt. % has particle size less than 100μm; (2) taste test in butter in a defined dispersion in butter, contg. 1.25% of the powdered mixt. no particles can be detected; (3) test of maximal permissible light reflection ability for wavelengths 540, 577, 620 and 681nm. not exceeding 15% in comparison with a defined comparison standard. 27.1.77 as 703374 (8pp068).

KKIR = D13 00005A/01 = DS 2727-654
Catalyst for hydrogenolysis of dimethyl-dibutyl hydroxybenzylamine - comprises alloy of nickel, aluminium, chromium, molybdenum and palladium

KAZA KIROV UNIV 21.06.76-SU-374525

E14 (06.12.79) *BE-855-861 B01j-23/88 C07c-39/06

Catalyst for the hydrolysis of N, N-dimethyl-3, 5-di-tert.-butyl-4-hydroxybenzene to 2, 6-di-tert.-butyl-4-methyl phenol (I) is a Ni-Al-Cr alloy contg. 39.0-47.7 wt. % nickel, 0.3-2.0 wt. % chromium, 0.5-4.0 wt. % molybdenum, 0.01-0.2 wt. % palladium and the remainder aluminium. The catalyst is prep'd. by melting aluminium, adding first nickel to the melt then molybdenum, chromium and palladium, stirring and removing the slag. The melt is cast, the solid melt is comminuted and part of the aluminium leached out.

With this catalyst the reaction time is shortened so that the formation of byprods. is reduced. Phenol I is useful as stabiliser for fuels, oils and foodstuffs. 20.6.77 as 727654 (3pp068).

MEGG ★ D13 89484B/50 ★DT 2823-339
Cheese prodn. - using ultrafiltration permeate for acidification after cation removal, of the milk

MEGGLE MILCHIND GMB 29.05.78-DT-823339

(06.12.79) A23c-19/02

Prod'n. of cheese comprises ultrafiltration of milk, of reduced pH to give a retentate which, opt. after adding other milk components such as cream, is thickened or coagulated, then processed conventionally to cheese. Novelty is that the permeate from ultrafiltration is acidified by cation removal (pref. to pH 1-2) and then used for reducing pH of the milk.

Pref. the milk is acidified to between pH 6 and the coagulation point of casein. Opt. only a portion of the permeate is acidified, then added to untreated permeate to give the required final pH. Ultrafiltration is pref. controlled to give vol. ratio permeate:retentate of 1.5-3:1.

Process does not require additional, non-milk acids or fermentative pre-ripening. It is easily controlled to give the required characteristics (taste and consistency) of a wide range of cheese types.

Both the milk used for cheese making and the permeate may be used in conc. form. Acidification is esp. by treatment with a cation exchanger or by electrodialysis.

29.5.78 as 823339 (13pp1251)

GERK ★ D13 89533B/50 ★DT 2824-042
Compsns. in foil form for use as foods, fodder or pesticide bait - produced by compression of a protein- and/or polysaccharide-contg. material and plant seeds

GERLACHE CHEM GMBH 01.06.78-DT-824042

C03 (06.12.79) A01n-17/12 A22c-13 A23k-01 A23l-01

In the prepn. of a material in the form of a foil using plant materials and water, protein- and/or polysaccharide-contg. natural substances of animal and/or vegetable origin and plant seeds or seed parts with a natural or artificial water content of up to 50wt. % are directly pressed to a foil. The protein- and/or polysaccharide-contg. material is pref. comminuted to a particle size of $> 500 \mu$.

The foil is intended primarily for use as a feed- or foodstuff. Thus, the foil can be used directly or after comminution as an animal feed or petfood. It can also be used as a food concentrate for human consumption. The foil can also be used as a bait contg. poisons or pesticides. 1.6.78 as 824042 (13pp280)

WOOD- ★ D13 89676B/50 ★DT 2922-247
Recovering protein and starch prods. from vegetable seeds - esp. peas and beans, by solubilising protein in aq. medium

WOODSTONE FOODS LTD 02.06.78-CA-304709

B05 F09 (D17) (06.12.79) A23j-01/14 C13l-01

Prod'n. of new protein and starch prods. comprises slurry-ing finely-ground or powdered vegetable seeds in aq. medium to give a suspension of pH 2-10. This suspension is centrifuged to give (i) a supernatant contg. most of the protein and (ii) a lower phase contg. most of the starch.

The pH of the fractions is then adjusted to recover the protein or starch prods. Pref. starting materials are beans and peas, pref. broad beans, white pea beans or esp. split peas. The protein and starch prods. themselves

are claimed.

The prods. are used in food processing, paper making and the pharmaceutical industry; the fibre recovered as prod. is also useful in nutrition. During the process enzymatic activity is inhibited so development of flavour and odour prevented. 31.5.79 as 922247 (27pp1251)

SNAM ★ D13 89690B/50 ★DT 2922-50
Prod'n. of protein isolate esp. from sunflower seeds - by alkaline extrn. and isoelectric pptn. with polyphenol(s) kept complexed by aluminium ions (NL 4.12.79)

SNAMPROGETTI SPA 02.06.78-IT-024136

(06.12.79) A23j-01/14

Prod'n. of protein isolate from ground plant material which contains unwanted components comprises first directly extracting the protein with alkaline aq. soln. The unwanted components are simultaneously complex with $AlCl_3$, $Al_2(SO_4)_3$ or some other Al salt and then the protein is pptd. by acidification at its isoelectric point in presence of a cpd. which keeps Al in soln.

The protein is dissolved up and pptd. again under the same conditions. Esp. the material is sunflower seed meal and unwanted components are polyphenols such as chlorogenic and caffeic acids. Extraction is esp. with NaOH soln. and citric acid is used both to retain Al in soln. and for acidification.

The prod. is acceptable for human nutrition. It is creamy white and only slightly discoloured at alkaline pH, has protein content 95% and protein recovery is 60%. The protein suffers only minimal denaturation and is completely soluble at pH 8-8.5. 1.6.79 as 922561 (8pp1251)

LANG/ ★ D13 89704B/50 ★EP ---5-703
Fuel e.g. alcohol and plant and animal nutrient - produced from solid municipal waste by separation, hydrolysis, saccharification, fermentation, distillation etc.

LANG JL 05.06.78-EP-400012

C03 H09 (12.12.79) A23k-01 C02c-05 C05f-07 C05f-09 C10l-01 C12c-11

D/S: E(BE, CH, DT, FR, GB, LU, NL, SW).

Prod'n. of useful materials, including liq. fuels, from solid municipal waste comprises the following stages:- (a) separation of metals present in the waste; (b) separation of leather, hydrocarbon impregnated paper and non-friable plastics; (c) separation of friable materials, such as plastics, glass, bone etc.; (d) soaking to swell the material hydrolysable in water; (e) separation by flotation of hydrolysable material; (f) fine grinding of the hydrolysable material; (g) regulation of the solids content of the liq. waste; (h) hydrolysis and saccharification of the polysaccharides and other constituents of the liq. waste, using a fixed concn. of H_2SO_4 ; until all the organic part is solubilised and converted to fermentable sugars; (i) rendering H_2SO_4 from stage (h) harmless; (j) regulation of the concn. of soluble solid materials and the pH to give conditions favourable for fermentation; (k) inoculation of the sterile mixture with a single fermentation species; (l) fermentation under appropriate conditions for the fermenting species; (m) filtration of the mixt. and recylatisation of the solid material to the hydrolysis stage; (n) distillation to give a liq. fuel (I) and leave a residue (II) which is a useful nutrient for plants and animals.

The process is used for disposal of municipal waste (household waste, sewage sludge and liquid) by hydrolysis of the carbohydrates to give sugars which can be fermented to give alcohols. The alcohol can be used as a fuel for internal combustion engines and the solid fermentation residue as a plant or animal nutrient.

5.6.78 as 400012 (14pp395).

(F) ISR: FR-638690; J51130583; FR-984983; FR2321469; US2312196; US2198785; US3725538; FR2119987; US3787583; US3848813; US3711392; DT-811821; NL7406786; 1 Journal Reference.

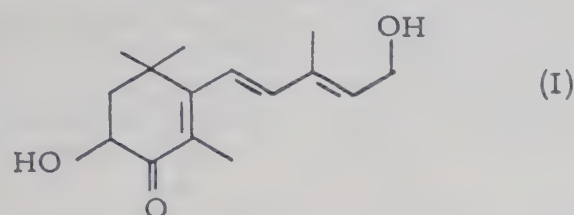
HOFF ★ D13 89713B/50 ★EP ---5-748
Synthesis of astaxanthin - from new tri:methyl-cyclohexenone deriv.

HOFFMANN-LA ROCHE AG 29.03.79-CH-002922 (02.06.78-CH-006074)

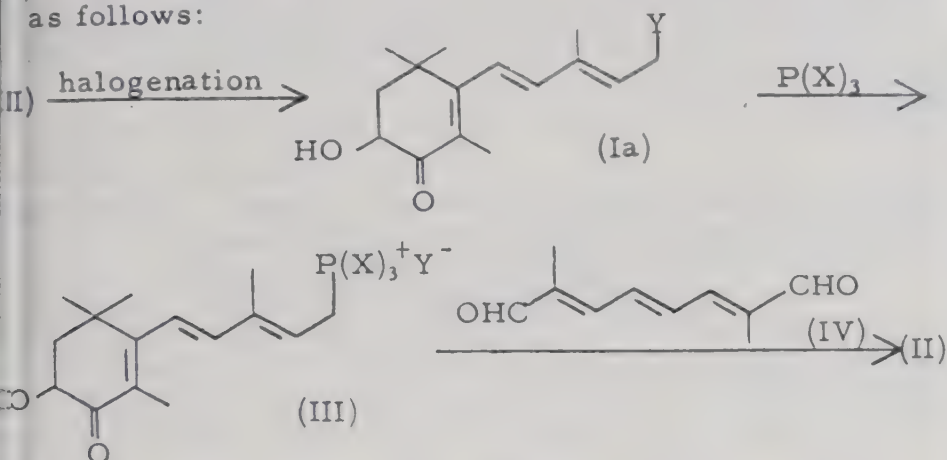
E24 (12.12.79) C07c-49/60 C07c-175 C07d-317/64 C07f-09/54

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE).

(A) Racemic or optically active 6-hydroxy-3-(5-hydroxy-2-methyl-1,3-pentadienyl)-2,4,4-trimethyl-2-cyclohexenone of formula (I) is new.



(B) Prepn. of racemic or optically active astaxanthin (II) as follows:



where X is aryl and Y is halogen).

(C) Intermediates of formulae (Ia), (III) and (V)-(VIII) (see "Preparation") are new, in optically active or racemic form.

5.79 as 101400 (29pp367).

(G) ISR: —

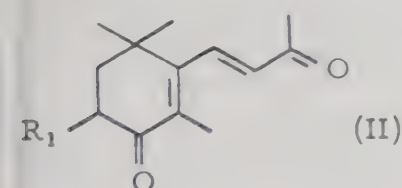
OFF ★ D13 89714B/50 ★EP ---5-749
Synthesis of red food dye astaxanthin - from new 4-oxo-beta-ionone derivs.

HOFFMANN-LA ROCHE AG 29.03.79-CH-002921 (02.06.78-CH-006073)

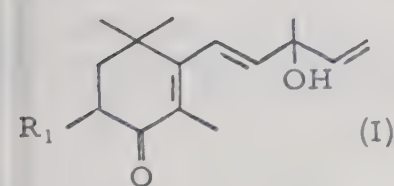
E24 (12.12.79) C07c-175 C07d-317/26

D/S: E(BE, CH, DT, FR, GB, IT, NL).

(A) Prodn. of racemic or optically active cyclohexene derivs. comprises (a) vinylating (or ethynylating and partially hydrogenating) a racemic or optically active cpd. of formula (II):



(where R₁ is an acyloxy or ether gp. convertible to OH), and opt. (b) converting the product of formula (I):



to astaxanthin (III) by known methods for condensing a 10C unit with a 15C unit.

(B) Cpds. (I) and (II) are new; also new are the intermediates of formulae (VII), (VIII), (II; R₁ = OH) and (X) (see "Preparation").

(III) is a red food dye.

8.5.79 as 101401 (29pp367).

(G) ISR: —

KONN ★ D13 89770B/50 ★EP ---5-891
Test unit for simplified testing of biological fluids - to determine antibiotics and sulpha drugs

GIST-BROCADES NV 05.06.78-NL-006086

B04 R16 (12.12.79) G01n-33/16

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, SW).

Antibiotic and sulpha drug residues in biological fluids are determined by using a unit prep. as follows. Spores of a micro-organism having broad sensitivity for the drugs are introduced into an agar soln. opt. contg. buffer and in such a way that they cannot germinate (lack of

nutrients and/or low temp.) but stay alive. The amt. of spores used is sufficient so that growth occurs in a short time under favourable conditions so that it can be observed by using an indicator.

The sensitivity for sulpha drugs is increased by addn. of trimethoprim but growth rate is not affected. Then the agar soln. is allowed to solidify, and the indicator is added to the agar soln. or to nutrients if prep. separately.

The units are useful for simplified testing of milk, meat prods., serum, urine etc. in a quick procedure giving a result within a few hours and which does not require highly skilled operators to perform it.

5.6.79 as 200277 (10pp1248).

(E) ISR: GB1467439; US3126325; 3 Journal References.

FMCC ★ D13 89801B/50 ★EP ---5-958

Powder for stabilising and enhancing quality of dairy prods. - contg.

1,4-glucan, carbohydrate sweetener and hydrocolloid gum

FMC CORP 02.02.79-US-008672 (31.05.78-US-911658)

(12.12.79) A23g-09/02 A23l-01/04 C08l-01

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Prodn. of water-dispersible powder comprises mixing, in a wet state, disintegrated β-1,4-glucan (I), a carbohydrate sweetener (II) and a hydrocolloid gum (III), then drying the mixt.

Pref. (II) is a hydrolyzed cereal solid and (III) is xanthan or xanthan gum. Pref. compsns. contain 30-80% (I), 10-65% (II) and 5-20% (III), all by wt. of the powder.

The powder is used for stabilizing and enhancing the body and texture of frozen dairy prods. such as ice-cream, ice milk or yoghurt. It is as effective as compsns. contg. carboxymethylcellulose derivs. (which are not permitted in some countries).

23.5.79 as 300912 (10pp1251)

(E)ISR: AU-423580; US4031261; US2395060; US3996389; US3355300; GB1500456.

SCMZ ★ D13 89838B/50 ★EP ---6-034

Compsn. contg. confectionery hard butter - useful as partial replacement for cocoa butter esp. in chocolate formulations

SCM CORP 05.06.78-US-912639

(12.12.79) A23g-01 C11b-07

D/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

Compsn. comprises (i) 15-40 pts. cocoa butter (I); (ii) 0-25 pts. butterfat (II), the total of (I) + (II) being > 40 pts.; and (iii) 60-85 pts. of a novel form of confectioner's hard butter (III). (III) comprises 96% 16-18C triglycerides with > 20% cis unsaturation in its fatty acids and has SFI (solid fat index) profile 78-85% at 50° and 70°F; 70-80% at 80°F; 31-45% at 92°F; > 3% at 100°F and 0% at 110°F. It has Mettler dropping point 36-39°C.

Esp. the compsn. contains 5-20 pts. (II) supplied by milk solids. Pref. (I), (II), (III) and 1-2 pts. lecithin constitute 30-35% of the compsn., the rest being sucrose (pref. 40-55%), cocoa fibre (pref. 5-20%), flavouring and NaCl. Esp. most (I) and some fibre are supplied as chocolate liquor.

(III) is an excellent partial replacement for cocoa butter for use in confectionary, coatings, etc. and for cosmetic and pharmaceutical uses.

5.6.79 as 301066 (24pp1251)

(E) ISR: —

FRPO- ★ D13 89853B/50 ★EP ---6-067

Preservation of whole, cooked eggs without shells - offers three to five weeks shelf life without discoloration of egg white

FRANCE PONTE 05.06.78-FR-016735

(12.12.79) A23b-05

D/S: E(BE, CH, DT, GB, IT, LU, NL, SW).

A number of eggs, precooked and then peeled, are enclosed in an air-tight package contg. an atmos. rich in CO₂, pref. pure CO₂ at about atmos. pressure. The package also contains an additive to improve the organoleptic characteristics of the egg. The eggs progressively absorb part of the CO₂ and some of the additive.

The packaged eggs have a shelf life of 3 to 5 weeks at +2 °C. There is no blackening or other discoloration of the white of the egg.

1.6.79 as 400356.(9pp448).

(F) ISR:-

TRIB- ★ D13 89863B/50 ★ FR 2418-627
Casein prepn. from skimmed milk - using an electrodialyser for first stage pH reduction
TRIBALLAT LAITERIES 02.03.78-FR-006007
(02.11.79) A23j-01/20 C09j-03/24

In the prepn. of casein by acidification of skimmed milk, the first stage of pH redn. is performed using an electrodialyser. Pref. this operation is effected until the pH is still above that at which the skimmed milk flocculates (i. e. pH 4.7), and the pH reached is esp. 4.9-5. Pref. the skimmed milk is passed several times through the same electrodialyser. Pref. the milk temp. is 4-25 (4-10)°C.

Method avoids disadvantages of the use of HCl, namely its brutal action and the addn. of unnecessary or harmful materials which have to be removed. 2.3.78 as 006007 (7pp997)

ELLC- D13 41784Y/24 =GB 1551-532
Savoury flavouring agents prodn. - by hydrolysing red blood cell concentrates with acids or enzymes
ELICO PROTEIN AB 12.02.76-SW-001552
(30.08.79) *BE-851-327 A23l-01/23

A seasoning compsn. in the form of a dry powder comprises a hydrolysate of a red blood cell concentrate contg. uncoagulated animal (excluding human) blood from which the plasma has been removed. The hydrolysate results from acid or enzymatic hydrolysis.

The compsn. is prepd. by removing plasma from the blood, hydrolysing the concentrate, and adjusting the pH of the hydrolysate to 6-8. Hydrochloric acid may be used to effect acid hydrolysis, using sodium hydroxide to adjust the pH, forming sodium chloride; or sulphuric acid may be used, using calcium- or barium hydroxide to adjust the pH removing the sulphate formed by filtration. A pancreatic enzyme or papain is used to effect enzymatic hydrolysis.

A red blood cell concentrate is prepd. contg. ≥ 30 wt. % of dry solids. 11.2.77 as 005790 (4pp931)

CAMP- D13 55773Y/31 #GB 1552-092
Texturising vegetable protein using steam injection - to give bland meat-like prod.

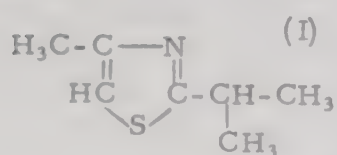
CAMPBELL SOUP CO 31.12.75-US-645612 (07.07.77-GB-028526) (D12) (05.09.79) *US4038-431 A23j-03 + C07g-07
Texturised protein is mfrd. by (a) mixing protein and water to form a slurry contg. ≥ 70 wt. % protein; (b) injecting a heated gas to propel the protein through a confined treating zone, the zone being at a temp. of 310-350°F to render the protein thermoplastic; (c) passing the gas/protein mixt. through a device at the end of the zone which maintains a back-pressure in the zone; and (d) stretching the thermoplastic protein.

Protein is pref. 50-60% soyflour and 40-50% soy protein isolate. The gas is pref. steam at a pressure of 80-150 psi. 7.7.77 as 028526 (8pp1376)

POLA D13 57187A/32 =GB 1557-382
2-Isopropyl-4-methyl-thiazole used in foods - to confer or improve a fruity flavour, esp. of peaches (BE 1.8.78)

POLAK'S FRUTAL WORKS INC 01.02.77-GB-004021
E13 (12.12.79) *DT2804-077 A23l-01/23

A flavouring compsn. contains an effective amt. of 2-isopropyl 4-methyl thiazole to impart or enhance a fruity flavour, in combination with a fruit-flavour-imparting component.



2-Isopropyl 4-methyl thiazole (I), although naturally occurring, is pref. prepd. synthetically by reacting mercaptoacetone with isobutyraldehyde in the presence of ammonia, followed by oxidation of

the resulting thiazolidine to the thiazole. Pref. (I) is used in foodstuffs in amt. 0.0001-5wt. % w. r. t. foodstuff.

The flavouring compsn. may be used to enhance the fruit flavour of various foodstuffs such as fruit juices or fruit flavoured beverages, puddings, pastries and ice cream. It can also be used to enhance the fresh fruit effect of canned and frozen fruits such as canned peaches. 31.1.78 (2pp931)

MICR- D13 54429B/29 #GB 1557-3
Lactic acid ferment flavoured pet food - having a pH of 3-6, es-
suitable for dogs

MICROLIFE TECHNICS 09.08.76-US-712492 (24.10.77-GB-04408
C03 (D16) (12.12.79) *US4160-038 A23k-01

Dry or semi-moist pet food is claimed which is packagab-
under non-sterile conditions, and including meaty and/or
vegetable protein, and also a flavouring from an edible
material fermentate of lactic acid producing bacteria in a
amt. to give pH of 3 to ≤ 6 . Fermentate is prepd. by gro-
wing the bacteria in presence of a meaty protein and/or
vegetable protein until desired pH is obtd. from lactic ac-
and flavouring.

Pref. bacteria are *Pediococcus cerevisiae*, *Lactobacillus lactis*, *Lactobacillus plantarum* and nisin-producing strains of *Streptococcus lactis*. 24.10.77 as 044083 (5pp963)

FULL- D13 27139A/15 =GB 1557-40
Carbon di:oxide injector for carbonated drinks - applies higher quantities to side stream before return to main stream

FULLPACK WIELAND 01.10.76-DT-644378

(12.12.79) *DT2644-378 B01f-03/04 B01f-05/04

CO₂ is introduced into a liq. stream, pref. beer, mineral water, by charging a by-pass portion of the stream with a sufficiently high CO₂ level such that when the by-pass stream returns to the main stream, the desired CO₂ level is given.

Pref. between the CO₂ introduction point and the re-union of the by-pass and main stream, the by-pass contains numerous bends. Uniform CO₂ dissolution is ensured. 20.9.77 as 039182 (7pp1376)

METG D13 25276A/14 =GB 1557-752
Protein concentrate prodn. by oil seed extraction with alcohol - esp. for soya using two or more stage extractions

DRAVO CORP 26.11.76-US-745469

(12.12.79) *BE-861-228 + A23l-01/20

Oleaginous seed material is extracted to prepare a protein flour by countercurrently contacting the material with a first conc. soln. of an alcohol in water to extract water and at least some of the lipids.

Micella are withdrawn from the first step, and the residual seed material countercurrently contacted with the sec. conc. soln. of the alcohol in water to extract all the lipids. Lipid-rich miscella are withdrawn and cooled to separate a solvent and a lipid phase. All or most of the solvent phase is returned to the process and the lipid phase and the remaining small portions of the solvent phase withdrawn from the process. The residual seed material is desolventised to yield a low-lipid protein flour.

A white protein flour is produced free of non-oil lipids which are given soybean prods. a beany flavour, and flatulence-causing carbohydrates. 28.11.77 as 049433 (7pp931)

ALLI- ★ D13 89913B/50 ★ GB 2021-923
Cocoa or chocolate prodn. by fermenting cacao beans or cocoa nibs - in plastics, esp. polyethylene or polypropylene, tank with periodic agitation

ALLIBERT EXPL 31.05.78-FR-016267

A92 (12.12.79) A23g-01/02

Cacao beans are fermented by placing them in a plastic tank, pref. of vol. 60 - 80 l, and the contents of the tank are periodically agitated. Pref. the agitation is carried out by placing a similar but inverted tank over the mouth of the fermentation tank and inverting the pair. Pref. this inversion is performed every 24 hrs. and continues for 5-8 days.

Pref. the tank is made of high density polyethylene or polypropylene and has projecting studs round its mouth to engage aligning orifices on the inverted tank. Pref. locking levers span the mouths of the two tanks and hold them united while the pair is inverted. Pref. the fermentation tank has apertures through its bottom to aerate the fermenting beans.

The volume of the tank is sufficient to provide for the self-sustained fermentation of the beans. 15.5.79 as 016745 (7pp295)

PEY- ★ D13 89915B/50 ★ GB 2021-948
Water miscible carbohydrate gum particles coated with starch - useful for reducing blood cholesterol and glucose and in foodstuffs
SPEYWOOD LAB LTD 25.05.79-GB-018281 (30.05.78-GB-024162)
A97 B05 (12.12.79) A61k-09/14
Water-miscible gum compsn. contains fine particles of a non-absorbable non-toxic carbohydrate gum (guar gum, locust bean gum, pectin or a water-sol. non-toxic alkylcellulose). The particles have a coating layer comprising a substance having a greater tendency to absorb water than the gum.
Compsns. can be easily mixed with water to give a mixt. of moderate viscosity that can easily be drunk. The compsns. may be used to produce a lowering in blood cholesterol and glucose in the treatment of hyperlipoproteinemia, obesity, hyperglycaemia etc. The compsns. may also be used for addn. of the gums to foodstuffs, esp. when higher than usual proportions are used. 25.5.79 as 018281 (pp1248)

RES- ★ D13 89954B/50 ★ GB 2022-249
Termn. of ascorbic acid in test liquids - by treatment with carbonate oxidase and measuring oxygen concn.
FRESENIUS CHEM PHAR 06.06.78-DT-824694
B04 E13 R16 (12.12.79) G01n-31/14
Ascorbic acid (I) in liquids is determined by adding ascorbate oxidase (II) to the test liq. and, after a fixed reaction time, the concn. of O₂ in the reaction mixt. is measured and compared with the concn. before (II) addn.
(I) is determined in serum and urine in diagnostic tests, and in various liqs. in the pharmaceutical and food industries. 31.5.79 as 19000 (4pp1248)

KEKD- ★ D13 B/50 ★ HU H002-482
Spice paprika semiproduct prepn. - in automatic plant giving imported product of higher purity
KEK DUNA MEZOGAZDAS 07.07.78-HU-KE1025
P43 (28.11.79) A23n-04 A23n-09 B07b-01

HYL- ★ D13 B/50 ★ HU T017-281
Animal, esp. pig, fodder prepn. - with plant fibre and cellulase and/or pectinase enzyme additives
PHYLAXIA OLTOANYAG- 16.09.77-HU-PI0590
C03 (28.11.79) A23k-01/16

CANN= ★ D13 B/50 ★ HU T017-283
Sterilising appts. for liquid and pasty foodstuffs - to give aseptic, storage-stable products
CANNING & VEG DRYIN 18.08.76-SU-385751
(28.11.79) A23l-03 C12h-01

KOZP- ★ D13 B/50 ★ HU T017-403
Quality control of agricultural and/or food prods. - by spectral analysis of surface properties
KOZPONTI ELELMISZER 20.01.75-HU-KO2695
J04 R16 (28.11.79) G01n-21/48

ZINE/ ★ D13 B/50 ★ IT 1033-585
Tomato puree prodn. vessel
ZINELLI E. 06.11.74-IT-042691
(10.08.79) A23m

CORA- ★ D13 B/50 ★ IT 1033-667
Soup pasta products dosing system
CORAZZA DI NATALINO 19.06.75-IT-003457
(10.08.79) A23c

SEIW- ★ D13 90073B/50 ★ J5 4140-746
Freezing process for fish, meat, vegetables etc. - by cooling aq. soln. having depressed freezing point, immersing stacked food in the soln. and freezing
SEIWA KAGAKU KK 24.04.78-JA-047862
(01.11.79) A23b-05/04 A23b-07/04 A23l-03/36
The method is effected by (a) cooling an aq. soln. having depressed freezing point, which is prepd. by dissolving ≥ 1 substance selected from inorganic salts, organic salts, crystalline organic substances and non-crystalline organic substances and sticky substance in water, (b) either treating stacked meat, fish, vegetable, etc. with the aq. soln. or immersing the stack of food in the aq. soln. and (c) freezing at lower temp. than fpt of the aq. soln.
When the frozen food obtd. is defrosted at a temp. higher than fpt of the aq. soln., a single unit of food can be re-

leased without defrosting the entire stack. Stacks can be sepd. into small units while maintaining freshness of foods. The aq. soln. is prepd. e.g. by dissolving Na chloride 30 g, Na malate 20 g, Na citrate 20 g and Na arginate 10g in water 1 litre. 24.4.78 as 047862 (3pp5)

DIAC- ★ D13 90074B/50 ★ J5 4140-747
Pasteurising and storing of dry vegetables and spices - in presence of deoxidant e.g. ascorbic acid in closed system to reduce microbial count

DIA-CHEMIFA KK 24.04.78-JA-048430
(01.11.79) A23b-07 A23l-01/22 A23l-03/34

The method comprises storing dry vegetables or spices with deoxidant in closed system for decreasing living microbial count.

As the deoxidant ascorbic acid, its salt, erythorbic acid and its salt can be used, because they form a low amt. of carbon dioxide gas which increases the pasteurising effect. Dry vegetables such as welsh onion, cabbage, carrot, onion, garlic, ginger, etc. and spices such as white pepper, black pepper, cumene, staranise, cinnamon, etc. can be stored with pasteurising effect. 24.4.78 as 048430 (2pp5)

ASAH ★ D13 90076B/50 ★ J5 4140-762
Seasoning base comprising beta-1,4-glucan - prepd. by hydrolysis, acidolysis, pulverisation or irradiation, etc. of finely crystalline cellulose

ASAHI CHEMICAL IND KK 24.04.78-JA-047864
(01.11.79) A23b-07/10

The β-1,4-glucan is of specific gravity ≤ 0.5 g/cc, ≤ 0.2 g/cc and is mixed with other ingredients, such as thickener, seasoning, sweetener, organic acid, table salt, colouring agent, antiseptic, etc.

The thickener is a gum, etc.; the seasoning is sodium glutamate, 5'-ribonucleotide, HAP, HVP, fermented seasoning, sodium succinate, etc.; the sweetener is sorbitol, saccharin, glycine, etc., and the organic acid is lactic acid, acetic acid, citric acid, malic acid, etc., the β-1,4-glucan is used in an amt. of 1-20 pts. per pt. thickener. The mixt. is diluted with water upon use. 24.4.78 as 047864 (6pp22)

TIJE/ ★ D13 90077B/50 ★ J5 4140-765
Lobster or shrimp food prodn. - by kneading lobster or shrimp flakes, sodium tri polyphosphate, lemon juice and sodium glutamate, coating with bread crumbs and frying
TIJEYRO JM 24.04.78-JA-048618
(01.11.79) A23l-01/32

Prodn. of lobster or shrimp food, comprises kneading a mixt. of lobster or shrimp flake, sodium tri-polyphosphate and small amts. of lemon juice and sodium monoglutamate, coating with bread flour and frying the coated mixt. in a boiling edible oil.

The lobster or shrimp food has the taste and texture analogous to that of fried lobster. 24.4.78 as 048618 (3pp15)

ASAE ★ D13 90080B/50 ★ J5 4140-773
Low calorific value foodstuff - comprises oil-in-water emulsion contg. cacao component, emulsifying agent, water and stabiliser
ASAHI DENKA KOGYO 20.04.78-JA-046915
A97 (A11) (01.11.79) A23g-01

Foodstuff comprises oil-in-water emulsion contg. a cacao component e.g. cacao mass, cacao butter, cacao powder, etc., (b) emulsifying agent, (c) water and (d) 0.03 to 2.0 wt. % of stabiliser e.g. Guar gum, gum tragant, CMC cellulose, sodium alginate, etc., the water content being 60 to 80 wt. %. The foodstuff contains high amt. of water, and has high fluidisability. The emulsifying agent usable includes recitin, propylene glycol ester of fatty acid, sorbitan ester of fatty acid, sugar ester of fatty acid, glycerin ester of fatty acid, etc. The compsn. may be mixed further with flavorant, colouring agent, sweetening agent, milk prod., etc.

In an example, 30 kg sugar, 0.7 kg Na alginate, and 0.3 kg CMC were added to 61.8 kg of water and heated to dissolve the components, and to the resultant was added 7.0 kg of cacao mass and 0.2 kg of recitin, followed by heating. The resultant was added to water, followed by emulsifying. 20.4.78 as 046915 (2pp22)

HONS ★ D13 90131B/50 ★ J5 4141-275
Artificial feedstuff for silkworms - contains thiodipropionic acid, 1,2,3,4 butan:tetra:carboxylic acid and/or nitrilo tri:acetic acid
YAKULT HONSHA KK 14.04.78-JA-043197
C03 (02.11.79) A23k-01/18

The feedstuff accelerates growth of silkworms at an early stage. The basic components of the feedstuff are chroll-ela, mulberry leaf powder, defatted soybean, starch, flour, agar etc.

In an example, a basic compsn. consisting of 30 g chroll-ela powder, 25 g defatted soybean powder, 25 g cellulose, 20 g mulberry leaf powder, 0.4 g vitamin C, 1.0 g antiseptics, 8 g of agar and 400 ml water was further mixed with 2.4 g nitrilo triacetic acid. When a silk-worm is fed with the compsn., ave. body wt. of 300 worms was 168 mg at 10 days after gathering silkworms from the egg paper. When fed with a control compsn. no nitrilo triacetic acid, av. body wt. was only 124 mg. 14.4.78 as 043197 (2pp22)

TAKE ★ D13 90199B/50 ★ J5 4141-717
Powdery anhydrous sodium succinate prepn. - by dry spraying aq. soln. of sodium succinate contg. water of crystallisation
TAKEDA CHEMICAL IND KK 25.04.78-JA-049450
E12 (05.11.79) C07c-51/42 C07c-55/10

Prepn. comprises dry-spraying of aq. soln. of Na succinate having water of crystallisation. Since the water of crystallisation is removed by dry-spraying, anhydrous Na succinate is obtd. with good yeid, i.e., 95-99%. The anhydrous Na succinate contains < 1.0% of moisture, has good flowing properties and is useful as a seasoning material or raw material.

The drying conditions for good efficiency are as follows: when a spray dryer of 3.0 m dia. and 12 m high is used, the temp. in the tower is 80-150°C the concn. of aq. soln. of Na succinate is 30-50 wt. % and the amt. to be fed is 100-300 l/hr. 25.4.78 as 049450 (2pp90)

SANE ★ D13 90385B/50 ★ J5 4142-236
High purity paprika pigment prodn. - by ester exchange treatment of e.g. cayenne pepper seed in presence of alcohol and basic catalyst and addn. of non-polar solvent
SAN EI CHEM IND KK 28.04.78-JA-051029
E24 (06.11.79) C09b-61

The process comprises ester exchange treatment a paprika pigment contg. substance in the presence of alcohol and a basic catalyst and addn. of a solvent with no or low polarity.

The ester exchange reaction treated prod. is neutralised with acid and oil layer is sepd. The non-polar solvent or low polar solvent such as hydrocarbons, halogenated carbons, ethers, carbon disulphide, etc. is added to the oil layer to deposit paprika pigment. The raw material used is the seed case of cayenne pepper, its dried prod. and oleo resin obtd. from it.

The obtd. prod. has excellent colour development and light resistance, has stable colour and has no abnormal odour. Mfg. operation is safe and easy, and yield is high. 28.4.78 as 051029 (3pp57)

FUJW D13 88719A/49 = J7 9037-965
Simultaneous pure carotene and red pigment sepn. from chlorella - by column chromatography of each fraction of extract obtd. by treating chlorella with organic solvent
FUJIMOTO SEIYAKU 08.04.77-JA-040735
E15 (E24) (17.11.79) *J53125-433 C09b-61

Process comprises obtg. pure carotene and red pigment from each fraction of the extract by organic solvent of chlorella by column chromatography under shading. Chlor-ella is extd. using organic solvent. The extract is washed with water and organic solvent is removed to obtain a crude extract. The extract is treated with chloroform, n-heptane, benzene, etc. which can dissolve carotene and red pigment and sepd. and purified by column chromatography under shading using an adsorbent such as alumina, silica gel, silicic acid, etc and pure carotene and reg pigment can be obtd. from each fraction.

A large amt. of pure carotene and red pigment which can be used as food additive can be obtd. at the same time easily by extn. from chlorella. 8.4.77 as 040735. C09b-

61/00 (17.11.79) FUJIMOTO SEIYAKU (6pp)(J5 3125433)

TOSU- D13 44323Y/25 = J7 9038-120
Purificn. of crude extract of Stevia rebaudiano bartoni - by addn. of water-soluble aluminium salt to concd.) extract removing ppte. and neutralising filtrate

TOYO SUGAR REFINING 04.11.75-JA-131517
B03 E13 (19.11.79) *J52057-198 C07h-15/24

Soln. contg. stevioside, obtd. by extracting leaves and stems of Stevia rebaudiana Bartoni, pref. concd. to $\frac{1}{2}$ to $\frac{1}{10}$ by vol. is mixed with 0.3-3.0 wt % water-soluble aluminium salt, pref. aluminium chloride or aluminium sulphate, based on the extract or concd. extract. After thoroughly stirring, the coagulated ppte. is removed e.g. by filtration.

Extract is then neutralised, pref. to a pH of 6.5-7.5, by adding an alkali agent, e.g. NaOH or Ca(OH)₂ pref. at 60-80°C, to ppte. aluminium hydroxide to which a large quantity of organic impurities is adsorbed.

The resulting stevioside soln. of pale yellow colour contains only a small amt. of impurities, and is further purified conventionally. 4.11.75 as 131517, C07h-15/24 (19.11.79) TOYO SUGAR REFINING (3pp) (J5 2057198)

DAIL ★ D13 90503B/50 ★ J7 9038-171
Potassium sorbate granules prodn. - by adding water opt. mixed with organic solvent to potassium sorbate then shaping and drying under airstream

DAICEL KK 17.07.67-JA-046278
E12 (19.11.79) A231-03/34 B01j-02/20

To potassium sorbate is added 3-18 wt % of water or 1-18 wt % of water contg. $\leq 60\%$ of organic solvent so as to swell the potassium sorbate. The resultant is shaped into granules, dried at $\geq 30^\circ\text{C}$ under air streams, to obtain granules of potassium sorbate having dia. of 0.5-2.0 mm, apparent gravity of 0.40-0.85, hardness of $\geq 20\text{g}$, solubility in water of 4 mins. and T value of ≥ 90 .

In an example, 100 wt. pts. of crystalline granules of potassium sorbate are mixed with water under agitation to give slurry, and the slurry is shaped into granules with the use of roller of dia. of 1 mm with a rate of 2.2 m/sec. and roller pressure of 30 kg/cm² to give granules having 1 mm of dia. and length of 10-20 mm. 17.7.67 as 046278, B01j-2/20, A231-3/34 (19.11.79) DAICEL KK (9pp22)

RALS D13 08549H/00 = J7 9038-186
Protein product
RALSTON PURINA CO 03.05.68-US-726573
C03 (19.11.79) *DT1920-475

SNOW D13 09342A/05 = J7 9038-187
Fermented milk prepn. - using Lactobacillus bacteria strain for maintaining constant acidity

SNOW BRAND MILK PRODUCTS 09.06.76-JA-067228
(D16) (19.11.79) *J52151-761 A23c-09/12

Lactic acid fermentation is carried out in animal milk medium contg. fermentable sugar using a variety M13 strain, which is the variety of Lactobacillus jugurti and is made lactose-unfermentable by the artificial treatment. By the invented method the fermented milk (e.g. yoghurt and starting material for lactic acid bacteria drink of which acidity can be kept constant, can be prepd. and the count of living bacteria does not decrease during preservation.

The prepn. of fermented milk using lactose-fermentable bacteria produces increased acidity during presrvation, and the deterioration in taste and flavour and decrease in the count of living bacteria have been observed.

By the invented method M13 strain cannot ferment lactose but can ferment glucose, galactose and mannose, which are previously added to the milk medium.

Glucose and galactose can be formed in the milk medium by previously treating the milk medium with lactase to hydrolyse lactose partly. The variety can be obtd. by treating L. jugurti with N-methyl-N'-nitro-N-nitroguanidine (NTG) M13 strain is trusted to Institute for Microbial industry (FERM P 3574). 9.6.76 as 067228, A23c-9/12 (19.11.79) SNOW BRAND MILK PRODUCTS (8pp) (J5 2151761)

IIJ D13 48594A/27 = J7 9038-188
 at resistant chocolate - contg. non-crystalline sugar coated with
 lithium hydroxide
MEIJI SEIKA KAISHA 10.11.76-JA-134187
 (19.11.79) *J53059-072 A23g-01
 chocolate material comprising sugar and non-crystalline
 sugar coated with NaOH with (out non-fatty milk solid
 added non-crystalline sugar coated with NaOH oxide in
 amt. of 15%, followed by kneading, crushing and ad-
 justing water content of the resulting material to 1.6%.
 Pref. amt. of non-crystalline sugar coated with NaOH
 which is to be added, is about 20%. The total amt. of NaOH
 component to be added to the chocolate material is 5-10%.
 The resulting chocolate can be stored without deformation
 at $\geq 30^{\circ}\text{C}$. 10.11.71 as 134187, A23g-1/00 (19.11.79)
MEIJI KK (7pp) (J5 3059072)

TT ★ D13 90508B/50 ★ J7 9038-189
 chewing gum compsn. - contg. gum base and coloured material
 that imparts a decorative pattern when the gum is expanded
LOTTE KK 01.04.77-JA-037974
 (19.11.79) A23g-03/30

The chewing gum comprises a gum base and water-insol.
 coloured substance (I) that imparts a decorative pattern
 when the gum is expanded, (I) is e. g. fibres, gluten, collag-
 en fish scale, etc. divided into a suitable size and dyed a
 desired colour. 1.4.77 as 037974, A23g-3/30 (19.11.79)
LOTTE KK (3pp83) (J5 3134660)

CHL D13 79767T/50 = SU -654-149
 edible cytoplasmic protein - from green leaf crops esp alfalfa
 free of chlorophyll carotenoids and lipids
KOHLER G O (KOH /) 28.05.71-US-147947
 C03 (28.03.79) *BE-783-838 A23k-01/14

Vegetable matter is fractionated by (a) pressing to a juice
 and a cake, (b) heating then cooling the juice to form an
 agglomerate contg. chloroplastic proteins, chlorophyll,
 carotenoids and lipids leaving cytoplasmic proteins in
 soln., (c) removing the agglomerate, and (d) sepg. the
 protein. Pref. pH is brought to 7-11 before pressing.
 Purity of protein is high.
Koler G.O., Bikoff E., Bul.11/25.3.79 26.5.72 as
 789261 (9pp)

ENDER D13 70581W/42 #SU -654-151
 iron-supplemented raw fish diet for esp mink - iron chelated to
 glutamic acid or RNA to prevent anaemia and kit mortality and
 improve fur quality
ENDER F 20.12.71-NO-004717 (19.12.72-SU-862195)
 C03 (28.03.79) *US3911-117 A23k-01/18
 The quality of mink fur is improved by adding to the food
 a complex cpd. of iron with desoxyribonucleic acid or
 glutamic acid.

This method is esp. effective when the minks are fed
 with raw fish. Apart from the fur improvement the above
 additive prevents the development of the anaemia in
 minks.

The above complex cpds. eliminate the undesired oxid-
 ising action of trimethylamine oxide in the blood, and pre-
 vent the formation of insoluble iron cpds. (which causes
 anaemia).

Ender F., Bul.11/25.3.79 19.12.72 as 862195 (4pp70)

TAMA ★ D13 90606B/50 ★ SU -654-237
 Compound feed for farm animals, e.g. pigs - contg. residue from
 cultivation of defluorinated fodder yeasts with addition of sodium
 bicarbonate as main component
TAMARCHENKO M E 06.07.77-SU-504345
 C03 (30.03.79) A23k-01/16

Main component (70-90%) of compound feed for farm anim-
 als e.g. pigs, contains the yeast fermentation residue
 from the cultivation of defluorinated fodder yeast with
 addition of 7-8 wt.% of NaHCO_3 .

The residue was high conc. of biologically active cpds.
 and it contains even more trace elements than yeast
 biomass 2.5 times cheaper than the latter. The addn. of
 NaHCO_3 gives mixt. of pH 6.7-7.1 so that the storage
 stability of the feed is improved.

Tamarchenko M.E., Krylov C.V., Shilov Yu.P., et al.
 Bul.12/30.3.79 6.7.77 as 504355 (3pp70)

GIDR = ★ D13 90751B/50 ★ SU -654-677
 Animal fodder yeast culture unit - has main and auxiliary circulation
 pipes interconnected by headers of jacketed cooling tubes
GIDROLIZPROM HYDROL 27.09.76-SU-407868
 C03 (D16) (30.03.79) C12b-01/10

The heat and mass exchange are increased and the yield
 of fodder yeast culture biomass increase of the vertical
 tank has evenly distributed peripheral circulation pipes.

The tubes of the header provide air to the circulation
 pipes, and additional circulation pipes are fitted concen-
 trically with the main ones. The heat exchanging jackets
 of the circulation pipes are interconnected by headers of
 vertical pipes carrying the coolant.

The nutrient and air are fed to the unit, and the result-
 ing suspension rises in the circulation pipes with air and t
 the evolved CO_2 is removed at the top. The remaining air
 is returned downwardly forming a multiple circulation
 pattern. The yeast suspension is extracted through a sep-
 arate outlet tube.

Kazimirchenko A.F., Nadezhdina A.V., Tokarev V.A.
 et al. Bul.12/30.3.79 27.9.76 as 407868 (4pp89)

UGLI = ★ D13 90818B/50 ★ SU -655-367
 Cheese press having base plate with moulds - held by plastic bags
 inflated under pressure to move strips, plus a pressing elastic
 membrane sealed to the base plate
UGLICH BUTTER CHEES 19.04.77-SU-475934
 P13 (07.04.79) A01j-25/15

Device for pressing and shaping of cheese includes a base
 -plate with moulds, mounted on a vibrator plate and attach-
 -ment to hold the moulds in place with the pressing ele-
 ment, which is positioned above the moulds. The level
 of noise is reduced and the pressing quality is increased
 by making the fixing attachment as a box-shaped shell
 contg. elastic bags and horizontal strips. The vertical
 walls of the shell have horizontal slots into which the
 strips, which are rigidly connected to the backs, can move
 backwards and forwards. The elastic bags are connected
 to a pneumatic system. The pressing element has an
 elastic membrane which is hermetically connected with
 the base plate by a pressure attachment.

Tabachnikov V.P., Eliseev O.M., Arutyunyan A.S.
 et al. Bul.13/5.4.79 19.4.77 as 475934 (4pp29)

SHAW / ★ D13 90942B/50 ★ US 4176-595
 Coring cauliflower held in spiked cup - by hold-down ring then
 cutting head
SHAW R A 25.07.77-US-818497
 P28 (04.12.79) A23n-15/02 A47j-21

A cauliflower head is placed in a cupped conveyor which
 carries it through a processing station. A hold-ring is
 lowered onto the head and maintains the cauliflower in
 the cup as it passes through the station. Pref. the ring is
 biased downwards by weights and adjusts its vertical posi-
 tion depending on the size of the cauliflower.

A first stage of the processing station comprises a rotat-
 ing cutter which removes the culls from the head. At a sec-
 ond stage a cutter divides the remainder of the cauliflower
 head into portions. 25.7.77 as 818497 (6pp295)

BEAN / ★ D13 90964B/50 ★ US 4176-748
 Packaged agricultural salt block - in tubular knit fabric bag of
 crimped synthetic multifilament yarn to protect against handling
 damage

BEANE FT 10.05.78-US-904486
 C03 Q32 Q34 (04.12.79) B65d-19/22 B65d-29 B65d-85/54

The block is packaged in a knitted fabric bag to protect
 against handling damage and to enhance frictional engage-
 ment with adjacent blocks. The bag is of crimped synthetic
 multifilament yarn formed into a knit tube with locked
 stitches, relaxed diameter being less than block size so
 that the bag is tensioned about the block and the stitches
 are opened.

The bag also prevents shattering and dispersal of the
 blocks when kicked or trampled by an animal. The bag may
 be closed by an end tie or seam. The block can be with-
 drawn partially from the bag for use. 10.5.78 as 904486
 (4pp1358)

MLEK- ★ D13 91100B/50 ★ US 4177-293
Low calorie butter spread mfr. - from sweet cream and dried milk or protein concentrate as thickener

MLEKARENSKY PRUMYSL 15.11.78-US-960787
(04.12.79) A23c-09/12

Sweet cream is mixed with a thickener which is dried milk and/or a protein concentrate, the mixture is pasteurised, cooled, and a clean milk culture is added. The mixture is homogenised at 20-30°C. and 10-25 MPa, then matured to an acidity of 68-112° Dornic. 0.5-5 wt.% of a food-stuff water stabiliser is added, and the mixture is homogenised at 65-80°C., and 5 MPa and finally cooled to 10° for further curing.

The prod. has a lower fat content and calorific value and a higher protein content than butter. It spreads easily even at refrigeration temps., and has a pleasant taste. It has a reasonable shelf life even without added preservatives. 15.11.78 as 960787 (3pp955)

MEIJ ★ D13 91101B/50 ★ US 4177-29
Prepn. of peanut curd having roasted flavour - from de-oiled roasted peanuts pulverised at low temp.

MEIJI SEIKA KK 17.07.78-US-925240
(04.12.79) A23I-01/*

Raw peanuts with intact testas are roasted at 110-120°C. for 15-60 mins., deskinning, pressed to remove 10-30 wt.% of oil, based on wt. of the roasted peanuts, and are the pulverised at -40°C. or below to about 325 mesh. The powder is dispersed in 5-8.5 pts. water at 5-50°C. per part of peanuts, the mixture is boiled for 1-5 mins., cooled to 70-80°C., and a coagulant is added to obtain peanut curd.

The product is similar to Tofu, (bean curd) and has a roasted flavour and high gel strength. The need for a cotton filter bag is eliminated, and no peanut milk residue is produced. The curd can be easily freeze-dried to give a product which can be reconstituted by soaking in hot or cold water. 17.7.78 as 925240 (6pp955)

See Also

D15 J7 9037423	D16 DT 2824553	D16 GB 1557414
D16 GB 1557755	D16 SU 654679	D16 US 4177107
D22 EP ---5980	D23 DS 2700688	D23 GB 1557550

D14: FOODSTUFF MACHINERY

BABW ★ D14 B/50 ★ BR 7902-099
Equipment for generating nitrogen and absorption of carbon dioxide - for preservation of fruit and vegetable products

SAMIFI BABCOCK SPA 06.04.78-IT-022035
E36 (27.11.79) A23n-15 C01b-13 C01b-21 C01b-31/20

GEOS- ★ D14 B/50 ★ BR 7902-807
Selector with programmable classifier for materials analysis
GEOSOURCE INC 05.05.78-US-903069 7.5.79 as 002807
J04 R16 R35 (27.11.79) A23p-01 G01n-21/23 G11c-15

GEOS- ★ D14 B/50 ★ BR 7902-812
Selector for materials analysis
GEOSOURCE INC 05.05.78-US-903057
J04 R16 (27.11.79) A23p-01 G01n-21/22 7.5.79 as 002812

GEOS- ★ D14 B/50 ★ BR 7902-813
Ejector delay control for selector
GEOSOURCE INC 05.05.78-US-903058
J04 R16 (27.11.79) A23p-01 G01n-21/22 7.5.79 as 002813

GEOS- ★ D14 B/50 ★ BR 7902-820
Universal selector for materials analysis
GEOSOURCE INC 05.05.78-US-903050
J04 R16 (27.11.79) A23p-01 G01n-21/22 7.5.79 as 002820

TRAN- D14 52778Y/30 =GB 1551-432
Fresh farm products - storage and delivery
TRANSFRESH CORP 08.12.75-US-638619
+Q31 (30.08.79) *J52069-750 A23b-07

In the preservation of fresh produce in storage or shipment, the produce is refrigerated to 29-60°F and maintained under such refrigeration in a gaseous atmos. of 1-20 vol.% CO₂, 1.8-30vol% O₂, 5-25vol% CO, and the remainder N₂ during the storage or shipment period.

Fresh fruits and vegetables may be stored under refrigerated conditions for extended periods in a manner which prevents the growth of harmful fungi, and provides an environmental atmos. which is a chemical antioxidant. Pref. e.g. the produce is cauliflower and the atmos. comprises 2.2-10vol% CO₂, 1.8-12vol% O₂, 5-20vol% CO, and the remainder N₂. 7.7.76 as 028297 (6pp990)

ARMO D14 03893A/02 =GB 1557-431
Pattie moulding apparatus - with pistons in moulds and rotating wire band cutting patties cleanly from piston ends
ARMOUR CO 14.07.76-US-705160
(12.12.79) *US4065-241 A22c-07

Patties are shaped by appts. which has a hopper for agglomerated edible material on a frame; a turret rotatably mounted on the frame having cavities spaced around the turret centre, each cavity having a reciprocating barrier defining a mould with the cavity; a housing between the hopper and turret in which is located an auger to lift material up into the mould, the end of the housing next to the

turret is enlarged along the travel path of the turret to provide efficient mould filling.

The auger is pref. arranged in the housing to leave no material in the housing. The patties can be a hamburger, meat ball or fish-cake. 14.7.77 as 029592 (9pp1376)

STRK ★ D14 89900B/50 ★ GB 1557-501
Extracting kernels from nuts esp. oil palm nuts - by cracking and using two-stage air stream separators
STORK APPARATENBOUW 30.11.77-GB-049743
(D23) (12.12.79) A23n-05

The kernels of oil palm nuts are extracted by passing the nuts through a cracker. The cracked nuts are fed to a dust separator where an upwardly directed air current lifts the dust free. At a second station, a higher velocity air stream allows all but the kernels to be removed through the top of a column with the air stream.

This stream from the top of the column contains uncracked nuts and shell pieces contg. kernels and is returned to the cracker for further treatment. Pref. the stream is sieved prior to returning to the cracker to remove any residual kernels.

The method separates the kernels of palm oil nuts. 30.11.77 as 049743 (4pp295)

LAND- D14 12814Y/08 =GB 1557-876
Air conditioned long term storage of bulk cereals - in vast quantities with min. handling, wastage and energy usage
BUNDESAN LANDWIRTSC 17.10.75-DT-546494
P12 (12.12.79) *BE-847-177 +A23I-03

Bulk grain is stored by placing the grain on flat beds, blowing air to initially dry the grain to give a desired temp. and water content, and then monitoring the air temp. and humidity outside the storage space and when they correspond, with the desired figures in the grain blowing the air through the grain.

The drying is pref. carried out in stages, the temp. of the air being reduced at each stage. The drying air pref. has a humidity of 50 to 70%. The grain is pref. stored at 8-10°C with a water content of 13-15% by wt. 8.10.76 as 041957 (11pp1376)

LIPO/ ★ D14 B/50 ★ IT 1033-515
Confectionery products prodn. press
LIPORIV 21.08.73-IT-040430
(10.08.79) A23g

DALL/ ★ D14 B/50 ★ IT 1033-679
Appts. eliminating microflora from food products
DALL OMO A 17.07.75-IT-003480
(10.08.79) C12h

BONA/ ★ D14 B/50 ★ IT 1033-734
Programmed appts. for fruit treatment and conservation
BONACINA E 05.06.75-IT-005168
(10.08.79) A23b

MLFO= ★ D14 90912B/50 ★ SW 7900-850
Rapid freezer for food - has fan, air cooler, and net-like carrier
plates attached to conveyor line which follows helical path through
freezer chamber
MOLD FOOD IND INST 01.02.78-SU-576361
Q75 (03.09.79) F25d-13/06

ATLA- ★ D14 90941B/50 ★ US 4176-594
Fruit peeling cutter - with knife rotating within lightweight guard on
knife shaft housing
ATLAS PACIFIC ENG 15.11.77-US-851640
(04.12.79) A23n-07

A cutter, e.g. for peeling pears, includes a shaft within a
housing and extending outwardly to carry a rotary knife
and chip breaker with a guard mounted on the housing co-
operating to adjust the depth of cut. The guard is partly or
wholly of plastics and has a guard rim around a flat part,
the rim being arcuate and extending towards the cutter to
follow closely an odd shaped part of a fruit.

A projection extending upwardly from the flat part fits
snugly in the housing to prevent rotation of the guard rela-
tive to the housing. The projection has a through bore re-
ceiving the shaft to form a bearing supporting the shaft
within the housing. The cutter is lightweight and requires
less pressure so that less flesh is removed during peeling.
15.11.77 as 851640 (4pp1358)

KRFT D14 10019A/05 = US 4176-970
Dasher for whipping fluid food - with rotating central shaft and end
plates supporting independently rotatable cage drums
KRAFT INC 08.12.75-US-638291 (29.08.77-US-828512)
P13 (04.12.79) *US4068-832 B01f-07/02

A dasher for whipping foods flowing through a cylindrical
chamber has (1) a main cage supported on a drive shaft,
the cage having frame members spaced axially on the
shaft and elongate elements supported by the members
circumferentially of the shaft and parallel to each other
and the rotation axis; and (2) a satellite cage on the main
cage rotatable about an axis eccentric to the shaft.

The satellite cage is constructed as the main cage, and
is mounted on the main cage such that the elongate ele-
ments of the satellite cage pass outwardly of an envelope
defined by the elements of the main cage as it rotates.

The flow rate of whipped fluid can be increased. The

parent specification claims a method of whipping food.
29.8.77 as 828512 Div.ex. 4068832 (cf. 10019A/05)
(5pp1376)

SUNG ★ D14 90982B/50 ★ US 4176-971
Multipurpose kitchen appliance with high and low speed spindles -
accepting alternate pairs of food mixing paddles
SUNBEAM CORP 19.07.78-US-925735
(04.12.79) B01f-07/32

A kitchen appliance includes a motor within a housing
which drives a gear train in a portion of the housing which
extends above a mixing bowl. The gear train has two
branches each of which drives a pair of contrarotating
spindles; but each of these pairs is driven at a different
speed.

A pair of food-mixing elements can be inserted into
either pair of spindles and these extend into the food mix-
ing bowl. An interlock prevents mixing elements being in-
serted simultaneously into both pairs of spindles. Pref.
one set of mixing elements is a pair of dough hooks and
may be inserted in the low speed spindles. Alternatively
beaters may be inserted into the high speed spindles.

The appliance is used in a kitchen to mix food at either
low or high speeds. The different speeds are provided by
different gear chains from a single speed motor, thus pro-
viding high torque at low speed for mixing dough. 19.7.78
as 925735 (11pp295)

HENK D14 27862B/15 = US 4177-294
Cleaning product for fruit, vegetables and other foods - is an aq.
concentrate contg. protein, polymer, sequestrants and preservatives
HENKEL KG AUF AKTIEN 08.10.77-DT-745371
A97 (04.12.79) *BE-871-061 + A231-03/34

Aq. concentrate for cleansing foodstuffs of animal or veg-
etable origin, comprises (a) 0.1-10 wt.% of water-soluble
to water-dispersible proteins, (b) 0.01-3 wt.% of water-
soluble polymers of mol. wt. $\geq 10,000$, (c) 1-15 wt.% of
water-soluble sequestering agent, (d) 0.01-1 wt.% of water-
soluble food preservatives, (e) 0-0.5 wt.% of food col-
ours and odorants, and (f) the balance to 100% water.

Pref. the proteins are native proteins esp. from pro-
tein-contg. seeds. Pref. polymers are PVA, PVP, and
cellulose ethers. Pref. sequestering agents are alkali
metal salts of an acid selected from citric, lactic, tar-
taric, aminocarboxylic and (poly)phosphoric acids.

The centrare effectively removes the foreign matter
without affecting the taste and aroma of the washed food-
stuff. 3.10.78 as 948221 (4pp924)

D15: WATER TREATMENT

TIIC- ★ D15 89434B/50 ★ BE -878-136
Treating water to remove cyanide(s) and cyanate(s) - using ozone-
contg. gas esp. in two or more zones
TII CORP 08.08.78-US-931958
(03.12.79) C02c

The process comprises (a) introducing the water into an
ozone contacting zone; (b) mixing by stirring at least a
part of the water with an ozone contg. gas and injecting
this into the zone and (c) withdrawing the water with redu-
ced cyanide content.

Pref. process also comprises (d) combining at least a
part of the exit water with the water to be treated and re-
peating stages (a)-(c). Pref. process comprises, using
two contact zones with the ozone contg. gas being contac-
ted with the 2nd zone first then recycled to the 1st zone,
esp. with mixing of the ozone gas to a part of the exit curr-
-ent from the 1st zone.

The process enables economic elimination of up to 90%
or more of cyanates which has hitherto been too costly on
an industrial scale. The cyanates may be formed in the
treatment of the cyanides. 7.8.79 as 878136 (71pp597)

BELC- ★ D15 B/50 ★ BR 7902-869
Regeneration of mixed bed of cation and anion exchange resins
BELCO POLLUTION CON 11.05.78-US-905078
J01 (27.11.79) B01j-01/09 10.5.79 as 002869

AMOS/ ★ D15 89436B/50 ★ CA 1066-857
Sec. bacteriological sludge disposal in paper mills - by burning with
waste pulping liquor in chemical recovery furnace
AMOS PT 13.06.74-US-479190
F09 (27.11.79) D21c-11/12

Disposal of sludge, contg. water from prim. effluent
treatment, in a celluloseprocessing plant comprises burn-
ing it with waste pulping liquor in a chemical recovery
furnace, opt. with an auxiliary fuel to assist burning.

The sludge may be conc. before burning and then mixed
with a plant process stream, esp. a thin or conc. pulp
washing or extrn. liquor, and the mixt. opt. further conc.
before passing to the furnace. The sludge may also be
mixed with sewage solids before burning.

The sludge can be used to generate steam or power
from the plant without needing to build a separate inciner-
ator. Chemicals, e.g. SO₂, MgO, CaO or Na₂O, may be re-
covered for reuse in cooking liquors. 13.3.75 as 221990

(38pp1251)

NITO D15 77829V/45 = DS 2416-675
Di-allyl-amine deriv. (co)-polymers and prodn. - by photo-polymerisation in soln. or suspension

NITTO BOSEKI KK 04.10.73-JA-111755 (05.04.73-JA-038947)

A12 C03 (A60 A87 A91 A97) (06.12.79) *DT2416-675 C08f-26/04

Prepn. of (co)polymers of ≥ 1 diallylamine deriv. of formula (I) and opt. ≥ 1 comonomer (II) is effected by photo-polymerisation using light of wavelength 150-500m μ in the presence of a solvent or non-solvent in an amt. of ≥ 30 wt. % based on total wt. of monomer(s), and opt. in the presence of a sensitiser.

$\text{CH}_2=\text{CR}_1-\text{CH}_2-\text{N}^+(\text{R}_2)(\text{R}_3)-\text{Y}^-$
In (I), R_1 is H or methyl. R_2 and R_3 are H, allyl, methallyl, 1-16C alkyl, 7-19C phenylalkyl or hydroxyalkyl of formula (I) $\text{HO}-(\text{CH}_2)_m-$ where m is an integer of 1-6; or R_2 and R_3 together with the N to which they are attached form a pyrrolidino, piperidino or morpholino gp. Y is a halide ion or the anion of an inorganic acid.

(II) is selected from maleic acid, maleic anhydride, N-vinylpyrrolidone and vinyl cpds. of formula $\text{CH}_2=\text{C}(-\text{R}_4)-\text{C}(=\text{O})-\text{Z}$. R_4 is H or methyl. Z is $-\text{OR}_5$ where R_5 is H, methyl or $-(\text{CH}_2)_n-\text{OH}$ in which n is an integer of 1-5, or a gp. of formula $-(\text{CH}_2)_n-\text{N}^+(\text{R}_6)(\text{R}_7)(\text{R}_8)\dots\text{X}^-$ where R_6, R_7 and R_8 are each H, 1-3C alkyl or benzyland X is a halide ion, or Z is $-\text{NR}_9\text{R}_{10}$ where R_9 and R_{10} are H, 1-5C alkyl or $-(\text{CH}_2)_p-\text{OH}$ where p is 1, 2 or 3.

The obtd. (co)polymers are useful as accelerators for coagulation and pptn. of suspensions, esp. paper pulp, and as filter aids, soil treatment agents, vulcanisation accelerators, etc. 5.4.74 as 416675 (+ 9.7.73, 26.7.73; 13.8.73 - JA - 077230; 084285; 090712) (22pp927).

DAGM- D15 61611X/33 = DS 2556-067
Carbonated drinks mfr and distribution - by mixing water contg. carbon dioxide with chosen flavoured syrup when required

DAGMA DEUT AUTOMATE 29.07.75-US-600063 (21.03.75-US-560797)

P28 + P27 Q39 Q75 R29 (06.12.79) *BE-839-758 B67d-05/56

Water at a temp. below a predetermined value is allowed to flow in an unpressurised, calm stream, through the mixing gully of a soft drink dispensing machine in which the syrup is stored at a Brix value sufficient for its preservation.

The essence and syrup mixt., at a temp. above the predetermined value is allowed to fall into a restricted zone of the stream of water. A mixing operation imposed from outside for the highly concentrated syrup is made unnecessary, and the loss of carbon dioxide during the mixing with the carbonated water is absolutely minimal. 12.12.75 as 556067 (8pp1014).

BERG D15 91397Y/51 = DS 2624-639
Membranes with an adjustable pore system - made by heating a shaped mixt. of finely divided coal, a rubber and a thermoplastic

BERGWERKSVERBAND GMBH 02.06.76-DT-624639

A88 J01 (06.12.79) *NL7705-870 C08j-05/18 + C08j-09

A mixt. consisting of ≤ 20 wt. % natural and/or synthetic rubber and 20 wt. % thermoplasts, the rest being finely ground coal or coke, is pressed into tubes, films or panels, pref. 0.1-5mm. thick. The products are heated to 400-1400°C.

The products are highly suitable as membranes for the sepn. of gases or liquids. They have better permeabilities with equal selectivities as known membranes. They are cheap to produce and are sufficiently strong without the use of a support. 2.6.76 as 624639 (4pp260).

METG D15 60654A/34 = DS 2706-039
Incineration of (refinery) salt-contg. sludges - using a fluidised bed of basalt chips, to lower operating gas pressures and obviate abrasion of the bed

METALLGESELLSCHAFT AG 12.02.77-DT-706039

H05 J09 Q73 (06.12.79) *DT2706-039 C02c-03 F23g-07/04

Fluidised bed oven for burning water-contg. clear slurry with O_2 -contg. vortex gases, the vortex laminates being formed of a material of particle size 0.5-4mm. The vor-

tex laminate, for removing burnt material, consists of at least 80 wt. % basalt. 12.2.77 as 706039 (3pp549).

ANIS D15 68835Y/39 = DS 2712-848
Treating waste water to remove transition elements, esp. vanadium - with electrode couples to reduce alkaline precipitation

ANIC SPA 23.03.76-IT-021472

M25 (06.12.79) *BE-852-799 C02c-05/12 + C25b-01 C25c-01

Transition elements of variable valency are recovered from waste water with simultaneous purification of the waste water. The valency of the transition elements is reduced by a short circuited electrode system of two materials, one of which is less noble than hydrogen and the other more noble than hydrogen. Before reduction there is added to the water a cpd. (I) of an element different from the cathode and more electropositive than the anode material. After reduction complete pptn. of the transition elements can be accomplished e.g. with $\text{Ca}(\text{OH})_2$. Cpd. (I) is pref. silver sulphate. The electrodes are pref. of copper and iron granules. 23.3.77 as 712848 (4pp068).

REZN/ D15 12211B/07 = DS 2735-055
Thermoelectric breakdown of water - using electrolytic cell with DC supply in which the anode and cathode are sepd. by insulation shield

REZNIK S 03.08.77-DT-735055

E36 J03 (06.12.79) *DT2735-055 C25b-01/04

Electrolytic splitting of water, the conductivity of which may be increased by addn. of electrolyte, is effected in a cell contg. at least one anode and at least one cathode and the electrodes are sepd. by an insulator preventing current flow. The cell is operated at a voltage of 15-1000 volts (30-70 volts) and a current density of 0.001-100 (0.1-5) amps/dm².

Sea water is pref. used. The insulator may be of glass. A mixt. of oxygen and hydrogen may be removed from the cathode. 3.8.77 as 735055 (6pp068).

BOHN/★ D15 89466B/50 ★DS 2838-204
Activated sludge tank aeration system - with one link of parallelogram linkage for distributor adjustable in length enabling it to be swung vertically for maintenance

BOHNKE B 01.09.78-DT-838204

(06.12.79) C02c-01/12

The aeration mechanism for tanks in which sewage is treated by the activated sludge system consists of two parallel levers which are mounted on stands and support an air distributor structure at the other end, forming with it a parallelogram linkage. In the working position, the levers are inclined at an angle and the distributor lies horizontally near the bottom of the tank. One of the levers can be lengthened so that in the raised position the distributor can be swung vertical for maintenance.

The horizontal dipping operation reduces the risk of stoppage of the distributor perforations. The swinging action facilitates the maintenance operations. 1.9.78 as 838204 Div. in 2857044 (5pp39).

STEL-★ D15 89492B/50 ★DT 2823-515
Gasifier or aerator for liquid tank - has vertical shaft with impeller at bottom and cone above impeller

FA STELZER E 30.05.78-DT-823515

(06.12.79) B01f-05/02 C02c-01/06

A gasifying or aeration appts. comprises a drive motor mounted above the liquid surface, with a shaft passing down from the rotor vertically through a suction pipe and carrying at its lower end a disc-type impeller with blades on its upper face. This impeller is just below the lower end of the suction pipe and the overall dia. of the blades is slightly greater than that of the pipe.

At the connecting region between the drive shaft and the impeller is a downwardly diverging (typically conical) gas guide block, which is pref. secured to the drive shaft and/or to the impeller. This guide block pref. projects with its lower end beyond the bottom of the suction pipe.

The effect of the gas guide block is to ensure that the air or gas is fed to the impeller in a narrow annular region where the impeller speed is uniform. This results in highly effective breaking up of the gas bubbles and thorough mixing with the liquid in the tank. 30.5.78 as 823515 (12pp236)

MAIH ★ D15 89502B/50 ★DT 2823-587
 Determining organic carbon content of salty water - by
 photochemical oxidn. after dilution with salt free water
 MAIHAK H AG 30.05.78-DT-823587
 J04 R16 (06.12.79) G01n-33/18

Determination of organic C in water contg. much salt and
 organic substances comprises irradiating the sample with
 UV light until all the organic substances have been photo-
 chemically oxidised to CO₂. The amt. of CO₂ prod. is then
 measured. Improvement is that each test sample is dilut-
 ed before irradiation with a salt- and C-free reaction wat-
 er.

Pref. the diluted sample is treated with O₂-contg. gas
 (contg. no CO₂) esp. air, to remove inorganic C before irr-
 adiation. The same gas stream serves as a carrier for
 removal of photochemically-generated CO₂. An appts. for
 this process is also claimed.

The analysis can be done continuously, and fully autom-
 atically, without progressive increase in the salt content
 of the diluent, so encrustation of the equipment with salt
 is prevented. 30.5.78 as 823587 (14pp1251)

STEN/ ★ D15 89517B/50 ★DT 2823-763
 Sewage denitrification - using filter-isolated nitrification and
 denitrification tanks with immerse and drain mechanisms
 STENGELIN V 31.05.78-DT-823763
 (06.12.79) C02c-01/02

Rotary immersion and drip mechanisms are used in a bio-
 logical purification stage for the removal of organic carbon
 from waste waters. These work in the conventional mann-
 er with the growing surfaces which are rotated, immersed
 half-way at least, in the liquid. Two mechanisms are used
 sep. from each other and are positioned, directly or oth-
 erwise, behind the mechanical-biological stage, for the
 oxidn. of the ammonia and the redn. of the nitrates to gas-
 eous N₂.

Used to eliminate residual contamination in the efflu-
 ents, which increases the BOD, when conventional methods
 of electron donation are used. The problems arising are
 solved. 31.5.78 as 823763 (22pp1045)

KRAM/ ★ D15 89528B/50 ★DT 2823-952
 Water purificn. by air injected by wind power - from airscrew on
 mobile mast coupled direct to compressor
 KRAMPITZ J 01.06.78-DT-823952
 (06.12.79) C02c-01/02

A quantity of oxygen which varies over a period of time is
 injected into water to purify the water. The energy of the
 wind is utilised and the feed of oxygen is made to pulsate.
 A screw with vanes is supported by a mast and supplies
 energy for driving a machine, esp. a compressor, which
 is connected to aerating lines laid in the water. The water
 is used as a store for the fluctuating supply of oxygen com-
 ing from the airscrew.

Used for cleaning e.g. ponds, fish ponds and esp. sew-
 age tanks, as well as the water in streams and rivers.
 The device makes is unnecessary to supply energy from
 conventional sources, and uses more efficiently, the sma-
 ller amts. of oxygen which may be provided. 1.6.78 as
 823952 (16pp1045)

MGEI ★ D15 89544B/50 ★DT 2824-204
 Scraper for settling tank mounted on travelling bridge - with
 automatically reversing towing device which also raises and lowers
 scraper
 MASCH H GEIGER 02.06.78-DT-824204
 (06.12.79) B01d-21/18 C02c-01/28

A bottom scraping device for a settling tank comprises a
 transverse bridge which travels along the length of the tank
 and carries a scraper mounted on an arm system so that it
 can be raised for one direction of travel and lowered for
 the other, scraping direction.

The travelling bridge is pulled in either direction by a
 cable, which passes around a drum, rotationally mounted
 on the bridge; while the bridge is being towed, in either
 direction, this drum is rotationally locked by locking elem-
 ents, typically double-armed levers acting as pawls, so
 that the drum acts as the anchor bar for the towing cable.
 2.6.78 as 824204 (14pp236)

VOIJ ★ D15 89567B/50 ★DT 2824-435
 Biological oxygen demand recorder - with oxygen analyser for fish
 basin supplied with effluent side stream
 VOITH J M GMBH 03.06.78-DT-824435
 R16 (06.12.79) A61k-29 G01n-33/18

The activity of fish and shellfish in a basin in which a side
 stream of an effluent is to be checked for toxic components,
 is measured continuously by using a system similar to one
 applied for the oxygen demand of activated sludge. When
 the oxygen concn. in the basin drops below a set threshold,
 fresh oxygen is added to an air stream entering the basin
 and the oxygen flow rate is recorded.

This provides a quantitative reading for the loading of
 surface waters by sewage and other wastes and for the eff-
 ect of any toxic constituents on fish or shell-fish in pisci-
 culture. 3.6.78 as 824435 (9pp39)

DAVY- ★ D15 89568B/50 ★DT 2824-446
 Trickling filter bed for effluent nitrification - with specified size of
 particles and oxygen enriched air in counter flow
 DAVY BAMAG GMBH 03.06.78-DT-824446
 (06.12.79) C02c-01/04 C02c-05/10

A nitrification process for domestic and industrial wastes
 is based on the use of a trickling filter bed. The filter bed
 is filled with particles of 3-10 mm (3-6 mm) size and it is
 accommodated in an enclosed tank which can be backflushed
 by air, water/air or water. The high specific surface area
 results in nitrification at the rate of $\geq 95\%$ in spite of the
 economically favourable small dimensions.

Pref. a distributor sprays the effluent from the inflow
 pipe over the packing of the trickling filter bed. The pipe
 takes away the outflow from the perforated bottom. Oxygen
 -enriched air is circulated through the filter bed in count-
 erflow by blowers or compressors and piping. 3.6.78 as
 824446 (12pp39)

CIBA ★ D15 89640B/50 ★DT 2921-374
 Treating hard water systems contg. suspended solids - with
 phosphorus-contg. acrylic acid telomers, esp. for keeping china clay
 in suspension

CIBA-GEIGY UK 26.05.78-GB-023434
 A97 L02 (A14) (06.12.79) C02b-05/06 C04b-33/24

Aq. systems of Ca ion content 5-1500 ppm which contain
 solid deposits, are treated by adding a small amt. of a
 telomer of formula $RR'-P(O)-(CH_2C(COOH)R')_n-CH_2$.
 $CHR''COOH$ (I) or its salt. In (I) R' is H or (m)ethyl; R
 is H, 1-18C opt. branched alkyl, 5-12C cycloalkyl, aryl,
 aralkyl, the gp. $(-CH_2CR''(COOH)_m-CH_2CHR''COOH$ (A) or
 OX; X is H or 1-4C opt. branched alkyl. $n+m \geq 100$; R' is
 OX. Pref. cpds. have $n+m < 60$; R is H or A; R' is OH or
 its water-sol. salt and R'' is H. (I) may be added to dilut-
 ed dispersions at 1-200 (2-20)ppm or to slurries at 0.1-5
 wt. % based on total solids.

(I) are dispersants and prevent deposition of solids;
 they are esp. useful in the china clay industry to maintain
 slurries in suspension during transport. Unlike known
 polyacrylates they have good hard-water tolerance.
 25.5.79 as 921374 Add. to 2525859 (16pp1251)

EGOS/ ★ D15 89740B/50 ★EP ---5-825
 Generating heat, cooling capacity and pure water - from aqueous
 feed in multistage flash evaporator with steam jet ejectors

EGOSID 30.05.78-US-910098
 Q72 Q74 Q75 (12.12.79) C02b-01/06 F22b-03 F24j-03/04 F25b-
 29

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

An aq. feed at an initial temp. is introduced into a flash
 evaporator which is pref. the first stage of a multistage
 flash evaporator. Vapour from the flash evaporator is
 compressed to yield pure water above the initial temp.
 and this serves as a source of output heat energy. The
 bottoms stream from the flash evaporator is at a lower
 temp. than the feed and serves as a source of cooling
 capacity.

Pref. the vapour is compressed by a steam jet with a
 converging-diverging throat and is followed by a mechan-
 ical compressor.

The appts. generates pure water, heat and cooling
 capacity from tepid impure water.

29.05.79 as 101645 (66pp295)
(E) ISR: CH-342583; DS-955718; DS-529464; DS-393061;
DT2530503.

DOWC ★ D15 89742B/50 ★EP ---5-827
Removing high boiling point organic contaminants from water - by stripping with gas, esp. for penta:chlorophenol
DOW CHEMICAL CO 30.05.78-US-910175
C03 E14 J01 (12.12.79) C02c-05
D/S: E(BE, DT, FR, GB, IT, NL, SW).

Removal of organic material (A), of normal b.pt. > 200° C and volatility relative to water ≥ 1 (pref. ≥ 4), from water comprises passing a current of vapour sufficient to vaporize (some) (A) through a moving stream of contaminated water.

Pref. the pH of the water is adjusted so as to avoid decompsn. of (A) and process is at 5-100°C using 1-1500 cu.ft. vapour per gallon. The vapour is e.g. CO₂, CO, He, CH₄, N₂, O₂, steam and/or air. The vaporized (A) may be recovered from the vapour stream.

Process is esp. for removing pesticides, heat-transfer fluids, antimicrobials etc.; specifically pentachlorophenol (I).

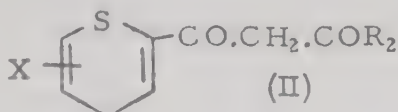
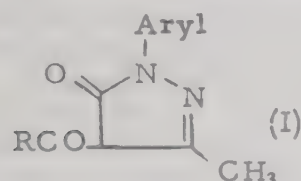
(A) with vapour pressure at 25°C below that of water can be removed with inexpensive stripping gases (esp. air).

30.5.79 as 101648 (30pp1251).

(E) ISR: DT1517714; US4028427; 2 Journal references.

ORON- ★ D15 89755B/50 ★EP ---5-859
Extraction of metal ions from alkaline aq. soln. - with synergistic mixt. of complexing agent and phosphine oxide or phosphate
ORONZIO DE NORA IMP 02.06.78-IT-024141
E13 J03 (E36) (12.12.79) C01d-03/18
D/S: E(DT, FR, GB, NL, SW).

Compsn. for reducing metal ion content of aq. alkaline solns. is a soln., in water-immiscible organic solvent, of ≥ 1 1-aryl-3-methyl-4-acylpyrazol-5-one (I; acyl is derived from 1-18C carboxylic acid) or thenoyl-substd. keto cpd., pref. of formula (II), plus as complexing additive a trialkylphosphine oxide or trialkyl phosphate.



(RCO is acyl from 1-18C carboxylic acid. R₂ = carbonyl-activating gp. X = H, halo, or 1-5C alkyl or alkoxy).

Esp. used to reduce Ca and Mg ion contents of brine fed to chlor-alkali cells having ion-exchange resin membranes.

The complexing agent and additive have a synergistic effect and metal ion content can be reduced to 0.2 mg/l.

1.6.79. as 101749 (22pp1251).

(E) ISR: 4 Journal References.

ICIL ★ D15 89775B/50 ★EP ---5-902
Aq. self-setting poly:isocyanate resin compsn. - contg. nonionic surfactant and alkaline filler used to consolidate esp. radioactive waste

IMPERIAL CHEM INDS LTD 18.05.78-GB-020430
A25 K07 L02 (A81) (12.12.79) C02c-03 C04b-13/26 C08g-18/30
C08l-75 G21f-09/16
D/S: E(BE, DE, FR, GB, IT, NL)

A self-setting compsn. comprises a mixt. of polyisocyanate resin, a non-ionic surfactant free of isocyanate reactive gps., alkaline filler and water. Consolidation of waste material by mixing with the compsn. is also claimed.

Wet particulate, esp. radioactive waste contg. e.g. Cs, borax used as moderator, etc., may be consolidated e.g. in drums for disposal in the sea in lead lined and/or cement-encased drums. The radioactive material will not leak out and become dispersed. The compsns. are compatible with the large quantities of water present in such wet particulate radioactive wastes and set without addition of catalyst. Evolution of CO₂ with foam formation

during setting is avoided. Other, non-radioactive, products may be made using the compsns., including floor screeds or cavity filling, using sands or aggregates and fibres as additives and opt. cements as additional hydraulic binders.

25.4.79 as 300697 (17pp966)

(E) ISR: GB1342063, DT2542288; US3142648.

CALG ★ D15 89851B/50 ★EP ---6-065
Corrosion inhibiting compsn. for water treatment appts. - comprises a source of zinc ions and of orthophosphate ions in a specified ratio
CALGON CORP 05.06.78-US-912616
M14 (12.12.79) C23f-11/18
D/S: E(OE, BE, CH, DT, FR, GB, IT, LU, NL, SW).

Corrosion of metal surfaces in contact with flowing water, in potable or industrial water distribution systems, is inhibited by adding a small amt. of an inhibitor comprising Zn ions and orthophosphate ions such that at the injection point the wt. ratio Zn²⁺ : PO₄³⁻ is 2-3:1.

Used esp. for preventing corrosion of turbine pump blades, the main distribution piping, tributaries and domestic piping. Only small amts. (in ppm) of inhibitor are required and the inhibitor has no undesirable properties (such as susceptibility to oxidising or reducing agents or encouraging biological growth).

1.6.79. as 400353 (13pp959).

(E) ISR: -

JACK/ ★ D15 89883B/50 ★GB 1551-255
Flocculant for water treatment - prepd. by reaction of laterite with acid

JACKSON B J 27.08.76-GB-035800 (29.11.75-GB-049159)
(30.08.79) C02b-01/20

Impurities in aq. liqs. are flocculated by addn. of the water sol. reaction prod. contg. at least ferric, aluminium and titanium ions, obtd. by lixiviating naturally occurring laterite in acid. Pref. laterite contains 20-25wt. % Fe₂O₃.

The compsn. may be used for purifying heavily contaminated waters e.g. sewage or relatively pure water, e.g. lake water. It can remove phosphates, nitrates and organic contaminants. It does not interfere with the action of detergents, and may be added to detergent compsns. It is very cheap and simple to prepare. 18.2.77 (5pp955)

EURT D15 10527A/06 #GB 1551-781
Treating effluents contg. fats, polysaccharide(s) and/or protein(s) - to improve their sedimentation rate and filterability by adding specific enzymes to cause degradation.

EURO DEV AB 26.07.76-DT-633514 (23.07.76-GB-030716)
(30.08.79) *DT2633-514 C02c-01/40 + C02b-01/20

The filtrability and sedimentation tendency of a suspension of macromolecular biological material contg. ≥ 1 fat, polysaccharide, starch, cellulose and protein is increased by the addn. of an enzyme or gp. of enzymes capable of degrading the substance(s), in the suspn., under agitation, to the suspension. Pref. the enzyme or gp. of enzymes is a lipase, amylase, cellulase or proteinase, added in amt. 0.1-1wt. % w.r.t. dry solids at a treating temp. of 20-60°C.

The process is esp. used to treat materials contained in the waste waters or sludge from the cellulose, starch, brewery, foodstuff and animal feed industries, and for waste material such as house refuse contg. food remains, faeces and paper. 23.7.76 as 030716 (3pp931)

ZINI D15 36751A/21 =GB 1551-894
Water additives preventing deposit-formation of heating surfaces - prepd. from unsaturated fat derivs. and maleic acid and/or anhydride (NL 16.5.78)

GRILLO WERKE AG (TAPR-) 11.11.76-DT-651438
A97 (05.09.79) *DT2651-438 C02b-05/06 + C07c-61/02 C07d-307/93

The formation of fur deposits at 140°C on heating surfaces for water contg. dissolved inorganic salts is prevented by introducing an additive (I) into the water. (I) is the water-sol. reaction prods. mfd. from (a) polyunsatd. fatty cpds. of chain length 10-20C, iodine value 80-200 and having a terminal carboxyl, ester or alcohol gp. by (i) reacting with (b) maleic acid and/or anhydride and (ii) opening any anhydride rings, or their alkali pref. Na salts. The reaction is at 150-200°C in the absence of solvents and

catalysts.

The heating surfaces are partic. in thermal sea-water desalination plants. 22.9.77 as 039506 (4pp974)

FISO ★ D15 89898B/50 ★ GB 1557-473
Biological treatment of fluids - flowing through packing unit formed of tilted parallel plates

FISONS LTD 22.07.76-GB-030502
(12.12.79) C02c-01/04

A fluid is biologically treated by causing it to flow over a packing unit in a vessel. The packing unit comprises a series of plates on which bacteria can grow. The plates are inclined at an angle of 5-40° to the overall line of flow of the fluid through the vessel. The plates extend transversely to the line of flow and cover substantially the width of the vessel. Pref. the spacing between adjacent plates is 2-10 cm, and the plates are perforated with apertures having a dia. of 1-20 mm.

The process is used to treat an effluent from the food industry, from distilling or brewing, from textile processing, from a tannery, from a papermaking plant, or from a pharmaceutical or plastics plant. It may also be used to treat domestic sewage or may be used where a hydrocarbon is being purified or a bacterial reaction is being carried out on the fluid in the vessel. By tilting the plates there is a reduced tendency for the passages between the plates to become blocked. 22.7.77 (5pp295)

ESILC D15 14893Y/09 = GB 1557-478
Treatment of aq. condensates and effluents from coking plants - with alkali salts of weak acids, to expel ammonia

STILL C 23.08.75-DT-537640
E35 H09 (12.12.79) *DT2537-640 C01c-01/10
Bound ammonia is sepd. from aq. liqs. by mixing ≥ 1 aq. soln. of an alkaline substance with the liq. and heating. Aq. solns. treated include spent alkali metal hydroxide from a gas scrubbing process for the removal of hydrogen sulphide.

Pref. ammonia is sepd. from aq. condensates of coke oven gas formed during a coking or low-temp. carbonisation process. Crude coke oven gas is scrubbed with aq. ammonia soln. to remove hydrogen sulphide by the ammonia-hydrogen sulphide circulatory scrubbing principle, and then purified by scrubbing with aq. alkali metal hydroxide soln. The spent hydroxide, contg. higher proportions of sulphides, carbonates, and cyanides, is mixed in an ammonia separator with aq. condensates from the coke-oven gas and heated to release ammonia.

The process is esp. used in the low temp. carbonisation or coking of pit coal, lignite, bitumen shale or peat. 20.8.76 as 034808 (3pp931)

CONN/ D15 55760A/31 = GB 1557-899
Tubular filter for sepg. liquid components - has semi-porous core coated with semipermeable membrane and positioned in pressure vessel

CONNELLY RF 09.12.76-JA-148274
J01 (12.12.79) *J53071-686 B01d-13 B01d-31
A tubular membrane filtration device has a porous cone with some of its internal passages coated with a semi-permeable membrane and some internal permeate ducts without membrane. Each duct is communicated with the outside of the pressure vessel in which the core is housed.

Pref. the other end of each duct is plugged or connected to another core. Pref. there is only one coated passage and one duct. Both the passage and the duct pref. have a circular cross-section. The core is pref. of ceramic, sintered glass, foamed or sintered plastic or sintered metal. 2.12.77 as 050353 (58pp1376)

HORT- ★ D15 B/50 ★ HU T017-265
Water aerating appts. - partic. for fish ponds or fish storage basins
HORTOBAGYI ALLAMI 30.12.77-HU-HO2039
P14 (28.11.79) A01k-63

MELY- ★ D15 B/50 ★ HU T017-288
Countercurrent gravity filter for liquids, esp. water - using granular filter bed

MELYEPITESI TERVEZO 17.04.76-HU-ME1965
J01 (28.11.79) B01d-23

MAOP- ★ D15 B/50 ★ HU T017-401
Spectral comparator for absorption measurements - partic. for the rapid analysis of water quality

MAGYAR OPTIKAI MUVE 11.05.77-HU-MA2873
J04 R16 (28.11.79) G01n-21/02 G01n-33/18

ANON ★ D15 B/50 ★ IT 1033-664
Organic effluent biological purification appts.
ANONYMOUS 23.05.75-IT-003424
(10.08.79) C02c

CLOV- ★ D15 B/50 ★ IT 1033-680
Aq. sewage purification appts.
CLOVER SPA 22.07.75-IT-003483
(10.08.79) C02c

GILA/ ★ D15 B/50 ★ IT 1033-748
Reservoir for sewage purification
GILARDI M 10.03.75-IT-007208
(10.08.79) C02c

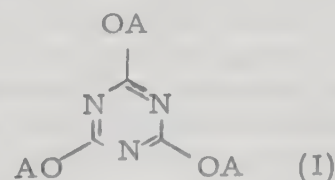
SAVI/ ★ D15 B/50 ★ IT 1033-987
Mechanical separator for solids-contg. aq. effluents
SAVIL 07.03.75-IT-018103
(10.08.79) C02c

TEIJ ★ D15 90017B/50 ★ J5 4100-984
Selectively permeable membrane resistant to chemicals - obtd. by reacting a polyepoxy cpd. contg. tri:glycyl:isocyanate gps. and a bis-epoxy cpd. with an amino cpd.

TEIJIN KK 26.01.78-JA-006670
A88 J01 (09.08.79) B01d-13

The membrane is obtd. by reacting a polyepoxy cpd. consisting of 100-5 mol.% of triglycylisocyanate of formula (I) and 0-95 mol.% of a bis-epoxy of formula A-O-R-O-A (II) with an amino cpd. of ≥ 2 amino or imino gps. at -30°C $\sim$ 100°C to obtain an aq. soln. of a water-soluble cpd., coating or impregnating the aq. soln. to a porous base body, contacting the coated or impregnated base body with a multifunctional cpd. possible to be reacted with amino, imino or hydroxyl gp. at 10-100°C for 5 secs. to 10 mins., and heating the resulting body at 50-150°C for 5-20 mins.

The porous base body is polysulphone or cellulose acetate. The multifunctional cpd. is isophthalic chloride, terephthalic chloride or toluenediisocyanate. In the formulae, A is a gp. (III); and R is -CH₂CH₂- or -CH₂.CH(OH)-CH₂-.



(I)



(III)

26.1.78 as 006670 (10pp51)

MITs ★ D15 90028B/50 ★ J5 4119-773
Treating pig urine and excrement - to recover useful material for mfg. fertiliser, cattle feed additives and soil modifiers

MITSUBISHI CORP (NISS NOSA) 08.03.78-US-884519
C04 (17.09.79) A01n-07/02 A23k-01 C02c-01/40 C05f-03

The excrements and urine are mixed with water by agitating and the resulting mixt. is filtered and thereby a liq. component is sepd. from a solid component. The solid component collected is mixed with water and sulphuric acid, it is hydrolysed, calcium hydroxide is added and sulphuric acid is neutralised. Then, calcium sulphate and a non-hydrolysed reaction cpd. are filtered as a solid component and a liq. material. The solid component is used as a fertiliser and/or a soil modifier. The liq. material, i.e. a liq. filtrate is used as an additive to cattle feed. The former liq. component is mixed with starch xanthate and a heavy metal adduct is obtd. and it is filtered and the heavy metal is recovered.

The excrement of swine contains non-digested cellulose, fatty component, carbohydrate and protein and the process aims to convert those useful materials into fertiliser. 2.6.78 as 065902 (5pp15)

TOXF ★ D15 90039B/50 ★ J5 4124-892
Cation-exchange activated carbon prodn. - by combining activated carbon having ion exchange gp., obtd. from polyacrylonitrile, with copper or silver

TOHO BESLON KK 22.03.78-JA-031771

A35 E36 J01 P34 (A14) (28.09.79) A611-13 B01j-01/06 C01b-31/08

Cation-exchange activated carbon is produced by combining the activated carbon having an ion-exchange gp. (which is produced from acrylonitrile polymer) with copper or silver by ion-exchange reaction, in which the content of ion-exchange gp. of activated carbon is 0.2 to 3 meq/g.

The activated carbon is used for water treatment of sterilisation water storage tank, breeding water tank and drinking water storage tank. It may also be used in air filters, masks and mats.

In an example, 1 pt. of acrylonitrile copolymer (contg. 90% of acrylonitrile and 10% of methyl acrylate) was mixed with a mixed aq. soln. of 60% zinc chloride and 6.7% sodium chloride so that pure zinc chloride became 4 pts., and the mixt. was calcined at 600°C for 60 mins. without contacting with air. The activated carbon obtd. was immersed in 1N-HCl soln. to remove adhered zinc chloride, washed with water until chlorine ions were not detected and dried. The activated carbon was dispersed in 0.2N aq. cupric nitrate soln., to which 0.1N aq. ammonia soln. was added dropwise until pH of the soln. became 6. Then this was washed with pure water until nitric acid ions were not detected and dried at 120°C. The amt. of copper combined was 63 mg/g. 22.3.78 as 031771 (9pp96)

EBAI ★ D15 90103B/50 ★ J5 4141-040
Desalination of sea water, etc. to give fresh water - by freezing, the used wash liquor being treated by reverse osmosis to give a liquor which can be reused

EBARA INFILCO KK 22.04.78-JA-048228

J01 (01.11.79) C02b-01/12

Fresh water is recovered from inorganic matter in e.g. sea water, brine, waste water, etc. by freezing it to form ice crystal followed by its sepn. The improvement which comprises sepg. liquor, used to wash the ice crystals, into conc. liquor and membrane-permeated liquor by reverse osmosis. The conc. liquor is subjected to freezing together with sea water, etc. to be treated, and the membrane-permeated liquor may be re-used as wash liquor.

The washing liquor may be deaerated in vacuo or aerated to remove refrigerant dissolved in the liquor prior to reverse osmosis, so that purified water is not contaminated with refrigerant. 22.4.78 as 048228 (4pp34)

EBAI ★ D15 90104B/50 ★ J5 4141-052
Biological denitrification of effluent contg. nitrogen and phosphate - by adding lime to inactivate the phosphate, and then contacting the obtd. water with calcium phosphate-contg. dephosphorising granules

EBARA INFILCO KK 22.04.78-JA-048227

(01.11.79) C02c-01/02 C02c-05/02

The improvement comprising adding lime, e.g. CaO, Ca(OH)₂, etc. pref. during nitrification, to convert phosphates the inactive form, i.e. Ca₃(PO₄)₂, Ca₅(OH)(PO₄)₃, etc., and contacting the overflow water with Ca phosphate-contg. dephosphorising granules, e.g. phosphate ore, etc. in the presence of Ca²⁺ in the fluidised or fixed state to completely remove the remaining PO₄³⁻, so that M-alkalinity components and N components are economically removed over a long period.

Also BOD, suspended solids, colouring matter and COD components (Mn²⁺) are removed by the addn. of lime in the biological treatment step, and the phosphates are completely removed for recovery. The presence of Ca²⁺ is essential in this process. 22.4.78 as 048227 (5pp34)

TOKA- ★ D15 90105B/50 ★ J5 4141-055
Treating waste water resulting from boiling of lumber - by treating with activated sludge, initial coagulation-sedimentation, treating again with sludge and sec coagulation-sedimentation

TOHO KAKO KENSETSU (OTSU-) 24.04.78-JA-048581

F09 (01.11.79) C02c-01/06

Method comprises (a) treating the water with activated sludge, (b) subjecting it to initial coagulation sedimentation treatment with inorganic coagulant, e.g. Al salt (used

at pH of 5.0-7.0) or ferrous salt (used at pH of 4.0-(c) further treating with activated sludge, (d) subjecting to sec. coagulation sedimentation treatment with the inorganic coagulant and powdered activated charcoal and (e) recycling the inorganic coagulant and the powdered activated charcoal, settled in the sec. coagulation sedimentation treatment to the initial coagulation sedimentation treat.

Method is used to treat strongly coloured waste water having very high COD and BOD value, resulted in boiling treatment of lumber for softening or removal of oils and fats, resins or colouring components, etc. 24.4.78 as 048581 (3pp34)

SANY- ★ D15 90155B/50 ★ J5 4141-376
Injecting liq. chemical at desired rate into soiled water - using appts. in flow channel which is connected to overflow of purifying tank

SANYO KAKO KK 26.04.78-JA-048698

J02 (02.11.79) B01j-04 C02c-05/02

Appts. is disposed in the flow channel which is connected to the overflow outlet of the purifying tank. When the water is supplied to any one of water receivers of an inclining member, it is turned and inclined about a rotary shaft, so that a cylindrical rotor having a chemical liq. receiving concave part is rotated through a sector gear, a gear and a shaft to inject the chemical liq. from a tank through a supply duct into the water.

The chemical liq. may be supplied in proportion to the water amt. to eliminate the waste. The appts. may be driven under water flow without use of electric or other power and is of a simple and reliable construction. 26.4.78 as 048698 (4pp35)

ASAG ★ D15 90350B/50 ★ J5 4142-171
Deodorising waste gas or water - using hypobromous acid which is reformed from the aq. soln. by forming hypochlorous acid by electrolysis

ASAHI GLASS KK 28.04.78-JA-049893

J01 P34 (D22) (06.11.79) A611-09/* B01d-53/34 C02c-05/02

The waste gas or water, contg. oxidisable odorous substances, is contacted with an aq. soln. contg. available bromine, esp. hypobromous acid or its salt to decompose the odorous substances and the treated aq. soln. is reformed into the original available bromine-contg. aq. soln. by forming hypochlorous acid or its salt in the presence of a water-soluble chloride, e.g. alkali chloride, etc. by electrolysis while controlling the amt. of the hypochlorous acid or its salt by absorption photometry using a light source, such as incandescent lamp, tungsten lamp, mercury lamp, etc., a light receiver such as Pb-Cs phototube, silicone photocell, etc. and a measuring cell such as borosilicate glass, quartz, etc.

This method is used to deodorise offensive and harmful odorous substances in amts. as small as several ppm. 28.4.78 as 049893 (6pp117)

MATU ★ D15 90359B/50 ★ J5 4142-182
Oxidising agent for treating COD components, etc. - by reacting sodium hydroxide and potassium persulphate to form silver peroxide on silver nitrate impregnated ceramic

MATSUSHITA ELEC IND KK 27.04.78-JA-051551

E32 J04 (06.11.79) C01b-15/04 C02c-05/04 C04b-41/04 C09k-03

Heated aq. soln. contg. sodium hydroxide and potassium persulphate is reacted with porous ceramic impregnated with silver nitrate, so that a homogeneous and dense silver peroxide membrane is formed on the surface of the porous ceramic.

The prod. is durable over long term use because of the strong adhesion of the silver peroxide. Since the silver peroxide is supported by porous ceramic, contact efficiency with a gas or liq. is improved.

Pref. porous ceramic is silica-alumina 30% Al₂O₃, 70% SiO₂, particle size 1-2 mm etc. 27.4.78 as 051551 (2pp55)

TORN ★ D15 90459B/50 ★ J5 4142-861
Solidification of sludge contg. heavy metals and other harmful matter - by mixing with gypsum and sulphur or sulphur cpd.

TORAY ENG KK 28.04.78-JA-050939

E19 L02 M11 (E37) (07.11.79) B01j-01 C02c-03

harmful sludge contg. a large amt. of heavy metals e.g. Pb^{2+} , Cd and Hg etc. and harmful matters, e.g. cyan etc., discharged from plating factory, printing factory and tanning factory etc. is made harmless by adding 50-1,000 wt. % of gypsum and/or gypsum semi-hydrate and 0.1-50 wt. pts. of ≤ 1 sulphur cpd. (or elementary sulphur) collected from colloidal sulphur, water soluble organic sulphur cpds. having mol. wt. $< 1,000$ contg. thiocarbamate, urea or thiol radicals, ferrous sulphate, Na_2S and CaS , 100 wt. pts. of the sludge. This is followed by uniform mixing to solidify the mixt.

Heavy metals or harmful matters are hardly leached from the solidified prod. even after allowing it to stand for long periods in open air or in water. The water content of the sludge is adjusted to 60-90% in the treatment. 27.4.78 as 050939 (3pp34)

BI ★ D15 90460B/50 ★ J5 4142-865
Waste water treatment appts. - used for denitrification of activated sludge contg. waste water by conveying from oxygen rich to oxygen poor zone

KUBOTA KK 27.04.78-JA-050453
(07.11.79) C02c-01/02

The appts. comprises a perpendicular zig-zag formed water path through which the waste water to be treated is circulated. Oxygen-contg. gas is admitted into a descending part of the zig-zag water path from an air pipe to dissolve oxygen under pressure in the water and to form nitrogen oxides by reaction between the dissolved oxygen and nitrogen components in the water. Thus the oxidising zone is formed at the descending part. At least two of the reducing zones are formed at an ascending part of the zig-zag path, at which nitrogen oxides and MeOH of activated sludge are reacted to form N_2 by the action of which the recirculation of the water is accelerated. Gas-drainage pipes are provided at the top of the ascending part, through which N_2 gas is taken-out together with a portion of the waste water to release N_2 gas in the open air, and to recycle the water to the zig-zag path. 27.4.78 as 050453 (3pp34)

IPK D15 30608X/17 = J7 9037-423
Industrial or domestic activated sludge treatment - by adding acid and sodium polyacrylate and sepg. coagulated org. solid
NIPPON KAYAKU KK 26.08.74-JA-097737
A97 C04 (C03 D13) (15.11.79) *J51027-577 + C02c-03 C05f-07
Method comprises adjusting the pH of activated sludge to 3.0-4.0 by the addn. of an acid, adding sodium polyacrylate in an amt. of 10-200 ppm and sepg. the coagulated solid from liquid. The recovered org. material is used as a feedstuff or fertiliser. In an example CaCl_2 is added to 20 litres of activated sludge (pH 7.0, solids content 10000 ppm) until the pH value is 3.0-3.5 and then sodium polyacrylate in an amt. of 50 ppm is added. The coagulated flock is then filtered. 26.8.74 as 097737, C02c-5/00, C05f-7/00 (15.11.79) NIPPON KAYAKU KK (4pp) (J5 1027577)

IPC D15 58191Y/33 = J7 9037-588
Sedimentation promotor for industrial waste water - contains powdered strontium sulphate or barium sulphate
NIPPON CHEM IND KK 25.12.75-JA-154090
J01 (15.11.79) *J52078-683 B01d-21/*
The promotor contains powdered BaSO_4 or SrSO_4 strontium sulphate as a main component, if necessarily, an aggregating agent, an oxidising agent, a reducing agent, or an adsorbing agent is added.

When the promotor was added to waste liquor by produced in desulphurisation of a waste SO_2 contg. gas, suspended substances of the waste liquor were sedimentated in a short time. 25.12.75 as 154090, B01d-21/01 (15.11.79) NIPPON CHEM. IND. KK (5pp51) (J5 2078683)

ANN D15 48129A/27 = J7 9037-986
Quat. ammonium monomer-based water-in-oil polymer emulsions - used as flocculating agents in paper mfr. and for clarifying waste water

SANYO CHEM IND LTD 22.12.76-JA-155370
A91 F09 (A14 A97) (17.11.79) *DT2756-697 C08f-02/32 C08f-20/34

New w/o polymer emulsions are prepd. by heating ($\geq 40^\circ\text{C}$)

a dispersion comprising (a) 30-70 wt % of an aq. soln. of an ethylenically unsatd. monomer component, (b) 70-30 wt % of a hydrophobic organic liq. and (c) ≥ 8 to < 20 wt % based on component (b) of an o/w-type nonionic surfactant.

The monomer component comprises (i) 1-10 wt % of a monomer of formula $\text{H}_2\text{C}=\text{CR}_1-\text{CO}-\text{A}-\text{B}-(\text{NR}_2\text{R}_3\text{R}_4)^+\text{X}^-$ (where R_1 is H or Me, R_{2-4} are 1-4C alkyl or 2-4C hydroxy-alkyl, and R_4 can also be H or benzyl, A is O, or NH, B is 1-4C alkylene or 2-4C hydroxyalkylene, X^- is an anion), (ii) 0-99 wt % of a hydrophilic comonomer, and (iii) 0-30 wt % of a hydrophobic comonomer.

The emulsions are useful as flocculating agents in the papermaking industry (to increase dewatering rates and increase retention of fillers and suspended materials) and for clarifying waste waters. The emulsions have a lower viscosity than those in which the concn. of component (c) is ≥ 20 wt % (cf. JA 72982/1975). 22.12.76 as 155370, C08f-20/34, 2/32 (17.11.79) SANYO KK (9pp) (J5 3078288)

KURK ★ D15 90523B/50 ★ J7 9038-417
Waste water treatment system - uses ultrafiltration followed by activated carbon treatment of low and then high mol. wt. material
KURITA WATER IND KK 22.02.74-JA-021676
J01 (21.11.79) B01d-15 C02c-05/02

Waste water contg. organic materials is subjected to ultrafiltration to separate it into one contg. low molecular wt. material and one contg. high molecular wt. material. The former is then treated with activated carbon, and then the latter is treated with the above-used activated carbon. The activated carbon is used efficiently. 22.2.74 as 021676, C02c-5/02, B01d-15/00, C02c-5/02 (21.11.79) KURITA WATER IND. KK (4pp22) (J5 0114859)

NITY D15 13050A/07 = J7 9038-418
Treating waste water contg. ammoniacal nitrogen - including heating with hot carbon dioxide and adding calcium hydroxide
NITTETSU KAKOKI KK (NITA) 11.05.74-JA-051775

E35 J01 (21.11.79) *J50144-267 + C02c-01/40 C02c-05
Waste waters contg. NH_3 -N are treated by heating with hot CO_2 which is produced from burning C-contg. fuels in a sealed oven, addn. of $\text{Ca}(\text{OH})_2$ soln. to the waters to adjust the pH to > 9.5 , and removal of pptes. releasing NH_3 by aeration and neutralisation by contact with the CO_2 gas to ppte. the excess $\text{Ca}(\text{OH})_2$ as CaCO_3

In an example a waste water contg. NH_4^+ 25 and PO_4^{3-} 22ppm obtd. from treatment of municipal sewage was heated from $5-50^\circ$ with CO_2 produced from burning kerosine the heated waters were mixed with cold waste waters to 22° . To the warm waste waters were added $\text{Ca}(\text{OH})_2$ to final concn. 300 mg/l. and the pptes. formed were removed. The waters were then introduced into the NH_3 -releasing tower and contacted with air to release NH_3 . The effluent was treated with CO_2 to ppt. CaCO_3 . The NH_3 - and PO_4 - removal efficiency was 97 and 97% resp. 11.5.74 as 051775, C02c-5/00, 1/40 (21.11.79) NITTETSU KAKOKI KK (5pp38) (J5 0144267)

TOYJ D15 74835V/43 = J7 9038-597
Heavy metals removal from waste waters - collector based on activated carbon and contg. sulphur cpd
TOYO SODA MFG KK (TOYO) 23.05.72-JA-050374
(21.11.79) *J49014-315 + B01d-15 C02c-05/02

A heavy-metal collector is mfd. by supporting, on activated carbon, ≥ 1 of BaSO_4 , Fe sulphide, ZnS, MnS and cpds contg. the gp. $\text{NC}(\text{S})(\text{SX})$, where X is S, C, N, or a metal.

In an example, activated carbon (10g) was soaked in H_2O (200 ml) contg. $(\text{NH}_4)_2\text{S}$ (2g) form ZnS on the C, washed with H_2O to pH 6, and dried at 120° for 2 hr. The C (0.4g) was added to a soln. (200 ml) contg. Hg^{2+} 1.9 ppm and NaCl 1.3 wt % stirred for 30 min. and filtered. The residual Hg^{2+} concn. in the soln. was 0.01 ppm. 23.5.72 as 050374, B01d-15/00, C02c-5/02 (21.11.79) TOYO SODA MFG. CO. LTD. (4pp) (J4 9014315)

SALI- ★ D15 90534B/50 ★ NL 7805-535
Prepn. of drinking water from sea water by evaporation - using evaporation plate onto which water is sprayed, contained in modular housing
SALINON LTD 22.05.78-NL-005535
(26.11.79) B01d-01/16 C02b-01/06

A liq. esp. sea water, is purified by spraying it onto a hot plate and condensing the vapour to give a product which, in the case of water, is suitable for human consumption.

The installation comprises a housing, pref. pyramid shaped with a cross section increasing downwards with a feed pipe for the fluid to be cleaned discharging over a heated evaporation plate. The housing is pref. from 1.5-2.5 m high and the angle of inclination of the walls is such that the vapour condenses on the walls and flows down them to a collection outlet at the lowest point.

The device is a compact unit with a high yield capable of being built up in parallel banks to an installation of any desired capacity. 22.5.78 as 005535 (12pp1370)

VBRO- ★ D15 90539B/50 ★NL7805-709
Sludge drier using recycled prod. as fuel - used to produce granular fertiliser prods. or for total incineration requiring no additional fuel
VAN DEN BROEK ENG B 25.05.78-NL-005709
(27.11.79) C02c-03 C07f-03/06

Effluent sludge is dewatered, dried and incinerated in a process which offers an alternative to the usual prodn. of fertiliser when there is either too much fertiliser available or the metal content in the end prod. would be too high. The sludge is passed through a mechanical dewatering installation and into a drying drum. A part of the end prod. is recycled via a mechanical handling system and bunkers into the oven for providing the drying heat for the process.

Opt. the entire prod. can be recycled in this manner and incinerated. If the oven is equipped with a moving grate, the dried prod. is fed onto the grate from the bunker via a suitable feed valve. If the furnace is equipped with a pulverised fuel burning system, additional grinding equipment is incorporated to reduce the granule size to that required by the burners.

The system operates without additional fuel and can be used for the complete disposal of the sludge if that is required. 25.5.78 as 005709 (10pp1370)

WAFI- ★ D15 90543B/50 ★NL7809-661
Drinking water prepn. from sea water by membrane filtration - in which the sea water is fed directly into first stage filter without chemical pretreatment
WAFILIN BV 22.09.78-NL-009661
(30.11.79) B01d-13 C02b-01/82

Drinking water is produced from seawater by means of membrane filtration in which the permeate from a first membrane filter unit is fed into the second membrane filter, the permeate from the second filter having a salt concn. less than that tolerated for drinking water. The seawater is fed directly into the first membrane filter via a coarse filter whose function is to remove large objects which might damage the equipment.

The arrangement is pref. such that the salt concn. in the permeate from the first stage is $< 60\%$ of that in the seawater itself. The pref. conditions for the filtration steps are 20-28 atmospheres for the second stage, 40-45 atmospheres for the first stage and surface area in the filter to concn. volume ratios of $< 100 \text{ m}^2/\text{m}^3$ in the first membrane and 10-50 m^2/m^3 in the second filter.

Feeding the seawater direct into the first filter eliminates the traditional chemical pretreatment stage thereby reducing the overall size of the installation. 22.9.78 as 009661 (13pp1370)

WAFI- ★ D15 90544B/50 ★NL7812-664
Filtration membranes esp. of cellulose acetate - made by casting a polymer soln. contg. a water miscible solvent and successive coagulation in cold and warmer aq. baths
WAFILIN BV 29.12.78-NL-012664
A88 J01 (A11) (30.11.79) B01d-13/04

Dry-storable membranes for membrane filtration are made by casting a film from a soln. of a macromolecular material in a solvent system contg. a water-miscible solvent. The cast film is then immersed successively in a first aq. liq. at a temp. of $< 10^\circ\text{C}$, then in a second aq. liq. at a temp. of $> 20^\circ\text{C}$.

The process is esp. useful for making cellulose acetate membranes which are less brittle in the dry state than known membranes, and are thus easier to handle. The coagulation bath is operated at lower temps. than in known

processes, which represents a saving in energy. The resulting membranes have a very high salt retention capacity coupled with satisfactory flux. 29.12.78 as 012664 (8pp513)

ASBI= ★ D15 90578B/50 ★SU-653-22
Unit for controlling aq. waste BOD processes - has electrolyser fitted with ion exchange membrane connected to quantising integrator and time interval forming unit via control

AS BIOL INSTR SPEC 12.05.76-SU-359165

R26 (28.03.79) C02c-05/10 G05d-27/02

The known monitor for controlling biochemical oxygen demand (BOD) in aq. wastes contains a thermostatically controlled vessel with an electrocontact manometer, and a controlled electrolyser. The latter is fitted with an ion-exchange membrane connected to a quantising integrator and timing unit in order to increase accuracy and reliability. The specified monitor is useful for purification in the chemicals industry. The vessel contg. the sample being analysed is no longer affected by atmospheric pressure change.

Kulikov A. I., Kuzmin A. A., Nesterov B. F., et al.

Bul. 11/25.3.79 12.5.76 as 359165 (4pp840)

TSPO= ★ D15 90634B/50 ★SU-654-546
Removing suspended matter and faeces from waste water - by flocculation with water-soluble copolymer of N-vinyl-pyrrolidone and allyl glycidyl ether

TASHK POLY 09.11.77-SU-540878

A97 (A14) (28.02.79) C02b-01/20

Turbid water and faecal waste can be cleaned of suspended matter by flocculation of it with a water-sol. copolymer. The residual level of 20-30 mg/l. obtd. for treated water originally contg. 4,000-5,000 mg/l. matter, using polyacrylamide at a rate of 2 mg/l., can be improved 2-2.5 times by the use of a copolymer of N-vinylpyrrolidone with alkyl glycidyl ether, used at a rate of 0.5-2.0 mg/l.

The flocculant is effective over the normal temp. ranges, but at 0-4°C the rate of addn. should be twice that used at 20-30°C.

Abdullaev T., Khakimova M. A., Nikoladze G. I. et al.

Bul. 12/30.3.79 9.11.77 as 540878 (2pp815)

AUZC= ★ D15 90635B/50 ★SU-654-547
Removing suspended iron oxide from water - using polyelectrolyte flocculant based acrylic or methacrylic acid and amide or ammonium deriv.

AS UZB CHEM INST 10.11.77-SU-542381

A91 E31 G01 (A14) (28.02.79) C02b-01/20

Waste water from prodn. of iron oxide pigments, or water contg. suspended kaolin can be cleaned by treatment with a polyelectrolyte flocculant, and the efficiency of the process can be increased and its cost reduced if the previous reagent, polyacrylamide, is replaced by a reagent based on acrylic or methacrylic acid and an amide-forming cpd. such as ammonium carbonate, disubstituted ammonium phosphate, urea or urotropine.

The use of this reagent increases the degree of purification 1.5-2 times and reduces the cost 2-5 times.

Artykov F. A., Shushpanovskaya L. M., Zainutdinov S. A. et al. Bul. 12/30.3.79 10.11.77 as 542381 (2pp815)

BAKI= ★ D15 90636B/50 ★SU-654-548
Waste water biochemical purification quality control - by estimation of dehydrogenase activity of water mixed with sludge in presence of triphenyl tetrazolium chloride, for aeration control

BAKINSK VODGEO RES 17.12.76-SU-431436

(28.02.79) C02c-01/02

Quality control of water purified by aeration is carried out by comparison of the dehydrogenase activity of mixts. with sludge at 35-37°C in presence of triphenyltetrazole chloride as indicator, the level of purification being estimated from the colour of the samples.

The method can be simplified and speeded up, and its range of use widened, if the comparison is made between the sludge mixt. itself and the sludge mixt. with addn. of 1-2% of uncleaned waste, instead of between 3 samples as before, i.e. the sludge, the sludge with addn. of untreated water, and sludge with addn. of tap water. The amt. of untreated water added is determined from the BOI

2% being added for a BOD of 500 mg/l and 1% for a BOD of 500 mg/l. The amt. used is 1.5-2 times less than in the previous method. Conventional analysis confirms that the redn. in BOD correlates with the colour of the sample to 97-99%.

Artyushkin A. D., Gasanov M. V., Bul. 12/30.3.79 17.12.76 as 431436 (3pp815)

KAZM= ★ D15 90637B/50 ★SU-654-550
Industrial waste water heavy metals removal - includes treatment with algae in ponds in widely spaced rows
KAZMEKHANOBRES 25.10.76-SU-413984
J01 (30.03.79) C02c-05/10

Heavy metal ions are removed from aq. waste by contacting with algae e.g. Characeae. The treatment is carried out in ponds by the row method in the direction of flow of the waste, with a wide spacing between the rows of 1-3m. The method gives a degree of purificn. of $<100\%$ and operates as well in winter as in summer, unlike the previous method using a suspension of degraded cells of green algae, which required a high material consumption, overloaded the system with organic cpds. in winter and did not achieve a degree of purificn. of $\geq 95\%$.

Kordakov I. A., Bul. 12/30.3.79 25.10.76 as 413984 (2pp815)

CIRO ★ D15 90705B/50 ★SU-654-623
Ion-exchanger contg. copper, e.g. for dissolved oxygen removal - is prepd. by electrochemical redn. of bipolar polyacrylonitrile ion-exchanger fibre contg. weak base and acid gps.

LENINGRAD TEXTILE LIGHT (POLI=) 25.10.76-SU-414667
A91 E36 J01 (A14) (02.04.79) C08f-08/42 C08f-120/44

Prepn. of ion-exchanger contg. Cu (e.g. for complete removal of dissolved O_2 from water) is based on bipolar polyacrylonitrile ion-exchanger fibre contg. weak base and weak acid gps. in ratio 0.4-1:1, to increase redox capacity and binding of Cu to the matrix. The resin is treated with $CuSO_4$ before reducing to Cu metal by electrochemical method in cathode chamber of electrodialyser using 8-10 mA/cm² current density (required charge 120-130 A.hr. for satn. and 250-300 A.hr. for redn. per 1 kg ion-exchanger). The process takes 135-150 mins. at room temp.

Mubaraskin G. M., Chimitova Ts. B., Vainberg V. M. et al., Bul. 12/30.3.79 25.10.76 as 414667 (4pp114)

MATS/ ★ D15 90804B/50 ★SU-654-900
Automatic water-hardness meter - has proportionators for water and oleate reagent and mixer to generate foam the thickness of which determines hardness

MATSIEVSKII V. A. 23.11.76-SU-424704
J04 R16 (30.03.79) G01n-33/18

Device is used for determining the hardness of water. It includes a mixing chamber, mixer and two measuring electrodes inside the chamber, proportionator for the water being analysed and the reagents, linked to the chamber, container for the water prior to analysis and switch-over attachment connecting the water container to the mixing chamber. Accuracy and reliability of the determination are increased, as a result of automatically correcting any measurement errors, by making one of the electrodes so that it is able to move up and down in the vertical direction.

Matsievskii V. A., Rashevskii A. P., Prots Ya. M. et al. Bul. 12/30.3.79 23.11.76 as 424704 (3pp29)

NIIG D15 14994Y/09 =SU-655-303
Aerobic compost fermentation from organic sludge - by traversing stirrer mechanism and top layer skimming conveyors in aeration tank

NIIGATA ENG KK (SEIU) 13.08.75-JA-098239
(30.03.79) *DT2636-535 C05f-03/06

Organic sludge, such as a mixt. of caeces and urine from animal farms, is turned into compost in an aerobic fermentation tank. This has a stirring device which introduces the sludge through a hollow shaft and agitates the sludge as it traverses on a bridge on top of the tank in both directions.

Aerators at the bottom introduce air bubbles. A conveyor system of horizontal and inclined screw conveyors

also mounted on the bridge, skims off a layer of compost from the top and discharges it to a belt conveyor outside.

This effects an aerobic fermentation even when the sludge is heaped to a thickness of one metre or more. A single tank combines all functions of stirring, mixing, aerobic fermentation and drying.

Simizu K., Katsumori S., Nisikawa T. et al. Bul. 12/30.3.79 13.8.76 as 387968 (6pp)

PLAN= ★ D15 90824B/50 ★SU-655-401
Crops pesticide spraying unit water filter for intake pipeline - contains inlet flap valve and filtering cloth covering hemispherical skeletal frames clamped in annular rim

PLANT CHEM PROTECT 25.10.77-SU-537503
(08.04.79) B01d-29/04

The process of filtering water pumped into installations for chemical protection of plants is accelerated and servicing of the filter is simplified if the filter consists of two semispherical skeletal frames which are covered with filtering cloth and clamped together with sealing ring by conical in section annular rim closed by a bolt.

One of the skeletal frames is connected to the suction pipeline closed by spring tensioned inlet flap valve. The latter opens when the suction of the pump forces the water from the tank through the filtering material and closes the access to the pipeline when the action of the pump is stopped.

Kozin L. N., Sheruda S. D., Omelyukh Ya. K., et al. Bul. 13/5.4.79 25.10.77 as 537503 (2pp135)

TINI= ★ D15 90827B/50 ★SU-655-404
Electrolytic froth flotation chamber for purifying aq. effluents - contains horizontal cathode plate consisting of separate strips consecutively connected to power source by time relay

TIN IND RES INST 26.07.77-SU-515175
J01 P41 R26 (J03) (08.04.79) B01d-35/06 B03c-03/40 G05d-27/02

The electrolytic froth flotation process used for extn. of solid particles suspended in industrial effluent waters or in prodn. process solns. is accelerated with redn. of power consumption by locally increased streams of evolved gas bubbles and prevention of turbulent motion of the liquid.

The horizontal plate of the upper electrode is made of separate strips insulated from one another and each connected to separate contacts of the time relay. The horizontal plate of the anode is connected directly to the positive terminal of the d.c. source, while the sections of the cathode are connected consecutively for short intervals of time (2-10 sec) according to pre-set programme of the time relay.

Makarenko V. K., Klimov A. Yu., Bul. 13/5.4.79 26.7.77 as 515175 (2pp135)

KIRK/ ★ D15 90968B/50 ★US 4176-779
Desalination in centrifugal rotor with diagonal baffle - and short radial fins collecting hydrogen

KIRK CF 02.02.78-US-874709
P41 (04.12.79) B04b-05/04

Brine is fed axially into a cylindrical rotor which includes a diagonal baffle. In addition, the rotor has short fins projecting radially from its axis but terminating short of the outer wall of the rotor. When the rotor is driven at high speed heavies accumulate near its outer wall and adjacent the lagging face of the baffle whereas lights concentrate adjacent the leading wall of the baffle near its radially inner end. Hydrogen gas accumulates in the chambers defined by pairs of radial fins.

Heavies and lights are removed by conduits which extend axially and are connected to ports adjacent the lagging and leading faces respectively of the diagonal baffle, by radial ducts.

The rotor is fed with brine under pressure and produces water as a result of artificial gravity, inertia, and catalytic similarities of hydrogen in the rotor. 2.2.78 as 874709 (5pp295)

CANA ★ D15 90990B/50 ★US 4177-031
Casting tubular polymeric membranes - in casting tubes which receive a casting bob supportable by a sleeve which allows fast insertion into a tube

CANADIAN PAT & DEV LTD 03.03.78-US-883267
A88 J01 (A32) (04.12.79) B29d-23/08 B29d-27/04

A tubular polymeric membrane is cast within a vertical tube by a casting lob to which polymer is fed and which defines with the tube an annular casting gap. Means are provided to fill the base of the tube with a coagulating liquid and to feed a gas to the space between the lob and the liquid as the lob is raised up the tube.

A sleeve is releasably received by the lower end of the lob and closes the casting gap and serves to guide the lob as it is lowered to its casting position. The sleeve is retained in the lower end of the tube by a clamp when the lob is raised to effect the casting. In the pref. embodiment, there are casting tubes and the sleeve affords a quick way of moving the lob from tube to tube. 3.3.78 as 883267 (9pp525)

ALFA D15 17680A/10 =US 4177-044
Carbonating water for brewing and soft drinks industries - in triple zone contacting column which removes oxygen

ALFA-LAVAL AB 06.09.76-SW-009798
(04.12.79) *BE-858-425 B01d-19

Process for removing O_2 from and adding CO_2 to a liq. (e.g. H_2O) is claimed, where the liq. and a CO_2 -contg. gas are intimately contacted by countercurrent flow. The liq. is passed through a first contact zone at relatively low temp (t_1) to take up CO_2 , then a second zone for delivering CO_2 and O_2 to the gas at higher temp. (t_2) and through a third contact zone to take up CO_2 at a temp. (t_3) lower than t_2 . Pref. liq. flow temps. are $t_1 = 5-30^\circ C.$, $t_2 = 30-90^\circ C.$ and $t_3 = 0-30^\circ C.$

Used in brewery and soft drink industries. Water with a very low O_2 content (< 0.1 mg./l. at $5^\circ C.$) can be obtd. 1.9.77 as 829951 (6pp963)

ADAM/ ★ D15 91001B/50 ★US 4177-051
Sepg. constituents from mixtures by liquation - by cooling to produce crystals followed by slow reheating to recover pure solvent

ADAMS C M 28.02.78-US-882256
J01 M25 (04.12.79) B01d-09/04

Liq. mixt. contg. solvent and dissolved and/or undissolved foreign matter is sepd. by cooling separate mixtures maintained in a quiescent undistributed state by moving them in opposite directions through a closed environment at a controlled slow rate of freezing sufficient to produce large plate-like crystals of pure solvent, with counter-flow heat transfer being effected between warmer and cooler mixtures passing in opposite directions.

The temp. of the combination of crystals and intercrystalline matter rich in solute, produced by cooling each mixt. is raised at a controlled low rate of heat absorption and liq. rich in solute removed from the spaces between the crystals while raising the temp. Pure solvent produced be continued heating and melting of the liq. crystals is recovered.

Used for recovery of pure water from polluted water, refining of secondary metals and prepn. of low melting invariant compns. Sepn. is effected with a min. expenditure of energy, e.g. dissolved solids can be removed from sea water with a consumption of < 20 kilowatt-hrs. per 1000 galls. 28.2.78 as 882256 (13pp67)

HIEJ D15 05231A/03 =US 4177-138
Dialyser with ion exchange membranes - used for treating sea water, brine and waste water contg. salts

HITACHI PLANT ENG CONST (HITA) 26.05.76-JA-060162
J01 P32 P34 (04.12.79) *J52143-976 B01d-13/02

Dialysis of a soln. is carried out in appts. having dilution and concn. chambers defined by ion exchange membranes by introducing soln. into each dilution chamber, adding condensed phosphate to the soln., introducing the soln. and phosphate to the concn. chambers, introducing air into both sets of chambers so as to rise between the membranes, flowing the soln. and concentrate from both sets of chambers, and discharging the air from the tops of the chambers.

Pref. the pH is adjusted to 4.0-6.0 before the phosphate is added. Clogging of the membranes is prevented economically. 26.5.77 as 800970 (9pp1376)

OTTC D15 32162A/18 =US 4177-139
Treating aq. effluent esp. to remove phenol cpds. - with oven regeneration and particle size restoration of adsorbent

OTTO DRC & CO GMBH 18.01.77-DT-701815
E14 (04.12.79) *BE-862-523 B01d-15/06

Active C or Al_2O_3 used to remove phenol from waste water is regenerated by draining water from the adsorbent, sepg. the adsorbent into particles of a given nominal size and particles of a size less than the nominal size but greater than 10% of this size, regenerating the nominal size fraction by heating, processing the undersized fraction until the particles attain the nominal size, and recycling both fractions of particles.

Pref. a fluidised bed is used to regenerate the nominal size fraction. Losses of adsorbent are reduced by 50%. 18.1.78 as 870389 (5pp1376)

ALKU D15 40386A/23 =US 4177-140
Eliminating weak acids from aq. solns. using anion exchange resin - which comprises styrene copolymer contg. tert. and quat. amine gps.

AKZONA INC 26.01.77-NL-000763
A91 J01 M14 (04.12.79) *BE-863-285 C02b-01/60

A weak acid is removed from aq. soln. by contacting the soln. with an anion exchanger contg. strongly basic and weakly basic gps.

The exchanger has a crosslinked matrix comprising a copolymer of styrene and > 20 wt.% of a crosslinking agent. From 3-90% of the total basic gps. are strongly basic and of the quat. NH_4 type of structure $(CH_2NR_1R_2R_3)^+$, where R_{1-3} are each CH_3 , C_2H_5 and C_2H_4OH , and the balance of the basic gps. are weakly basic and of the tert. amine type.

Used e.g. for removing SiO_2 , carbonic acid and humic acids. The anion-exchanger is also useful for removing Au and Ag from CN-contg. aq. solns. 27.1.78 as 872843 (7pp997)

UNTC ★ D15 91037B/50 ★US 4177-142
Filter bed of oppositely charged filter aid material - treated with electrolyte-type cpd. to cause clumping in aq. suspension

ECODYNE CORP 27.09.77-US-836967 (04.04.74-US-457821)
J01 (04.12.79) B01d-37/02

Filter bed for removing impurities from liq. comprises a mixt. of oppositely charged particles of filter aid material which normally have a surface charge in aq. suspension. 5-95% of these particles are treated with an electrolyte-type cpd. to produce a surface charge that is opposite from the normal surface charge by bonding to the surface of the filter aid material.

The oppositely charged particles clump in aq. suspension and produce a filter bed which is capable of removing suspended particles with very high efficiency while maintaining a low pressure drop across the filter bed. 27.9.77 as 836967 (11pp67)

NALC ★ D15 91038B/50 ★US 4177-143
Preventing strainer fouling in air conditioning units - by adding biocide to soln. left in contact with filter

NALCO CHEMICAL CO 25.10.78-US-954717
J01 (04.12.79) B01d-29/38

Filters used to filter cooling water which is used intermittently in direct heat exchange to cool large buildings, etc., are kept in contact with water which contains an industrial biocide when they are not in use. The amt. of biocide used is greater than that used to treat the water under normal operating conditions.

Plugging of the filters by growth of microorganisms is prevented and filter operation is improved. Pref. biocide is ozone, methylene bithiocyanate, etc. 25.10.78 as 954717 (4pp955)

ECOL- ★ D15 91039B/50 ★US 4177-144
Fluidised bed reactor for denitrification of waste waters - with separator column and agitator for removing excess cellular material

ECOLOGOTROL INC 19.07.78-US-926207
J04 (04.12.79) B01d-15/02

The system comprises a separator column disposed in the reactor column disposed in the reactor with its low end extending towards the fluidised bed and its high end extending towards a head of liq. effluent which lies on the bed.

During operation of the greater cellular material grows the particles causing the bed to expand until its level reaches an alarm point indicative of excessive growth.

This point is sensed to activate an agitator which effects shearing of the excess cellular material to produce the column a mixture of sheared material and partially stripped particles. The sheared material is discharged from the column through a draw-off port below the surface of the effluent head and the partially stripped particles returned to the bed.

Used for extracting N cpds., e.g. nitrate or NH_3 from waste water. The sheared growth is confined to the separator column and cannot enter the process effluent stream. This eliminates the need for a clarifier in the output line of the reactor. 19.7.78 as 926207 (11pp67)

DBE-★ D15 91041B/50 ★US 4177-147
Aerobic biological treating system for waste water - having slime supporting plates reciprocated into and out of waste water
ROBERTS FILTER MFG 20.03.78-US-887952
(04.12.79) C02c-01/04

The plant comprises a tank having an inlet for the waste water and an outlet for the aerobically treated water. There are ≥ 2 pairs of water water-contacting units which have surfaces for encouraging the growth of biological slimes.

A connecting rod joins one pair of the units together for reciprocating motion to permit each unit of the pair to alternately move into and out of the waste water. A second connecting rod joins a second pair of the units together for similar reciprocating motion. A motor reciprocates the two connecting rods to alternately move each unit of each pair into and out of the moving waste water.

The appts. is partic. suitable for the secondary treatment of domestic or industrial waste water. 20.3.78 as 887952 (10pp295)

HACH-★ D15 91042B/50 ★US 4177-148
Polluted water analyser intake strainer - with stack of perforated discs and blades permitting controlled leakage to analyser
HACH CHEMICAL CO 03.03.78-US-883205
J01 (04.12.79) B01d-33

The strainer comprises a frame with two posts supporting an end plate, and perforated discs slidable but non-rotatable on a shaft journaled for rotation in the frame. Blades sandwiched between the discs are not coupled to the shaft but are slidable on the posts.

The disc-blade stack is urged against the end plate completely enclosing the perforations, and the shaft is slowly and continuously driven. The plate has a passage opening

to the perforations, and a post passage opens to the plate passage so that water leaking between discs and blades passes to a tube while particles are stopped at the disc peripheries. 3.3.78 as 883205 (4pp1358)

ASAH D15 30455A/17 =US 4177-150
Porous polyacrylonitrile membranes with compact skins - by extruding polymer soln. into coagulation bath and treating film in hot water etc., useful as battery separators and osmosis membranes
ASAHI KASEI KOGYO 08.09.76-JA-106613
A14 J01 L03 R47 +P73 (A32 A85 D16) (04.12.79) *DT2740-252
B01d-13/04

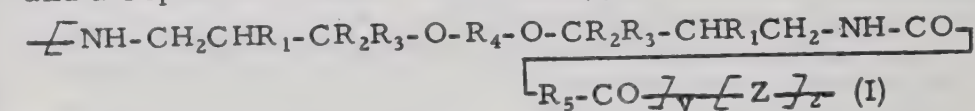
A dried porous membrane having a porosity of 20-70 vol.% and a fragility of <30 , is composed of acrylonitrile polymer walls sepg. predominantly interconnecting small size pores. The membrane comprises surface layers integral with a support layer to form a single continuous acrylonitrile polymer phase. Each of the surface layers has pores of 0.001-0.05 μ in average size and a thickness of 0.1-20 μ . The support layer has pores of a larger average size than those in the surface layers.

Membrane has improved flexibility, folding endurance and impact strength. It is used as a separator in lead storage batteries. 6.9.77 as 831017 (18pp997)

SUNO ★ D15 91068B/50 ★US 4177-222
Semipermeable membrane comprising block copolymer of poly(di:oxa:amide) - and a melt spinnable polyamide contg. no ether gps.

SUNTECH INC 19.01.79-US-004777 (14.11.73-US-418524)
A23 J01 (A88) (04.12.79) C08I-77

A novel block copolymer has a mol. wt. of 5,000-100,000 and a repeat structure of formula (I):



(where $\text{R}_1, \text{R}_2, \text{R}_3$ are each H, 1-10C alkyl or 3-10C isoalkyl; R_4 and R_5 are each 1-10C alkylene or 3-10C isoalkylene or R_5 is a direct bond; Z is derived from a melt spinnable polyamide; y and z are each 4-200; the polyamide is nylon-6, -6,10, -6,6 or -11, or MXD-6, or PACM-9, -10 or -12). The copolymer is pref. hydrophilic.

The copolymer is used as a semipermeable membrane, and is processed easily, has good mechanical properties, and stability. 19.1.79 as 004777 C.i.p. 4130602
(+12.3.75; 16.2.77; 18.12.78-US-557717; 769246; 970409)
(3pp904)

See Also

D16 GB 1557674

D16 US 4177226

D16: FERMENTATION INDUSTRY

GRAC ★ D16 89435B/50 ★BE-878-137
Enzymatic diagnostic compsns. - comprising hexokinase and glucose-6-phosphate dehydrogenase immobilised on carboxylated polyurea urethane support

GRACE W R CO 07.08.78-US-931334
A96 B04 R16 (A25) (03.12.79) G01n

A diagnostic compsn. comprises a mixt. of hexokinase (HK) and glucose-6-phosphate dehydrogenase (G-6-PDH) immobilised in biologically active form on ≥ 1 external surface of a support comprising a carboxylated poly(urea-urethane) with skeletal segments of oxyalkylene units, of which ≥ 60 mole % are oxyethylene.

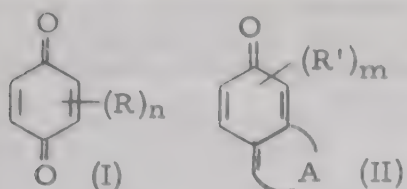
A process for analysing human body fluids, comprising contacting an aq. soln. of the body fluid with the immobilised enzymes to catalyse the reaction between the components of the solns. and determining the amt. of ≥ 1 component in the resulting soln. A process for immobilising enzymes, comprising reacting an amino acid with excess urethane prepolymer, polymerising the resulting carboxylated prepolymer, and condensing an enzyme with the prod. in the presence of a carbodiimide.

The immobilised KH/G-6-PDH mixt. can be used to determine ATP, ADP, creatine phosphate, glucose, glucose-6-phosphate, NAD, NAD phosphate, glucose-1-phosphate, fructose-6-phosphate, myokinase, phosphoglucose isomerase, galactokinase or creatine phosphokinase.
7.8.79 as 878137 (29pp367)

MYCO-★ D16 89457B/50 ★CH-614-466
Inhibiting growth of bacteria in fungal culture media - by adding sugar and quinone or hemi:quinone deriv.

MYCOGEL LABS INC 01.04.75-CH-004112
B04 C03 (B02 B05) (30.11.79) C12k-01/06

Agent for inhibiting the growth of bacteria in culture media used for growing fungi and yeasts (excluding agents described in CH 505900) comprises (a) ≥ 1 sugar and (b) a quinone of formula (I) or a hemiquinone of formula (II).



In the formulae $n=0-4$; each R is a substit. or 2 adjacent R complete a condensed ring. A completes a condensed carbocyclic or heterocyclic ring; $m=0-3$ and each R' is a substit. or 2 adjacent R'

complete another condensed homocyclic or heterocyclic ring. Alternatively a glycoside of (I) or (II) is used.

Used in media to isolate, identify or cultivate fungi, esp. for clinical diagnosis of Candidiasis. Unlike the polyhydroxyanthraquinones proposed in CH 505900 these additives do not require exact pH control; generate fungal colonies of characteristic colour or form; stimulate growth of many strains (e.g. *Aspergillus niger*) and enhance prodn. of metabolites such as citric acid or antibiotics. 1.4.75 as 004112 (7pp1251)

SCHM/ ★ D16 89577B/50 ★DT 2824-553
Softening tough parts of mushrooms - by incubating in acidic salt soln. opt. with addition of enzymes

SCHMITZ H 05.06.78-DT-824553
(D13) (06.12.79) A231-01/28

Prodn. of soft, edible fungal fruiting bodies (or their parts) from tough fungal material, rich in softening enzymes, comprises treating the material with an acid soln. of pH 3-5.5 and salt conc. 0.02-0.5 M at 20-55°C for 0.5-10 days. The treatment may be under aerobic or anaerobic conditions.

Pref. the acid soln. is a pH 4 acetic, citric or lactic acid buffer, or an acid whey made by fermentative milk acidification. The fungal material may be fresh or stored for up to 2 years at -2° to -40°C.

A similar process can be used with fungal material of low softening enzyme content if combined with treatment with glucanase and chitinase (supplied e.g. as an extract of enzyme-rich fungi).

For treating the tough stems of *Pleurotus* species (esp. *P. ostreatus*) which represent 20-25% of the total crop and are usually discarded. The prods. have acceptable consistency, good taste and aroma, and can be stored frozen for a long time. 5.6.78 as 824553 (20pp1451)

ALBR ★ D16 89590B/50 ★DT 2836-823
Isomerised hop extract prodn. - by heating in non aq. medium with alkali, then extn. with water

BUSH BOAKE ALLEN 31.05.78-GB-025212
(06.12.79) C12c-09/02

Prepn. of isomerised hop extract comprises treating a hop extract contg. α -acid (or its soln. in a non aq., water-immiscible solvent) with a non-aq. alkali. The resulting non-aq. resin-contg. alkali metal salt of α -acid (or its soln.) is then heated to give a salt of iso- α -acid. This is recovered by partitioning between a water-immiscible apolar solvent and water with pH 8.2-9.5.

Pref. a solid alkali is used, esp. Na or K hydroxide or carbonate, best K_2CO_3 . Pref. >100% of the stoichiometric amt. of alkali based on total acids with $pK \geq$ that of α -acid is used, esp. >140% on α -acid.

The prod. is used as a bitter agent for beer. The prod. is obtd. completely free of β -acid by a simple extraction procedure. Less liq. is needed so throughput is high and less base compared with isomerisation in aq. media. 23.8.78 as 836823 (24pp1251)

ICIL ★ D16 89599B/50 ★DT 2912-110
Compsn. contg. indigo and xanthan polysaccharide - made by carbohydrate fermentation using *Xanthomonas campestris*, giving homogeneous storage stable dispersions

IMPERIAL CHEM INDS LTD 31.05.78-GB-025661
A60 E24 F06 (06.12.79) C09b-07 C09b-67 D06p-01/48

Compsn. comprises indigo (I) and a natural xanthan polysaccharide (II) obtd. by fermenting carbohydrates with *Xanthomonas campestris*. Dispersions of this comps. in aq. or water-miscible organic media are also new. Pref. the dispersions are aq. and contain 10-30wt. % (on total) of (I) and 0.1-10wt. % (on (I)) of (II). Opt. they also contain up to 10wt. % (on total) of an antifreeze.

Dispersions are convenient in dyeing since they are easily handled, homogeneous and of good storage stability,

and avoid problems associated with handling dry (I). 27.3.79 as 912110 (8pp1251)

CHUS ★ D16 89657B/50 ★DT 2921-82
Antitumour compns. contg. bacterial cells - of *Streptococcus equisimilis*

CHUGAI SEIYAKU KK 29.05.78-JA-063418
B04 (06.12.79) A61k-35/74 C12k-03

Compsns. for treating malignant tumours contain cells of *Streptococcus equisimilis* (esp. ATCC 21597). The compns. are pref. prepd. by (a) heating a suspension of the cells in a salt soln. contg. ≥ 25000 (esp. 26000-60000) U/ml of a penicillin at 30-38°C for 10-30 min and then at 40-50°C for 20-40 min, or (b) heating a suspension of the cells in a salt soln. at 65-100°C for 5-30 min. The salt soln. is pref. Bernheimer's basal medium (BBM) or phosphate-buffered physiological saline soln. The compns. are pref. stored in freeze-dried form with a stabiliser comprising an amino acid, a sugar, dextran or soluble starch.

Compsns. have higher activity than analogous compns. contg. *S. haemolyticus*, e.g. giving 48-89% inhibition of a wide range of tumours in mice. 29.5.79 as 921829 (17pp367)

FUJI ★ D16 89715B/50 ★EP ---5-751
Stable and potent hyaluronidase BMP-8231 - obtd. by cultivation of *Streptomyces koganeiensis* atcc 31394 in nutrient medium

FUJISAWA PHARM KK 11.05.78-JA-056313
B04 C03 (12.12.79) C07g-07/02 C12d-13/10

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

Hyaluronidase BMP-8231 (I) is new. It has endo- β -hexosaminidase type action and it degrades hyaluronic acid, but not chondroitin or chondroitin sulphate A or C. It acts at an optimum pH of 4.0, and it is stable at pH 4-11.3. It is effective at an optimum temp. of 60°C. and is stable at $\leq 60^\circ\text{C}$.

(I) has higher stability, non-susceptibility to proteolytic enzymes and higher enzymatic potency than prior hyaluronidase enzyme preps. It is a spreading factor, diffusing factor etc. for increasing absorption of medicinals and in antibiotic solns., esp. for treating bovine mastitis. It has also been used as an analytical reagent and it may produce significant redn. in myocardial infarct size. 10.5.79 as 101420 (27pp1248).

(E) ISR: FR2018608; 4 Journal References.

NYBL- ★ D16 89757B/50 ★EP ---5-864
Subparticulate mass contg. hepatitis B surface antigen - useful as vaccine for protecting against viral hepatitis

NEW YORK BLOOD CENT 07.06.78-US-913422
B04 (12.12.79) A61k-39/12 C12k-05

D/S: E(BE, DT, FR, GB, NL, OE, SW).

Antigenic compsn. comprises a subparticulate mass contg. hepatitis B surface antigen.

The compsn. is useful as a vaccine or vaccine intermediate for protecting against viral hepatitis so that chronic liver diseases are prevented, and possibly the high incidence of primary liver cancer associated with hepatitis in certain areas.

6.6.79 as 101777 (43pp1248).

(E) ISR: FR2331354.

ELIL ★ D16 89800B/50 ★EP ---5-956
Antibiotic A-38533 complex contg. four separate factors - useful as low toxicity antibacterial esp. effective against *Pseudomonas* spp.

ELI LILLY & CO 25.05.78-US-909582
B04 (12.12.79) A61k-35/70 C07g-11 C12d-09/16

D/S: E(BE, DT, FR, GB, IT, LU, NL, SW).

(A) Antibiotic A-38533 factors A₁, A₂, B and C as pure, new and identified materials are isolated from Antibiotic A-38533 complex, which is obtd. by cultivation of *Streptomyces* spp. NRRL 11298 in a nutrient medium. They form salts.

(B) *Streptomyces* spp. NRRL 11298 is new.

The antibiotics are antibacterials esp. effective against *Pseudomonas* spp. and they have very low toxicity.

12.5.79 as 300908 (56pp1248).

(E) ISR: US4029769; US4035481; US4038384; 1 Journal Reference.

DIATR ★ D16 89839B/50 ★ EP ---6-035
bacterial beta-galactosidase of high thermal stability - useful for converting lactose in whey to glucose and galactose
NATIONAL RES DEV CORP 07.06.78-GB-026503
A96 B04 (12.12.79) C07g-07 C07h-03/02 C12d-13/10
p/S: E(DT, FR, IT, NL).

(A) A new β -galactosidase enzyme (I) derived from *Bacillus stearothermophilus* has, when pure, an activity half life of ≥ 1.5 hr. at 55°C ; ≥ 1 hr. at 60°C and ≥ 10 min. at 65°C (measured using O-nitrophenyl- β -D-galactopyranoside as substrate). Prefd. strains for producing (I) are NCIB 11407-11413.

The enzyme may be used pure, immobilized on a solid support as a whole cell prepn., opt. immobilized on an ion-exchange solid such as DEAE-cellulose.

(B) The strains NCIB 11407-11413, their variants and mutants are also claimed.

The enzyme is used for hydrolysing lactose (esp. in crude whey) to glucose or galactose. The hydrolysates can be used to make syrups, useful in brewing or confectionery, or pure sugars can be recovered. The high temps. possible with (I) avoid problems of microbial contamination and (I) may be added to UHT milk before heat treatment.

7.6.79 as 301082 (40pp1251).

(E) ISR: —

UNVO D16 23857Y/14 =GB 1551-285
Normal-paraffins sepn. from mixts. contg. iso paraffins and aromatics - by selective adsorption and two-stage desorption (NL280377)

UOP INC 24.09.75-US-616470
E17 H04 J01 (30.08.79) *DT2640-365 C10g-25/04
Sepn. of a n-paraffin from a feed stream of mixt. of n-paraffin with isoparaffin(s) and aromatic hydrocarbon(s) using a shape-selective zeolite, comprises (a) contacting the zeolite with the feed at adsorption conditions to selectively adsorb the n-paraffin and some of the aromatics; (b) removing a raffinate stream contg. less selectively adsorbed isoparaffin(s) from the adsorbent; and (c) effecting a desorption operation by contacting the adsorbent with a desorbent under desorption conditions to desorb the n-paraffin.

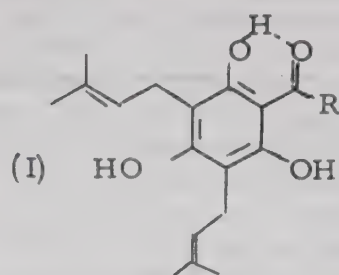
The desorption comprises (i) contacting the adsorbent with a first desorbent to desorb the aromatic hydrocarbons; (ii) removing the aromatics extract and the first desorbent; (iii) contacting the adsorbent with a second desorbent to desorb the n-paraffin; and (iv) removing a second extract stream of n-paraffin and second desorbent. This second extract stream is sepd. to give the n-paraffin and the second desorbent. 23.9.76 as 039487 (17pp982)

ATLS D16 72204X/39 =GB 1551-354
Synthetic humulones from phloroglucinol with higher yields - by acylation, alkylation and oxidn of 4-desoxy cpds

ATLANTIC RES INS LT 05.05.75-DT-519990
E14 (30.08.79) *BE-841-471 C07c-49/82
4-Desoxyhumulone of formula (I) is produced from an acylphloroglucinol by protecting with a blocking gp. only 1 of an OH gp. in an ortho-posn. and an -OH gp. in a para-posn.; and reacting the protected acylphloroglucinol formed with γ, γ -dimethyl-allyl bromide or 2-methyl but-3-ene-2-ol in an organic solvent in the presence of a weak Lewis acid catalyst.

Pref. the Lewis acid used is ZnCl_2 , POCl_3 or an acid zeolite, the organic solvent is dioxane and ether/methylene chloride or methylene chloride.

(I) can be oxidised or hydroxy-



lated to humulone on an industrial scale, and its derivs. used to impart the characteristics bitter flavour to beer. 4.5.76 as 018170 (9pp931)

PHIG D16 07501Y/05 =GB 1551-437
Antirabies vaccine prepn. - from ERA strain virus by repeated passage through pig kidney cells

PHILIPS ROXANE INC 21.07.75-US-597654
B04 C03 +R16 (30.08.79) *BE-844-353 A61k-39/28 C12k-05 C12k-07 + C12k-09

A live rabies virus strain which exhibits a reproducibly significant cytopathic effect which correlates with the virus titer is prepd. by passing a ERA strain rabies virus (derived from S. A. D. virus, a fixed virus strain, originally isolated from a rabid dog) in tissue culture of PK₂A cells (derived from PK₂A pig kidney cell line) for a number of passages sufficient to develop the strain. Pref. the passage through the PK₂A cells is repeated ≥ 60 times, and esp. after this the resulting virus strain is passed through primary canine kidney cells.

The prepd. strain is highly aminogenic and non-pathogenic to animals, and can be used in the prodn. of rabies vaccine for the immunisation of e. g. dogs, cats, cattle, horses and swine. The vaccines may be administered by intramuscular injection. 16.7.76 as 029697 (15pp990)

EAST D16 41723Y/24 =GB 1551-452
Cholesterol oxidase and cholesterol esterase, prodn. - by culturing microorganisms in presence of enzyme inducers and yeast extract

EASTMAN KODAK CO 15.11.76-US-741908 (11.12.75-US-639690)
A97 B04 R16 (30.08.79) *BE-849-301 + C07g-07/02

Prodn. of cholesterol oxidase (III) comprises (a) growing a suitable microorganism (I) in a growth medium (II) and (b) sepg. (III) from (II). (II) contains (i) an inducer of (III); (ii) 1.0-5.0 g/l nonionic surfactant/amt. and nature being such that it and its decopsn. prods. are non-toxic to (I); and (iii) ≥ 10 g/l yeast hydrolysate.

Pref. (iii) is a yeast extract. (I) is pref. of the order Actinomycetales and/or of the family Mycobacteriaceae, Nocardiaceae, Streptomyetaceae or Corynebacteriaceae. The use of time-consuming, expensive cell disruption techniques such as homogenisation is avoided. Use of nonionic surfactant gives an ≤ 3 -fold increase in enzyme yield. 13.12.76 as 051961 (16pp936)

KURE D16 18072A/10 =GB 1551-476
Basidiomycetes e.g. *coriolus veriscolor* cultivation - on media contg. glucose and yeast extract to increase yield of antitumour polysaccharide-contg. mycelium

KUREHA KAGAKU KOGYO 30.08.76-JA-102628
B04 + P13 (30.08.79) *DT2737-471 C12d-13/04
A Basidiomycetes fungus belonging to the genus *Coriolus* of the family of polyporaceae is cultivated in a glucose-yeast extract medium contg. 7.5-15 wt. % of glucose, such that the wt. ratio of glucose to yeast extract is 3-15:1.

Pref. the glucose to yeast extract ratio is 6-10:1, the glucose content in the medium is 10-15wt. % and the Basidiomycetes fungus is *Coriolus versicolor* (Fr). Quel. The cultivation is at $25 \pm 3^\circ\text{C}$ in submerged culture under aeration and agitation for 3-10 days.

Therapeutically active polysaccharides, noted for their antitumor activity and other pharmacological effects, can be obtd. from the culture by extracting the mycelia formed with an aq. solvent, refining the resultant soln. to remove low mol. wt. substances, and drying the residue. 17.8.77 as 034612 (4pp931)

ELED D16 74422Y/42 =GB 1551-518
Enzyme immobilisation - by coagulating with quat. pyridine anion-exchange resin and extruding to give immobilised enzyme pellets (NL 4.10.77)

DENKI KAGAKU KOGYO (DENK) 31.03.76-JA-035471 (31.03.76-JA-035468)
A97 B04 + R16 (A91) (30.08.79) *DT2714-629 C07g-07/02 + C13k-01/06 C13k-11

Prod. of immobilised enzyme compsn. comprises (a) reacting a biologically active enzyme system with a water-insol. anion-exchange resin having a quat. pyridine ring in the polymer unit, to coagulate and immobilize the enzyme and/or enzyme-contg. microbial cells; (b) extrusion moulding the prod. in a wet state; and (c) drying the moulded prod.

Pref. extrusion is effected in a twin screw horizontal type extruder, which esp. has a 0.1-2 mm screen. Compsns., obtd. have good physical strength, high enzymatic activity and a reasonable stability, and exhibit sufficient penetration when packed in an industrial scale reactor. 30.3.77 as 013485 (9pp936)

RETO D16 89794Y/50 = GB 1551-897
Glucose isomerase prepn. from *Flavobacterium arborescens* - obtd. in max. yield when using lactose in growth medium

REYNOLDS TOBACCO CO 20.10.76-US-734222

(D17) (05.09.79) *US4061-539 C07g-07/02 C13k-11

A glucose-isomerising enzyme is prepd. by cultivating a microorganism of the species *Flavobacterium arborescens* which is capable of producing the enzyme, in a nutrient medium, and recovering the enzyme.

Pref. the strain of *F. arborescens* used is ATCC 4358, NRRL B11022 or NRRL B11023. The enzyme obtd. exhibits useful activity at 45-90°C at pH 6-10. The enzyme may be derived from a cell-free extract of the microorganism or from cellular material obtd. therefrom.

The enzyme obtd. is used to convert glucose to fructose by contacting a glucose-contg. soln. with the prod. and recovering the fructose-contg. liquor, esp. when corn starch is used as a starting material. 10.10.77 as 042135 (6pp931)

UPJO D16 63755A/36 = GB 1551-910
Antibiotic acanthomycin active against *Staphylococcus aureus* - prepd. by culturing *Streptomyces spinosus* subspecies *acanthus*

UPJOHN CO 28.02.77-US-772552

A91 B04 + P34 (A97) (05.09.79) *DT2806-220 C12d-09/16

New antibiotics acanthomycin and its base addn. salts (I) are active against *S. aureus*. In pure form (I) (a) is of formula $(C_{90}H_{139}N_{19}O_{42})_n$; (b) has the following analysis: C 49.81, H 6.47, N 12.36 and O 31.35%; (c) has $[\alpha]_D^{25}$, -28.5° (c, 1, DMSO); (d) is soluble in DMF and DMSO, slightly sol. in (m)ethanol and insol. in water, ether, halohydrocarbons and satd. hydrocarbons, and ammonium and Na salts are sol. in water and 1-4C alcohols; (e) has an equiv. wt. of 2159 and (f) has IR and UV spectra as given.

(I) is pref. prepd. by cultivating *Streptomyces spinosus* subsp. *acanthus* NRRL 11081 under aerobic conditions. 16.2.78 as 006131 (39pp974)

KURE D16 26299Y/15 #GB 1557-414
Microbial food prepd. by culturing *Methylomonas probus* - in medium contg. methanol as carbon source

KUREHA KAGAKU KOGYO 29.08.75-JA-104093 (24.02.77-GB-007967)

(D13) (12.12.79) *J52028-988 C12d-13/06 C12k-01/04

Prod. of microbial cells usable as a protein source comprises cultivating the new bacterial species *Methylomonas probus* in a medium contg. methanol as C source, a source of N and inorganic nutrients under aerobic conditions at 15-41°C and a controlled pH of 5.3-9.1. Specifically, the cultivation is carried out under aeration at 35-37°C while controlling the pH of the culture medium at 6.3-7.0. Pref. the methanol concn. in the culture medium is ≥ 4 vol. %.

Method yields cells having a crude protein content of up to 80wt. %. They have high nutritive value and are non-toxic and so provide an excellent protein source when mixed in feed or food. 24.2.77 as 007967 (8pp927)

TANA D16 76723A/43 = GB 1557-545
Crude urokinase purification by adsorption chromatography - on sulpho gp. contg. polysaccharide(s), useful for treating circulatory disorders

TANABE SEIYAKU KK 30.09.77-JA-118321 (09.04.77-JA-040683)

A97 B04 (A11) (12.12.79) *DT2812-609 C07g-07/02

Crude urokinase is purified by contacting an aq. urokinase soln. with a water-insol. hydrophilic polysaccharide having a gp. of formula $-CH_2CH(OH)CH_2R$ (where R is sulpho (thio) or p-sulphophenylamino) to adsorb the urokinase, then eluting the urokinase. Pref. the aq. urokinase soln.

has a specific electric conductivity ≥ 15 m mho/cm, and the elution is carried out by contacting the polysaccharide with an aq. soln. of specific electric conductivity ≤ 20 m mho/cm.

Pref. the aq. soln. used for the elution is a phosphate, carbonate or tris(hydroxymethyl)aminomethane buffer soln. or an aq. NaCl soln. Pref. the aq. urokinase soln. has pH 6-9, and the soln. used for elution has pH 3-9. The urokinase obtd. has high potency and is free of pyrogens. 28.3.78 as 011941 (+28.4.77-JA-049634) (9pp924)

SIMP- D16 42444B/23 = GB 1557-544
Mechanised germination plant for malting cereal grain esp. barley - uses powered conveyors, elevators and stirrers to eliminate manual labour

SIMPSON & CO ALNWIC 21.04.78-GB-015799

(12.12.79) *BE-873-963 C12c-01/04

Cereal grains are germinated in maltings by passing stepped grains to closed germinating vessels in a series, allowing the grain to stay in each vessel for 23 hrs., then either turning the grain in each vessel or transferring the grain to the next vessel, and finally passing the grain as a green malt to a kiln.

Opt. the germination is either part of a batch or a continuous malting process. Each vessel pref. has a radial screw. 30.5.78 (4pp1376)

SAKA/ D16 65669A/37 = GB 1557-556
Antitumour emitanin prodn. - from mycelial cultures of certain fungi

SAKAKIDA K 17.06.77-JA-071130 (02.03.77-JA-021456)

B04 (12.12.79) *DT2809-092 C12d-13/04

Prod. of the polysaccharide exitanin comprises inoculating culture samples of *Tricholoma matsutake*, *Tricholoma baka matsutake*, *Volvariella volvaea* or *Tremella fuciformis* into a culture medium, fermenting the grown culture in a liq. medium contg. a carbohydrate and a N-source isolating solid mycelia from the resulting broth and extracting the solid mycelia with hot water to isolate the active ingredients. Isolation of the mycelia is pref. carried out by centrifugal sepn.

Specifically a pptg. agent which is a 1-4C alcohol, acetone, an acid or a quat. ammonium salt is added to the extract obtd. by extracting the mycelia and the resulting ppte. is purified to obtain emitanin-A. The filtrate remaining after sepg. the ppte. is purified to obtain emitanin-B.

Emitanin exhibits antitumour activity. 1.3.78 as 008085 (8pp927)

LINM D16 12506A/07 = GB 1557-644
Hops ground and pelletised with liquid nitrogen feed - to cool ground prod. and prevent deterioration of taste

LINDE AG 06.08.76-DT-635470

(12.12.79) *DT2635-470 C12c-03/04

Ground hops are pelletised by cooling the hops using liq. N_2 and then compressing the hops to form pellets. The N_2 is pref. sprayed onto the hops. The hops are pref. compressed in a chamber connected to a liq. N_2 tank by a line having a spray nozzle at its end.

The bitter substances in the hops are retained. 5.8.77 as 032871 (3pp1376)

BOEH D16 12290A/07 = GB 1557-645
Immobilised enzyme on hardened porous protein support - fixed by means of glutaric di-aldehyde

BOEHRINGER INGELHEIM 12.08.76-DT-636206

B04 (12.12.79) *BE-857-718 C07g-07

Immobilised enzyme prepn. comprises a porous water-insol. protein polymer having ≥ 1 enzyme covalently bonded to it by glutardialdehyde. The protein polymer can absorb 2-8 times its dry wt. of water and is produced by treating a protein with a hardening agent.

The protein is suitably gelatine, egg white, albumin or soya bean protein and the hardening agent formaldehyde, glutardialdehyde or a diisocyanate.

Both proteolytic and nonproteolytic enzyme preps. can be produced economically. They have high degree of activity even after long or repeated use and are resistant to microorganisms. They have high specific activity, low apparent Michaelis' constant and good through flow properties in packed bed form. 11.8.77 as 033776 (9pp945)

ERJ D16 47931A/27 =GB 1557-649
 Prodn. of cells loaded with active substance - using methods to promote accumulation in spleen and liver
 KERNFORSCHUNGS JULICH 15.12.76-DT-656746
 B07 C03 K08 (12.12.79) *DT2656-746 A61k-09
 Loaded cells formed from natural human or animal cells are claimed, and have enclosed in them a pharmaceutically acceptable substance intended to undergo a chemical or physical interaction with material in the spleen and/or liver of a human or animal.

The size and/or form of the loaded cells differs from that of the original cells, or the cell membrane have their lipid or protein layers chemically modified, in such a way that after injection into the bloodstream, the loaded cells are excreted out of the blood and degraded by the spleen and liver of the body.

Used e.g. for controlled admin. of radionuclides. The cells are regarded as foreign in the spleen and liver, and are removed from the blood and broken open. 15.12.77 as 552188 (8pp997)

YPR- D16 23303A/12 =GB 1557-658
 Veterinary vaccine for sheep - based on live larvae of *Trichostrongylus axei*

UNIV OF PRETORIA 07.02.77-ZA-000683

B04 C03 (12.12.79) *ZA7700-683 +A61k-35

Veterinary method of treating sheep against the parasite *Trichostrongylus axei* comprises admin. of live larvae of *Trichostrongylus axei* at a quantity range of 20,000-45,000 to a sheep for introduction into its abomasum.

Pref. admin. is oral and, when carried out in summer rainfall areas, effected at the commencement of summer. The larvae are pref. present in a physiologically acceptable medium, esp. water. 18.1.78 as 022114 (7pp997)

IANO D16 09705Y/06 =GB 1557-668
 Particle form viral insecticide - contg. insecticidal virus embedded in protein and/or clay matrix.

SANDOZ LTD 18.07.75-US-596986

C03 (12.12.79) *DT2630-682 A01n-15

Articulate virus insecticide compsn. comprises 0.1-35 wt. % of a virus insecticide secured in 65-99.9wt. % of a solid matrix comprising inert solid proteinaceous material and/or clay, the %ages totalling 100.

The proteinaceous material is pref. vegetable protein or defatted soy bean. Pref. the clay is Attapulugus clay. Pref. the insecticide is a nuclear polyhedrosis virus insecticide (esp. *Heliothis zea*).

Compsns. have increased stability, wettability, hardness and adhesiveness. 16.7.76 as 029692 (10pp997)

UPR- D16 05880Y/04 =GB 1557-674
 Rotary filter for membrane filtration of colloidal soln. etc. - having filtration layers with sleeve surfaces running parallel to rotation axis

SUPRATON F-J ZUCKER (KOHL/) 03.07.75-DT-529614

B04 J01 (D15) (12.12.79) *DT2529-614 B01d-31

Rotary filter separator comprises a cylindrical drum with inlet at one end and outlet at the other; and a cylindrical filter element having annular means at each end to partially close the element. The soln. is continuously filtered through the element, the filtrate is conducted from the separator through one passage and the concentrate is conducted from another passage between the upper end of the drum and the upper end of the filter element.

Filtration or ultra-filtration efficiency of suspensions and solns., such as colloidal solns., is increased. The process can be carried out continuously without cleaning, back-flushing and exchange of filter elements. 1.7.76 as 027374 (5pp976)

ANVR D16 14598Y/09 =GB 1557-712
 Acylated peptidoglycan-type adjuvant for vaccine - modified with polycarboxylic acid and administered as isotonic soln.

AGENCE NAT VALORISATION 29.08.75-FR-026704

B04 (12.12.79) *BE-845-557 A61k-39 C07g-07

Immunological agents are obtd. by acylating a water sol. adjuvant (I) including peptidoglycane fragments contg. saccharide units formed between N-acetylglucosamine and an N-acylmuramic acid, using an acylating agent (II) being derived from a physiologically acceptable polycarboxylic acid.

Suitably (I) includes peptidoglycone fragments contg. saccharide units formed between N-acetylglucosamine and either N-glycolylmuramic acid or N-acetylmuramic acid, with the muramic acid gps. being substd. by a peptide chain. (II) is pref. phthalic acid or its deriv.

The agents are incorporated into vaccines to reinforce and enhance the activity of weak immunogens. In partic. they are useful in immunisation against tumours. They have reduced toxicity. 27.8.76 as 035699 (10pp945)

CORP D16 67001A/38 =GB 1557-755
 High-viscosity acidic polysaccharide(s) obtd. by *Bacillus lentus* cultu - used as pharmaceutical excipients, textile finishes oil viscosity modifiers, food thickeners and cosmetic additives

CPC INTERNATIONAL INC 09.03.77-JA-024937

B07 F06 H01 (B04 D13 D17 D21) (12.12.79) *BE-864-687 C12d-13/04

Prodn. of acidic polysaccharides having a viscosity of 4000-5000 cP (1% aq. soln. at 25°C) comprises culturing a microorganism of the species *Bacillus lentus* in a culture medium contg. ≥ 1 carbohydrates as C source, and isolating polysaccharides in which the principal constituents are glucose, galactose, mannose and glucuronic acid.

Pref. the microorganism is *B. lentus*. D-228, FRI 3337 The C source is pref. glucose, sucrose, maltose, starch, hydrolysates, starch, dextrin or their mixts. The medium pref. also contains a N source selected from corn steep liquor, peptone, yeast extract, meat juice extract or their mixt. Cultivation is pref. at 20-40°C and at an initial pH of 5-8.

The polysaccharides obtd. can be used as food thickeners and in the recovery of oil from oil wells. They may also find use as excipients, textile sizes, toiletry additives etc. 8.3.78 as 009236 (8pp393)

UHLI/ D16 52679B/29 =GB 1557-774
 Bacterial culture process - using bacterium with temperature-dependent plasmid replication

UHLIN BEN 30.12.77-DT-759053

B04 (12.12.79) *DT2759-053 C12k-01/02 C12k-03

Prepn. of a gene prod. of DNA comprises cultivating bacteria carrying a plasmid showing a controlled constant plasmid copy number when the bacteria are cultivated at one temp., and showing when the host bacteria carrying the plasmid are grown at a different temp, and altered plasmid copy number control allowing a much higher or totally uncontrolled copy number. Cultivation is under conditions including at least a part of cultivation at an approaching temp. at which the plasmid shows an altered copy number control allowing a much higher or totally uncontrolled copy number.

Hence the number of copies of the plasmid is low at one temp, which decreases the risk that the cloned plasmid or its gene prods. should disturb growth of the host bacterium. 26.5.78 as 023209 (17pp393)

BIOG ★ D16 B/50 ★HU T017-370
 Neomycin prep. by aerobic fermentation - of *Streptomyces fradiae* LN-47

BIOGALGYOGYSZERGYA 05.07.77-HU-BI0558

B04 (28.11.79) C07h-15/22 C12d-09/16

PACI/ ★ D16 B/50 ★IT 1033-792
 Fermentation vessel for processing solids contg. liquids

PACINI A 23.04.75-IT-009406

(10.08.79) C12b

PACI/ ★ D16 B/50 ★IT 1033-813
 Vinasse removal system from fermentation vat

PACINI A 07.07.75-IT-009478

(10.08.79) C12g

HAKK- ★ D16 89997B/50 ★J5 4090-112
 1-Deoxy-d-erythro-heptulose and its 2,7-anhydro deriv. - prepd. by culture of *Bacillus pumilus*

HAKKO KENKYUSHO (TAKE) 26.12.77-JA-160795

B03 (17.07.79) A61k-31/70 C07h-03/02 C12d-09/20 C12d-13

1-Deoxy-D-erythro-heptulose and its 2,7-anhydro deriv. are new. Prepn. comprises culturing microorganism of *Bacillus* genus having 1-deoxy-D-arthroheptulose-producing power into culture medium and opt. treating the prod.

with acid. As fungi in this invention may be cited, e.g. *Bacillus pumilus* No. 14 (FERM-P 4330, IFO 13770) or *Bacillus pumilus* No. 15 (FERM-P 4330, IFO 13771) etc. 26.12.77 as 160795 (11pp69)

KIRI ★ D16 90052B/50 ★ J5 4140-711
Anticancer agent contg. KS substance - prepd. by cultivating e.g. *Daedalea dickinsii* or *Lentinus edodes* microorganism
KIRIN BREWERY KK 23.03.78-JA-032384
B04 (01.11.79) A61k-35/84 A61k-37/02 C12d-09/04

The anticancer agent contains, as active ingredient, a KS substance having the following physiochemical properties which is an amorphous powder having (1) elementary analysis $18.6 \pm 2.3\%$ C; $2.8 \pm 0.4\%$ H, $1.3 \pm 0.2\%$ N and $10.5 \pm 1.3\%$ ash., (2) mol. wt. 70,000 (Viogel P-series column and Amicon ultrafiltration), (3) decompsn. pt. $\geq 300^\circ\text{C}$, (4) IR spectrum (cm^{-1}) 3350 (valley), 2900 (valley) 1640 (valley), 1480 (small peak), 1400 (valley), 1320 (sharp valley), 1240 (small valley), 1070 (valley), 1030 (valley) and 560 (valley), (5) solubility in water and insolubility in ethanol, n-butanol, acetone and hexane and (6) an aq. soln. pH of 6-7. When used as a 1% aq. soln. it gives a positive result in anthrone and carbazole sulphate colour reactions and a negative result in Elson-Morgan reaction.

Its amino acid compsn. (g/100g) is alginine 0.4 ± 0.05 , lysine 0.5 ± 0.06 , histidine 0.4 ± 0.05 , phenylalanine 0.2 ± 0.03 , leucine 0.3 ± 0.04 , isoleucine 0.3 ± 0.04 , methionine 0.1 ± 0.01 , valine 0.4 ± 0.05 , alanine 0.6 ± 0.08 , glycine 0.8 ± 0.1 , proline 0.6 ± 0.08 , glutamic acid 1.2 ± 0.2 , serine $a \pm 0.1$, threonine 0.8 ± 0.1 , aspartic acid 1 ± 0.1 , tryptophane 0.06 ± 0.01 and cystine 0.3 ± 0.04 . Its sugar compsn. (gas chromatography) is glucose 57.6%, galactose 5.05%, mannose $26 \pm 3\%$, xylose $8 \pm 0.8\%$ and arabinose $5 \pm 0.3\%$.

Although the KS substance does not directly attack cancer cells, it increases the protective functions of living body and indirectly inhibits proliferation of cancer cells.

It is prepd. by cultivating e.g. *Daedalea dickinsii* KSDD 6 (FERM-P No. 3933) or *Lentinus edodes* KSLE 7 (FERM-P No. 3994). 23.3.78 as 032384 (12pp140)

KIRI ★ D16 90081B/50 ★ J5 4140-788
Anticancer monocytes prodn. - by sepg. monocytes from blood and cultivating in medium contg. monocyte-activator originated from Basidiomycetes

KIRIN BREWERY KK 18.03.78-JA-031362
B04 (01.11.79) A61k-35/66 C12d-09 C12k-09

Prepn. of anticancer monocytes comprises sepg. monocytes from blood and cultivating the monocytes in a medium contg. a monocyte-activating agent originated from Basidiomycetes to impart anticancer activity to the monocytes.

Immediately after activation, the activated monocytes can be contacted with cancer cells to cease abnormal increase of cancer cells. The monocyte-activating agent pref. includes KS or KS-2-A originated from *Daedalea dickinsii* KSDD 6 (FERM-P No. 3993) or *Lentinus edodes* KSLE 7 (FERM-P No. 3994). 18.3.78 ks 031362 (13pp140)

JIKK- ★ D16 90082B/50 ★ J5 4140-789
Cultivation of tumour cells producing colony stimulating factor - by first culturing in serum good for cell multiplication, and then a serum bad for multiplication, to give highly multiplying cells

JIKKEN DOBUTSU CHUO 22.04.78-JA-047177
B04 (01.11.79) A61k-35/12 C12d-13 C12k-09

Cultivation of tumour cells producing colony stimulating factor (CSF) comprises first cultivating tumour cells producing CSF effective for human (hCSF) in a medium contg. a serum good for cell multiplication and then keeping the cultivated cells in a medium contg. a serum bad for cell multiplication to bring about transformation into highly multiplying cells. The resulting cells have high capability to produce hCSF and their properties do not change by successive cultivation.

In an example, human submaxillary cancer tissue (LJC-I-JCK) (300 mg) which had been transplanted to a nude mouse and multiplied was isolated, cut into pieces and treated with trypsin. The tissue was cultivated in an F-10 (RTM) medium (16 ml) contg. 10% bovine fetus serum, penicilline (100 $\mu\text{g}/\text{ml}$) and streptomycin (100 $\mu\text{g}/\text{ml}$) at 37°

C for 3 days in 5% CO_2 -95% air. The resulting cell sheet was treated with trypsin and EDTA to prepare a cell float. This was added to an F-10 medium contg. penicilline (100 $\mu\text{g}/\text{ml}$), streptomycin (100 $\mu\text{g}/\text{ml}$) and 10% bovine serum which is bad for cell multiplication and maintained at 37°C in 5% CO_2 -95% air. Growth was poor, but while changing the medium twice a week transformation suddenly took place after 6 months. Thereafter, the cells began vigorous multiplication (double in 18-20 hrs.). 22.4.78 as 047177 (4pp140)

MITU ★ D16 90083B/50 ★ J5 4140-791
Prod. of immobilised enzyme - comprising water insol. membrane contg. dispersed enzyme and water soluble PVA or PVP in polymer matrix

MITSUBISHI CHEM IND KK 24.04.78-JA-048489
A96 B04 (A14) (01.11.79) C07g-07/02 C12d-13/10

A composite is prepd. by supporting water insol. membrane of thickness of ≤ 30 microns on an inert solid substrate. In the membrane are dispersed enzyme and a water soluble polymer selected from polyvinyl pyrrolidone having mol. wt. ≥ 100000 or PVA having polymerisation degree ≥ 1000 and saponification degree $\geq 75\%$ in three dimensional matrix consisting of polymer of polyfunctional cpd. having mol. wt. ≤ 450 and having ≥ 2 photo-polymerisable functional gps.

The enzyme includes glucose oxidase, L-amino acid oxidase, lactase, etc. An amt. of the polyfunctional cpd. to form the matrix to be used is 10-300 wt. % relative to the water soluble polymer. The polyfunctional cpd. includes acrylic acid diamide, polyvalent alcohol ester of (meth) acrylic acid, etc. 24.4.78 as 048489 (6pp22)

MOMI ★ D16 90084B/50 ★ J5 4140-791
Polyphenol oxidase prodn. - by culture of *Alternaria* microorganism, pref. under aerobic conditions

MORINAGA & CO LTD 24.04.78-JA-048511
(01.11.79) C12d-13/10

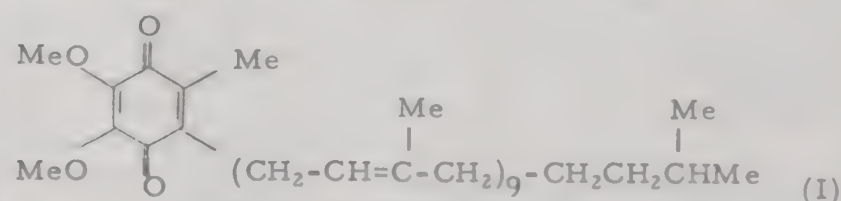
Microorganism which belongs to the genus *Alternaria* and can produce polyphenol oxidase is cultivated and polyphenol oxidase thus produced is recovered from the culture broth. Polyphenol oxidase can be obtd. in high purity state at high yield. The microorganism usable includes *Alternaria tenuis* A-2 (FERM No. 332) whose characteristics are disclosed in Japanese Publication No. 16636.

The cultivation takes place in medium contg. carbon source, nitrogen source, inorganic salt, etc. at pH of about 4.7 at about 30°C under aerobic conditions for about 2-5 days. The cultured soln. is filtered and the filtrate is subjected to salting-out, pptn., dialysis, ultra-filtration, gel chromatography, ion exchange chromatography and other purificn. procedure to give purified polyphenol oxidase. The resulting oxidase can act upon only polyphenols and not act upon monophenols. 24.4.78 as 048511 (6pp22)

FUJI ★ D16 90085B/50 ★ J5 4140-793
Di:hydro-coenzyme/Q 10 prodn. - for electron transfer in peripheral system, by culturing suitable *Cephalosporium* strain

FUJISAWA PHARM KK 21.04.78-JA-048156
B05 (01.11.79) C12d-13

Prod. of dihydrocoenzyme Q_{10} of formula (I) comprises culturing a suitable *Cephalosporium* strain in a medium, and recovering (I) from the culture broth.



A suitable strain is *Cephalosporium acremonium* ATCC 11550, which may be cultured in a submerged culture medium (synthetic, semi synthetic or natural) contg. C source such as a saccharide (glucose, mannose, sucrose, molasses, starch, liquefied starch) or alcohol (MeOH, EtOH, glycerin), N source such as meat extract, casein hydrolysate, peptone, gluten meal, corn meal, cotton seed cake, soybean meal, corn steep liquor, dry yeast, ammonium

alts (ammonium phosphate, ammonium sulphate), nitrates (ammonium nitrate) or urea, inorganic salts including phosphates, carbonates and chlorides such as Na_2HPO_4 , H_2PO_4 , CaCO_3 , FeSO_4 , $\text{Fe}_2(\text{SO}_4)_3$, MgSO_4 , CuSO_4 , ZnSO_4 , InCl_2 , MgCl_2 , etc., and traces of nutrient source (e.g. vitamins, amino acids). 21.4.78 as 048156 (4pp52)

KYOWA ★ D16 90086B/50 ★ J5 4140-794
Antibiotic G-52 prodn. - by fermentation of *Micromonospora sagamiensis* strain

KYOWA HAKKO KOGYO KK 24.04.78-JA-047821
B04 (01.11.79) C12d-09/14

Prepn. of antibiotic G-52 comprises culturing a *Micromonospora sagamiensis* strain as a nutritive.

Antibiotic G-52 is known to be produced by a strain of *Micromonospora dionensis* (J49055895) and to be effective against both of Gram positive and negative bacteria. In the prior art, however, the yield of G-52 is poor. The strain of *Micromonospora sagamiensis* produces G-52 in an industrially acceptable yield.

Example of the strains include *Micromonospora sagamiensis* KG-52 (FERM-P 4456, NRRL 11290) and its mutant generated by irradiation of UV, X ray or Co or by treatment with a mutation inducer, which may be cultured in a conventional medium used in culture of actinomycetes containing carbon source, nitrogen source and mineral. 24.4.78 as 047821 (4pp52)

KOWA ★ D16 90186B/50 ★ J5 4141-701
Antibiotic KA-7038, I, KA-7038 II and KA-7038 III - active against *Staphylococcus aureus* 209p, *Bacillus subtilis* and *Cereus* etc.

KOWA KK 28.03.78-JA-034972
B03 (05.11.79) A61k-35/74 C07g-11 C12d-09/14 C12k-03

Antibiotic KA-7038 comprises KA-7038 I, KA-7038 II and KA-7038 III, having the following properties. KA-7038 I: white powder, molecular formula $\text{C}_{17}\text{H}_{35}\text{O}_5\text{N}_5$, Mass: 389 (M^+), m.pt. 83-90°C, $[\alpha]_D^{25} + 120.5^\circ$ ($c = 1$, H_2O), UV: end absorption at 220-360 nm; readily soluble in water, MeOH, moderately soluble in EtOH, slightly soluble in Me_2CO , insoluble in CHCl_3 , EtOAc, Et₂O, hexane, petroleum ether; positive to Ryden-Smith and ninhydrin reactions, negative to Sakaguchi, FeCl_3 and Fehling reactions; stable at pH 2.0-8.0; NMR (as the HCl salt): δ D_2O (ppm) 1.75 (3H), 3.17 (3H), 3.45 (3H), 4.06 (2H), 5.32 (1H), $a, \tau = 3.5$ Hz).

KA-7038 II: white powder, $\text{C}_{13}\text{H}_{28}\text{O}_4\text{N}_4$; Mass: 304 (M^+), m.pt. 85-102°C, $[\alpha]_D^{25} + 61^\circ$ ($c = 1$, H_2O), UV: end absorption at 220-360 nm, very soluble in water, readily soluble in MeOH, moderately soluble in EtOH, slightly soluble in Me_2CO , insoluble in CHCl_3 , EtOAc, Et₂O, hexane, petroleum ether; positive to ninhydrin and Ryden-Smith reactions, negative to Sakaguchi, FeCl_3 and Fehling reactions; stable at pH 2.0-9.0; NMR (as the HCl salt) δ D_2O (ppm) 1.83 (3H), 5.84 (1H, $a, \tau = 3.5$ Hz). KA-7038 III: white powder, $\text{C}_{15}\text{H}_{32}\text{O}_4\text{N}_4$, Mol. wt. 332, mp. 74-83°C, $[\alpha]_D^{25} + 88^\circ$ ($c = 0.5$, H_2O) UV: end absorption at 220-380 nm. Solubility the same as above; Colour reaction: the same as above; stable at pH 2.0-9.0; NMR (as the HCl salt): δ D_2O (ppm) 2.73 (3H), 2.83 (3H), 3.46 (3H), 5.43 (1H, $d, \tau = 3.5$ Hz).

MIC (mcg/ml) to organisms are *Staphylococcus aureus* 209P, KA-7038 I 1.5 (mcg/ml), II 50, III 25; *S. smith*, I 0.4, II 25, III 6; *Bacillus subtilis*, I 0.2, II 6, III 12; *B. cereus* I 3, II 100, III 100; *B. anthracis*, I 0.4, II 3, III 6; *Streptococcus faecalis*, I > 100, II > 100, III > 100; *E. coli* NIHJ, I 6, II 100, III 100; *E. coli* ML141OR-101 (gentamicin-tobramycin-kanamycin resistant strain), I 12, II > 100, III > 100; *Proteus vulgaris*, I 6, II 100, III 100; *Klebsiella pneumoniae*, I 6, II 100, III > 100; *Pseudomonas aeruginosa* Shibata, I 6, II 100, III > 100; *Serratia*, I 6, II > 100, III 50; *Mycobacterium smegmatis* ATCC 607, I 3, II > 100, III > 100. Acute toxicity of KA-7038 I, > 100 mg/kg (i.v.), > 400 mg/kg (i.p.) in mouse.

KA-7038 is produced by *Streptomyces* sp. KC-7038 (FERM-P 4388) or its mutants. 28.3.78 as 034972 (10pp)

ANY ★ D16 90187B/50 ★ J5 4141-702
Antibiotic malioxamycin - prepd. by culture of *Streptomyces lydicus* SANKYO KK 20.04.78-JA-047113
B04 (05.11.79) A01n-09 A61k-35/74 C07g-11 C12d-09/14

Malioxamycin having the following properties is new: (1) appearance: colourless needles, (2) m.pt. 158-160°C (with foaming), (3) $[\alpha]_D^{25} = +73.4^\circ$ ($c = 1.21$, water), (4) elementary analysis: found: C 40.36%, H 6.79%, N 10.41%, calculated for $\text{C}_9\text{H}_{18}\text{N}_2\text{O}_6 \cdot \text{H}_2\text{O}$: C 40.60%, H 6.81%, N 10.52%, (5) mol. wt. 348; (6) molecular formula: $\text{C}_9\text{H}_{16}\text{N}_2\text{O}_6$, (7) UV spectrum: end absorption (200 $\mu\text{g}/\text{ml}$ in MeOH), (8) $\text{In}(\text{KBr})(\text{Fig. 1}) \text{ cm}^{-1}$: 3500, 1682, 1625, 1590, 1585, 1510, 1415, 1370, 1320, 1278, 1250, 1201, 1150, 1078, 1053, 1010, 978, 805, (9) NMR in $\text{DMSO}-d_6$: 0.92, (6H), 1.94 (1H), 2.62 (2H), 3.41 (1H), 4.30 (1H) ppm. (10) solubility soluble in water, MeOH, EtOH, Me_2CO , DMSO, DMFA; insoluble in EtOAc, CHCl_3 , Et₂O, PhH, hexane, petroleum ether. (11) colour reaction: positive to ninhydrin and FeCl_3 reactions. (12) TLC: Rf on cellulose 6065 (Eastman-Kodak Co.) = 0.46 ($n\text{-PrOH-PyAcOH-H}_2\text{O} = 15:10:3:10$), 0.47 ($n\text{-BuOH-AcOH-H}_2\text{O} = 3:1:1$).

Malioxamycin has the following antimicrobial spectrum. MIC ($\mu\text{g}/\text{ml}$): *Staphylococcus aureus* FDA 209P JC-1, > 100; *Bacillus subtilis* PCI219, > 100; *Escherichia coli* NIHG JC-2, 100; *E. coli* B, > 100; *E. coli* 665 (resistant strain), 100; *E. coli* SAAK 72375 (resistant strain), 50; *Klebsiella pneumoniae* 846 (resistant strain), 100; *Serratia marcescens* SANK 73060, > 100; *Pseudomonas aeruginosa* 1046, > 100. Toxicity: no unusual condition observed in mouse at a dose of 100 mg/kg (i.v.) over 14 days.

Malioxamycin is produced from *Streptomyces lydicus* No. 15748 (FERM-P 4481), which is isolated from the soil of Biwako lake, Japan. This may be cultured on a conventional medium used in culture of microorganisms of actinomycetes under shaking or aeration and agitation at 20-35°C, pref. 28°C for 7-9 days. 20.4.78 as 047113 (8pp52)

KYOWA ★ D16 90188B/50 ★ J5 4141-703
Antimicrobial antitumour substance DC-14 - produced by aerobic culture of *Streptomyces olivaceus* KY 11459

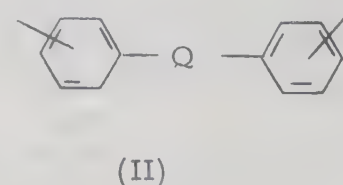
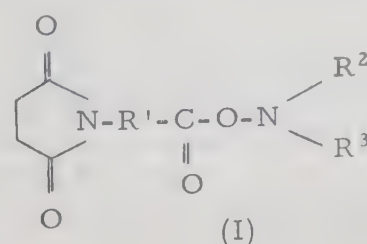
KYOWA HAKKO KOGYO KK 24.04.78-JA-047819
B04 (05.11.79) A61k-35/74 C07g-11 C12d-09/14

Substance DC-14 the following physical and chemical properties: (a) slightly basic material, (b) elementary analysis: C 65.11%, H 6.24%, N 3.49%; (c) molecular wt. 802, (d) molecular formula: $\text{C}_{43}\text{H}_{50}\text{N}_2\text{O}_{13}$; (e) m.pt. 214-125°C (dec)(sic); (f) UV: λ_{max} 243 nm, 265-270 nm (shoulder) and 290-295 nm (shoulder); (g) IR: specified; (h) PMR (CDCl_3): δ (ppm) 7.98, 7.74, 6.46, 5.43, 4.99, 4.05-2.87 (many peaks), 2.42, 32.32, 2.26, 1.95, 1.47, 1.42, 1.40, 1.26, 0.87, 0.72; (i) TLC (silica gel) Rf = 0.22, (developed with EtOH: $\text{Me}_2\text{CO} = 1:1$ (v/v)).

Substance DC-14 exhibits antimicrobial activity and antitumour activity. MIC ($\mu\text{g}/\text{ml}$): *Staphylococcus aureus* ATCC 6538P, 1.0 ($\mu\text{g}/\text{ml}$); *Bacillus subtilis* No. 10707, 1.0; *Klebsiella pneumoniae* ATCC 10031, 8.0; *Escherichia coli* ATCC 26, 32; *Shigella sonnei* ATCC 9290, 60; *Salmonella typhosus* ATCC 9992, 120. Acute toxicity LD_{50} 8 mg/kg. The antitumour activity was confirmed by therapeutic effect to sarcoma 180 ascites tumour and lymphocytic leukaemia P-388. 24.4.78 as 047819 (6pp52)

ASAHI ★ D16 90225B/50 ★ J5 4141-762
O-(Maleimidoacyl) hydroxylamine derivs. - useful as reagents for coupling sulphhydryl cpds. with amino cpds., e.g. in immobilising enzymes

ASAHI CHEMICAL IND KK 20.04.78-JA-046826
B03 C02 E13 (05.11.79) C07d-207/44 C07g-07/02 C12d-13/10 C12k-01
O-(Maleimidoacyl)hydroxylamine derivs. of formula (I) are new (where R' = bivalent aliphatic (esp. alkylene), ali-



cyclic (esp. cycloalkylene) or aromatic-aliphatic (esp. aralkylene such as phenylene, naphthylene, pyridylene)

hydrocarbyl or bivalent aromatic ring-contg. residue; R^4 , R^3 = aliphatic, alicyclic, aromatic-aliphatic hydrocarbyl. R^1 is esp. of formula (I) where Q = single bond, -O-, -S-, -S(O)-, -S(O)₂-, -CH₂-, -C(O)-, -C(O)NH- or -NH-.

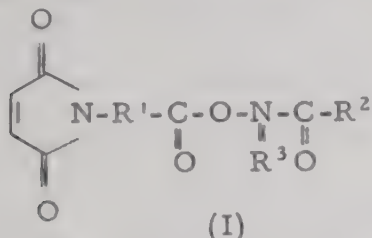
(I) is useful as reagent for effectively combining sulphhydryl gp.-contg. cpd. with amino gp.-contg. cpd. and is applicable in medical field for prodn. of immobilised enzyme, carrier for affinity chromatography, combining substances in enzyme immunoassay, and agrochemical intermediate. 20.4.78 as 046826 (10pp38)

ASAH ★ D16 90226B/50 ★ J5 4141-763
O-(Maleimidoacyl)-hydroxamic acid deriv. - useful for prodn. of immobilised enzyme, carrier for affinity chromatography in enzyme immunoassay and as agrochemical intermediate

ASAHI CHEMICAL IND KK 22.04.78-JA-048051

B03 C02 E13 (05.11.79) C07d-207/44 C07g-07/02 C12d-13/10 C12k-01

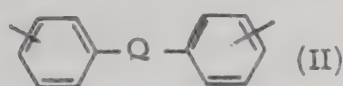
O-(Maleimidoacyl)hydroxamic acid derivs. of formula (I) are new.



(I)

In (I) R^1 is bivalent aliphatic, alicyclic or araliphatic hydrocarbyl or bivalent aromatic ring-contg. gp. (esp. alkylene, cycloalkylene, aralkylene such as phenylene, naphthylene or pyridylene); R^2 is aliphatic

or aromatic hydrocarbyl; R^3 is H or aliphatic or aromatic hydrocarbyl. Specif. R_1 is of formula (II)



(II)

(where Q is a single bond, O, S, SO, SO₂, CH₂, CO, CO-NH or NH).

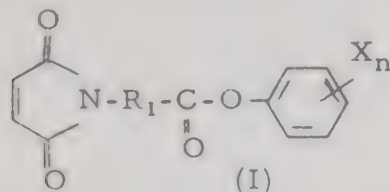
(I) is useful as reagent for combining sulphhydryl gp.-contg. cpd. with amino gp.-contg. cpd. and is applicable in medical field for prodn. of immobilised enzyme, carrier for affinity chromatography, combining substances in enzyme immunoassay, and agrochemical intermediate. 22.4.78 as 048051 (10pp38)

ASAH ★ D16 90228B/50 ★ J5 4141-765
Maleimido-acyloxy-phenyl derivs. - useful as bonding reagents for sulphhydryl-contg. cpds. and amino gp.-contg. cpds.

ASAHI CHEMICAL IND KK 25.04.78-JA-049015

B03 C02 E13 (05.11.79) C07d-207/44 C07g-07/02 C12d-13/10 C12k-01

Maleimidoacyloxyphenyl derivs. of formula (I) are new (where R^1 = bivalent aliphatic, alicyclic or araliphatic hy-



(I)



(II)

drocarbyl or bivalent aromatic ring-contg. gp. (esp. alkylene, cycloalkylene, aralkylene such as phenylene, naphthylene or pyridylene of formula (II)); n = 1-5; ≥ 1 X = halogen (esp. Cl), hydroxy or carbamoyl and the other(s) are H, lower alkyl or lower alkoxy; Q is single bond, -O-, -S-, -S(O)-, -S(O)₂-, -CH₂-, -C(O)-, -C(O)NH- or -NH-.

(I) is useful as reagent for effectively combining sulphhydryl gp.-contg. cpd. with amino gp.-contg. cpd. and is applicable in medical field for prodn. of immobilised enzyme, carrier for affinity chromatography, combining substances in enzyme immunoassay and agrochemical intermediate. 25.4.78 as 049015 (10pp38)

DIAS ★ D16 B/50 ★ J5 4142-183
Coagulation of chemically and or biologically active material

DIAMOND SHAMROCK CORP 06.04.78-FR-010181

B04 J04 (06.11.79)

5.1.79 as 041518.

ZAID

D16

62171Y/35 = J7 9038-099

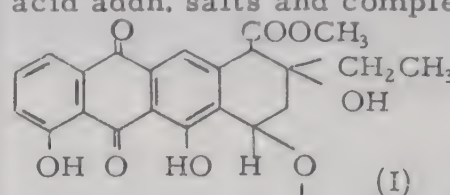
Carcinostatic aclacinomycin A and -B - prepd. by cultivation of *Streptomyces galilaeus* ATCC 31133

MICROBIAL CHEM RES 14.01.76-JA-003397

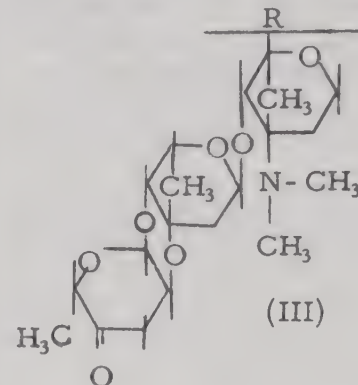
B03 C02 (19.11.79) *J52087-159 A61k-31/71 +C07h-15/24

C12d-09/14

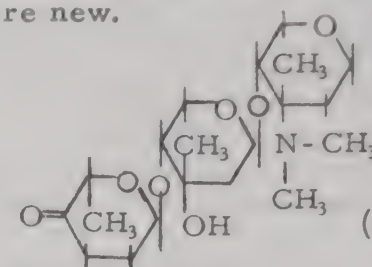
Anthracycline glucosides of formula (I) and their nontoxic acid addn. salts and complexes are new.



(I)



(III)



(II)

In the formula, R is (II) or (III). Cpds. (I) are prepd. by conventional cultivation of *Streptomyces galilaeus* MA144-M1 strain (FERM-P No. 2455, ATCC 31133).

Cpds. (I) exhibit potent carcinostatic and antibacterial activities to Gram-positive bacteria and *Candida* accomp-

-anied with slight toxicity, and are useful as carcinostatic and antibacterial agents effective against tuberculosis, diphtheria, pneumonia, staphylococcosis, streptococcosis, tetanus and candida, and exhibit antitumour activity to P388 ascites, 6C3HED/OG sarcoma and L1210 leukemia in mice at LD₅₀ 33.7 and 16.4 mg/kg in vein. 14.1.76 as 003397, C07h-15/24, A61k-31/71, C12d-9/14 (19.11.79) MICROBIAL CHEM. RES. (20pp)(J52087159)

ZAID

D16

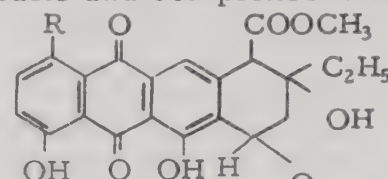
55824Y/32 = J7 9038-100

Anthracyclin glycoside antibiotics MA 144-M1 and -M2 - useful against tumours, esp. leukaemia, and Gram positive bacteria

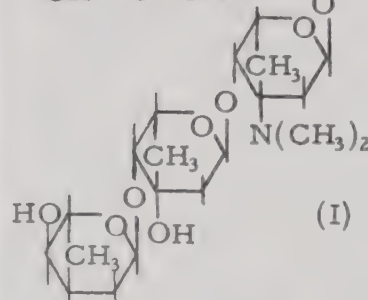
ZH BISEIBUTSU KAGAKU KEN 07.04.76-JA-039688

B03 (19.11.79) *BE-853-203 A61k-31/71 C07h-15/24 C12d-09/14

Glycosides of formula (I), their non-toxic acid addition salts and complexes with DNA are new (R = H or OH).



(I)



(I)

They are prepd. e. g. by aerobic cultivation of *Streptomyces galilaeus* MA144-M (ATCC 31133).

(I) are low-toxicity anti-tumour agents esp. for control of leukaemia. They are also active against Gram-positive bacteria. LD₅₀ (intraperitoneal) in the mouse is 35 mg/kg, (R=H) and 23.5 mg/kg (I, R=OH).

7.4.76 as 039688, C07h-15/24, A61k-31/71, C12d-9/14 (19.11.79) ZAIDANHOJIN BISE (18pp) (J5 2136159)

ZAID

D16

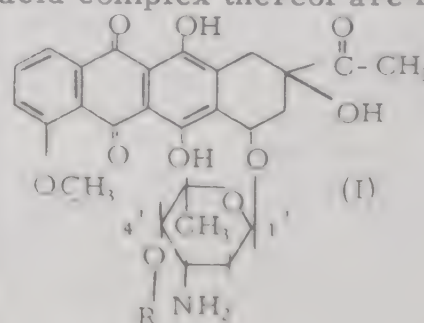
07366A/04 = J7 9038-101

Anthracycline glycoside having anti-neoplastic and antibacterial action - prepd. by culturing a streptomyces microorganism

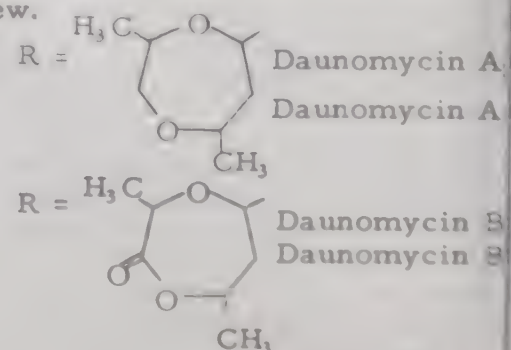
ZH BISEIBUTSU KAGAKU KEN 11.05.76-JA-054167

B03 (19.11.79) *J52148-063 A61k-31/71 C07h-15/24 C12d-09/18

Anthracycline glycoside (I), and acid addn. salt and nuclei acid complex thereof are new.



(I)



Daunomycin A

Daunomycin A

Daunomycin B

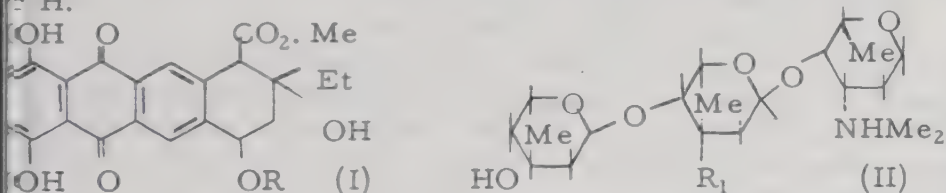
Daunomycin B

Process for prepg. (I) comprises aerobically culturing daunomycin-producing *Streptomyces* (pref. *St. peuceticus* subsp. *carneus* ATCC 21354, *St. coeruleorubidus* ATCC 740 or more pref. *St. coeruleorubidus* ME 130-A4 FERM 40) in a medium contg. carbon- and nitrogen-sources, organic components and minor ingredients and recovering daunomycin accumulated in the culture and further treating the resultant daunomycin with extraction, chromatography and crystallisation in the conventional manner to give daunomycins A₁, A₂, B₁ and B₂. Gram-positive bacterial infection remedy and anti-neoplastic agent consisting of, as the active ingredient, cpds. claimed in (1-3).

The anthracycline glycoside (I) is novel antineoplastic and antibacterial antibiotic produced from culture of novel strain, *Streptomyces coeruleorubidus* ME 130-A 4. Cpd. (I) exhibits remarkable life prolongation in leukemia mice and excellent MIC to *Staph. aureus*, *B. subtilis*, *B. cereus*, *S. megaterium*, *Sarcina lutea*, *Micrococcus flavus*, *Corneb. ovis*, *Ps. fluorescens*, *Proteus morganii*, *Myco-bacterium magermatis*, *Candida albicans* and *C. tropicalis*. 11. 5. 76 as 54167, C07h-15/24, A61k-31/71, C12d-9/18 (19. 11. 79) ZH BISEIBUTSU KAGAKUKEN (21pp38) (J52148063)

DAID **D16** **14004A/08 = J7 9038-103**
Antitumour rhodirubins A and B - also with antibacterial activity, prepd. esp. from *Streptomyces* sp ME 505-HEI
ZH BISEIBUTSU KAGAKU KEN 16.08.76-JA-098113
B03 (B04) (19.11.79) *BE-857-840 A61k-31/71 C07h-15/24 C12d-09/18

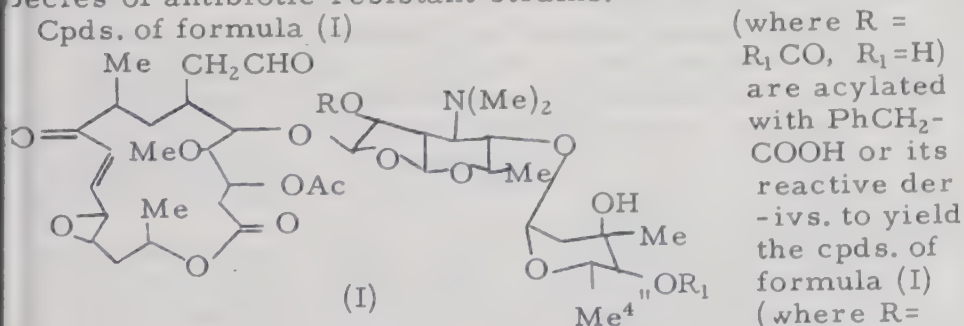
Anthracycline glycosides of formula (I) are new together with their acid-addn. salts and complexes with deoxyribonucleic acid (DNA). In (I) R is gp. of formula (II), R₁ is OH or H.



The cpds. rhodirubin A (R₁ is OH) and B (R₁ is H) and their hydrochlorides are specif. claimed. The cpds. are antitumour antibiotics, also with antibacterial activity against gram pos. organisms, with a high activity against malignant tumours and ascites, and a low toxicity. 16. 8. 76 as 098113 C07h-15/24, A61k-31/71, C12d-9/18 (19. 11. 79) Z AidanH-JIN BISEIBU (16pp288) (J5 3023961)

MAC **D16** **17488Y/10 = J7 9038-113**
Macrolide antibiotic derivs. - e.g. deacyl-phenylacetyl-deltamycin
SANRAKU OCEAN (AJIN) 19.07.75-JA-088520
B02 (19.11.79) *J52012-185 A61k-31/71 C07h-17/08

Novel basic macrolide antibiotic derivs. in which the 4''-ester gp. of mycarose is practically not hydrolysed in the living body, are described which are effective against various species of antibiotic resistant strains.



The starting cpds. may be prepd. from cpds. of formula (I) (where R = R₁ = H) on selective acylation with COOH or its reactive derivs. in a solvent such as dry acetone, benzene, ether, etc. without using basic solvents. The cpds. (I) (R=R₁=H) may be prepd. from deltamycins A₁-A₄ produced by *Streptomyces deltae* P3409 (FERM-P No. 2504) on action of an enzyme produced by *Corynespora casicola* IFO-6724 11. 9. 75 as 088520, C07h-17/08, A61k-31/71 (19. 11. 79) SANRAKU-OCEAN CO. (10pp52) (J5 2012185)

MITK ★ **D16** **90509B/50 ★ J7 9038-198**
Fermentation prod. or cell body prepn. from microorganism - adjusting amt. of air in vessel to maintain optimum cell body concn.
MITSUI TOATSU CHEM INC 20.12.68-JA-093134
P41 (19.11.79) B03d-01/02 C12b-01

During or after fermentation, amt. of air to be introduced into the vessel is adjusted to 0.5-1000 cm/min. linear velocity, whereby part of the cell body in the vessel is floated on the upper portion to cause difference in concn. of cell body in the vessel, and a part of the upper cell body or lower cell body is taken out of the vessel. Culture medium corresp. to amt. of cell body taken out is supplied to the vessel, whereby the optimum cell body concn. can be kept during the fermentation. In an example yeast was cultured in a vessel of 400 liters. Then air was introduced at linear velocity of 10 cm/min. for 120 mins. The floated cell body was taken out of the vessel, and ~30% of culture medium was supplied to the vessel. 20.12.68 as 093134, C12b-1/00, B03d-1/02 (19. 11. 79) MITSUI TOATSU CHEM. INC. (4pp22)

SUMO ★ **D16** **90528B/50 ★ J7 9038-535**
Solid granular ink prepn. - using pullulan as protective colloid for the carbon black

SUMITOMO CHEMICAL KK (HAYB KANA) 10.07.76-JA-082255
A97 G02 (21.11.79) C09d-11

In the prepn. of solid granular ink, pullulan is used as protective colloid for the carbon black, which is the main component of the ink. The pullulan is highly preservative in comparison with the convention colloid, such as glue.

The pullulan is obtd. by cultivating a microorganism belonging to the genus *Pullularia*. 10. 7. 76 as 082255, C09d-11/00 (21. 11. 79) SUMITOMO CHEM. KK, HAYASHIBARA BIOCHEM. (2pp22) (J5 3008222)

PUNT= ★ **D16** **90593B/50 ★ SU -653-311**
Biological maceration of bast fibre-contg. plant tissue - using liquid squeezed out from macerated mass prior to ultrasonic treatment as bacterial preparation for next batch
PUNTUKAS PLAN DES (BAST=) 21.04.76-SU-352630
F01 (28.03.79) D01c-01/04

Bacterial prepn. for the biological maceration of bast fibre-contg. plants consists of a liquid squeezed out (by centrifuging) from the previously macerated batch. This process is intensified by subjecting the macerated mass, prior to centrifuging, to ultrasonic vibrations (36-60 kHz) and carrying out the centrifuging at a sepn. factor of 4,000-10,000.

It is pref. to use a pulp obtd. by centrifuging the squeezing-washing maceration liquid at a sepn. factor of 3,000-5,000.

Budris R. P. P., Shapiro A. M., Tregub L. I. et al.
Bul. 11/25. 3. 79 21. 4. 76 as 352630 (6pp70)

BEEC **D16** **46071W/28 = SU -654-170**
Penicillin acylase/methacrylic polymer complex - stable mechanically and biologically, used in prepn. of high yields of 6-APA from penicillins

BEECHAM GROUP LTD 28.12.73-GB-059978
A14 B02 (28.03.79) *BE-823-782 A61k-31/43 C07d-499/10

Novel water-insoluble enzyme complex comprises a penicillin acylase adsorbed on a water-insoluble polymeric substrate cross-linked with glutaraldehyde, glyoxal or formaldehyde, the novelty being that the substrate is a polymer or copolymer of methacrylic acid. Process for preparing 6-APA comprises contacting an aq. soln. (pH 6.0-9.0) of benzyl penicillin, phenoxypenicillin or their salts with a complex as in (A).

Complexes are stable, and no concurrent neutralisation is required in use.

Preferred substrates are copolymers with divinyl benzene and opt. benzenesulphonyl gp. contg. monomers, esp. "Amberlite IRC-50" and "Zeokarb 227" (RTM). Preferred enzyme is from *E. coli* NCIB 8734. Complexes are prepared by adsorbing the enzyme on the non-crosslinked substrate followed by crosslinking.

Savage, T. A., Powell, L. W. Bul. 11/25. 3. 79. 27.12.74 as 096409 (8pp)

MOSU ★ D16 90703B/50 ★SU -654-620
More active immobilised enzymes prepn. - by graft copolymerisation of a polymeric carrier with a monomeric allylamine using ionising radiation in presence of phosphoric acid
MOSCOW LOMONOSOV UNIV 06.12.76-SU-426265
A97 B05 (A18) (30.03.79) C07g-07/02

Immobilized enzymes (I) are widely used in fine organic synthesis, medicine and the food industry. Their prepn. involves graft copolymerisation of a polymeric carrier with a monomer under the action of the ionising irradiation, followed by treatment of the resultant graft copolymer with an activator and a soln. of an enzyme.

The process features use of an allylamine (II) as a monomer, a glutaraldehyde (III) as an activator, the process being carried out in the presence of phosphoric acid (IV) being equal 1:1.0-10. This simplifies the process and increases the activity of (I).

The reaction is generally carried out in bulk, or in polar solvents (water, alcohols, ketones, ethers, esters and other) under the action of ionising irradiation, e.g. γ -radiation (the total irradiation dose for the graft copolymerisation equal $2 \cdot 10^6$ - $5 \cdot 10^6$ rad)- Polymers for grafting (II) include polyethylene, polypropylene, polystyrene, polymers of the diene series etc. The homopolymer is washed away from the graft copolymer with a 5-50% aq. soln. of an inorganic acid, e.g. HCl, H_2SO_4 , H_3PO_4 , and others. Immobilisation of the enzyme on the graft copolymer treated with (III) is carried out by incubation of the said copolymer in the enzyme soln. at the physiological pH values at 0-50 °C.

Plate N.A., Baluev L.I., Kotova L.E., Bul. 12/ 30.3.79 6.12.76 as 426265 (4pp48)

ODFO= ★ D16 90752B/50 ★SU -654-673
Microbiological culture growing unit - has zones sepd. by solid partitions with overflow pipes and heat exchangers attached to aerators, used in food, pharmaceutical etc. mfr.

ODESS FOOD IND INST (ODFO=) 22.12.76-SU-432811
(30.03.79) C12b-01/10

The biomass yield is increased and microbial growth is accelerated using culture mixt. with zones separated by inclined solid partitions using overflow pipes for the culture fluid.

The aerators are in the form of chamber with a mesh tray and inclined partition, while the heat exchangers are made as perforated trays with coils attached to the aerators. The nutrient is fed by nozzles above the trays, and the zones of growth and of final utilization are linked by pipes and injection of the thickening zone.

Sherstobitov V.V., Golivets G.I., Mikhailenko G.G. et al. Bul. 12/30.3.79 22.12.76 as 432811 (4pp89)

LENL ★ D16 90753B/50 ★SU -654-679
Animal feed yeast culture medium - contg. cellulose sulphate prodn. waste water purifcn. slime, oxidate and vegetable hydrolysate

LENINGRAD FORESTRY ACAD 01.06.76-SU-367939
C03 (D13) (30.03.79) C12b-03/12 C12c-11/08

The substrate for prodn. of yeast biomass for use as animal feed additive is obtd. by the oxidative decomposition of raw material with subsequent filtration of the resulting oxidate and mixing it with vegetable material hydrolysate. In order to utilise industrial waste materials for yeast growing cellulose sulphate prodn. waste water biological and chemical purifcn. slime is used as starting material. The slime is thermally treated for 30 mins. at 85-90 °C and pH2 prior to oxidation decompn., filtration, mixing with hydrolysate etc.

The oxidn. is carried out at 220 °C for 3 hrs. using air and adding aq. ammonia.

Popova L.G., Novikova M.N., Yurina A.A. et al. Bul. 12/30.3.79 1.6.76 as 367939 (2pp938)

UYLA= ★ D16 90754B/50 ★SU -654-680
Bacterial and fungal culture growth medium - contg. sodium pyrophosphate as growth stimulation agent, to increase biomass yield

LATV UNIV 22.12.75-SU-300690
(02.04.79) C12b-03/14

Microbial culture medium contains growth stimulation

agent to increase biomass yield. Bacterial and fungal cultures (pref. *Bacillus subtilis*, *Flavobacterium suov-alens*, *Mycobacterium lacticolum*, *Pseudomonas fluores-cous* 310, *Aspergillus niger* and *Actinonycetes aureofaci-ens*) can be cultured under aeration in culture medium contg. C, N and P source cpds. with addn. of 0.01-0.2 vol. % Sodium pyrophosphate as growth stimulant to in-crease the biomass yield.

Vishol M.Ya., Dombrovska E.A., Lishman A.Ya., Bul. 12/30.3.79 22.12.75 as 300690 (5pp938)

ALMI= ★ D16 90755B/50 ★SU -654-681
L-glutamic acid microbiological prodn. - using specified *Corynebacterium glutamicum* strain as high yield producer
AS LATV MICROBIOLOG 27.12.76-SU-435532

B05 E16 (02.04.79) C12d-13/06 C12k-01/02

L-glutamic acid is obtd. in high yield using *Corynebacterium* 541-P/47 microbial strain as producer. The strain is described as new.

The use of the above strain give culture medium contg 60g/l glutamic acid by the end of the 68-70 hrs. ferment-ation period. The culture medium comprises (in wt. %) food grade sugar 8.5-9.5; urea 0.8; magnesium sulphate (I) 0.05; manganese sulphate 0.01; zinc sulphate 0.01; monopotassium phosphate (II) dipotassium phosphate (III) 0.1, molasses (contg. 200 mg/kg biotin (IV) 1.5 and water the rest.

Are R.Yu., Beker M.E., Verner E.S., et al. Bul. 12/ 30.3.79 27.12.76 as 435532 (4pp938)

BIOC= ★ D16 90756B/50 ★SU -654-682
D-glucose-isomerase microbiological prodn. - using specified *Lactobacillus brevis* as producer for high yield high activity prod.

BIOCHEM INST 31.03.77-SU-470106

(D17) (30.03.79) C12d-13/10 C12k-01/02

Lactic flora bacterial strain: *Lactobacillus brevis* -74 is used as D-glucose-isomerase producer to obtain high yields of the enzyme. The enzyme is used as additive to glucose-contg. syrups, in dietary fructose prodn. (used by diabetic patients) and in confectionery industry. The producer strain is described as new.

The strain is cultured in a culture medium compsn. contg. (in g/l): xylose 15; glucose 1; peptone 20; sodium acetate 10; cobalt chloride 0.1, malt extract 2.5% (by vol. tap water 1 l. The culture medium has pH 6.5

The culturing is conducted, using 5% 1 day culture for inoculation, for 18-20 hrs. with aeration. The enzyme can convert 65% of glucose to fructose in 2-3 hrs.

Bezborodov A.M., Vlezlo I.V., Tulevova E.T. et al. Bul. 12/30.3.79 31.3.77 as 470106 (2pp938)

ASNA= ★ D16 90817B/50 ★SU -655-36
Green algae culture unit - has a heating channel widening in flow direction and featuring a sloping bottom

CENT ASIA NATURAL G 01.08.75-SU-164683

P13 (10.04.79) A01g-31/02

The flue gases of the unit for mass cultivation of green algae are subject to cleaning prior to their admission to the unit. The heating channel is tapered and widens in the flow direction with bottom sloping 5-10°, and the system of channels is in the form of zig-zags. The distributing manifolds are connected to the heating channels by ducts featuring evenly-spaced bubbling tubes.

The combustion prods. are cooled in the gas ducts, the tapered channels reducing their velocity which contri-butes to dust precipitation. The given-up heat raises the temp. of the suspension in the tank, while the accumulate slurry is flowing to the next channel. The cleaned gases enter the bubbling tubes for dispersion in the *Chlorella* suspension.

Salikhodzhaev S.S., Bul. 13/5.4.79 1.8.75 as 164683
Add to 264057 (3pp89)

BIOT= ★ D16 90822B/50 ★SU -655-39
Horizontal extractor for reacting fibrous solids and extractant - has rotating arm with perforated scoop and perforated screen to direct solids into next section

BIOTECH RES INST 13.12.77-SU-554624

(D17) (08.04.79) B01d-11/04

Horizontal extractor for processing solid materials with

an elastic or fibrous structure and with a tendency towards swelling e.g. the removal of enzymes from the surfaces of fungi nutritive substances from vegetable raw materials (sugar beet, malt extract etc) sugar from cane etc. It comprises a horizontal cylindrical body divided into sections by vertical screens, each section having a discharge opening, a hopper, and a shaft with a scoop disposed coaxially to the body. The scoop is fastened to an arm, and a perforated braking screen is located in front of the discharge opening so that it can rotate. Extraction process effectiveness is increased by reducing the time the liquid remains in the solid phase. This is achieved by making the perforated rotating screen in the form of two plates positioned at an angle to one another. The perforated screen is also fitted with a weight and the angle of the rear wall of the scoop is fixed by providing a fasten for it. Prinspun V. Ya., Zhuchkov V.N., Kraltsov Yu.K., et al. Bul.13/5.4.79 13.12.77 as 554624 (4pp29)

ERU- D16 50273V/28 =SU-655-400
continuous degassing of gas/liq. dispersions - by risers with funnels above extraction openings and terminating above froth surface
VEB GERUNGSCHMIE (STEP/) 09.04.73-DL-170036 (09.04.73-DL-170033)

J02 (08.04.79) *DL-104-912 B01d-19
continuous degassing rig for gas/liquid dispersions in reactors (fermenters) with an external circulation including a funnel-shaped sepg. chamber, with the larger end downwards, above the bottom extn. opening of the reactor. A vertical riser is joined to the top of the chamber and terminates near the froth surface of the reactor contents. A horizontal baffle is arranged between the extraction opening and the mouth of the sepg. chamber. Intensified mass exchange and thorough degassing of recycled gas/liquid dispersion are possible.
Stephan W., Schnaider J., Frommholts G. et al. Bul.13/4.4.79 8.4.74 as 017622 (3pp)

VE=★ D16 90842B/50 ★SU-655-433
horizontal deposition centrifuge for manure solid liquid phase sep. - has segmental partitions at rotor discharge point, and concentric outer and inner shells on rib discs with holes to register for discharge

LIVESTOCK FARM MACH 04.04.77-SU-476303
P41 (08.04.79) B04b-01/20

The centrifuge comprises rotor, drum and radial ribs, screw whose turns are secured to the ribs and load and discharge openings for the feed and prods.

To obtain a clearer liquid offtake from a simpler design the rotor wall at the solids discharge opening is fitted with segmental partitions to fence off this zone. The radial ribs have lugs which protend beyond the ends of the drum and are fitted with discs.

Tkach V.D., Omelchenko A.A., Klimenko N.I., et al
Bul.13/15.4.79 4.4.77 as 476303 (3pp26)

SKOG/★ D16 90902B/50 ★SW 7801-316
Plastics fermentation vessel with water seal for gas release - has top moulded to form annular recess with central neck, so that water in recess makes seal with flange of cowl on neck

SKOGLUND H CE 03.02.78-SW-001316
A92 Q33 (03.09.79) B65d-51/16

PLAC D16 84966Y/48 =US 4177-038
Carriers for covalently bonding biological materials, esp. enzymes - in which the binder has one, or pref. two, reactive isocyanate gps.
MAX PLANCK GES WISSENSCH 18.05.76-DT-621974
A96 B04 (04.12.79) *DT2621-974 C08b-15/06 C08b-37/02 +D06m-13/42

prodn. of vehicle capable of covalent bonding with biologically active matter which is synthesised from a vehicle contg. pref. several free NH_2 or OH gps. and ≥ 1 bonding agent contg. ≥ 2 reactive gps., improvement is that vehicle, under anhydrous conditions, is reacted with excess organic diisocyanate in an anhydrous organic solvent in presence of strong basic catalyst and obtd. vehicle is isolated in storable form.

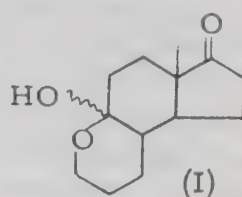
Pref. vehicle is agarose, dextrane or an acrylamide deriv.; or fibrous cotton wool; or small-(or non-)pored material.

Material is useful for immobilising e.g. enzymes.
17.5.77 as 797677 (11pp963)

UPJO D16 60739A/34 =US 4177-106
4-Hydroxypropyl-hexa:hydro-1,5-indane-dione - by biotransformation of steroid(s) with microorganism mutants, useful as steroid intermediate (NL 16.8.78)

UPJOHN CO 14.02.77-US-768025 (21.02.78-US-879775)
B02 (B01) (04.12.79) *DT2802-524 C12d-13

Cpds. of formula (I) are prepd. by cultivating a mutant *Arthobacter*, *Bacillus*, *Brevibacterium*, *Corynebacterium*, *Nocardia*, *Protaminobacter*, *Serratia* or *Streptomyces* microorganism, in an aq. nutrient medium at pH 3.0-6.0 under aerobic conditions in the presence of a steroid, and then recovering (I).



The steroid opt. has a 17-alkyl side chain of 2-10C. The mutant is one which converts such steroids to 3 α -H-4 α -[3'-propanol]-7 α -methylhexahydro-1,5-indandione hemiketal.

(I) is an inter. for useful 19-nor steroids. 21.9.78 as 879775 Div.ex. 4097335 (6pp974)

JAAT D16 57917Y/33 =US 4177-107
Enzyme and bacterial cell immobilisation - by subjecting mixtures with monomers and adsorbents to ionising radiation at low temp.

JAPAN ATOMIC ENERGY RES 31.01.76-JA-009702

A96 B04 (A14 D13) (04.12.79) *DT2703-834 C07g-07/02

Compsns. contg. insolubilised enzyme and/or insolubilised bacterial cells are produced by (i) mixing (a) an aq. soln. of enzyme and/or an aq. dispersion of bacterial cells, (b) ≥ 1 porous absorbent and (c) ≥ 1 vitrifiable monomer (I), (II) and/or (III), and (ii) irradiating at $< -10^\circ\text{C}$. with ionising radiation.

$\text{CH}_2=\text{CX}.\text{CO}.\text{O}.\text{R}_1.\text{R}_2$ (I) $\text{RC}(\text{CH}_2\text{O}.\text{CO}.\text{CX}=\text{CH}_2)_3$ (II),

$\text{CH}_2=\text{CX}.\text{CO}.\text{O}.\text{CH}_2.\text{CH}(\text{O})\text{CH}_2$ (III)

X is H or CH_3 . R_1 is $(\text{CH}_2)_n$, $\text{C}(\text{CH}_3)_2$, $(\text{CH}_2\text{CH}_2\text{O})_m$ or $[\text{CH}(\text{CH}_3)\text{CH}_2\text{O}]_l$. n is 1-6, m and l are each ≥ 2 . R_2 is OH, OCH_3 or $\text{O}.\text{CO}.\text{CX}=\text{CH}_2$ if R_1 is not polyether and H, CH_3 or $\text{CO}.\text{CX}=\text{CH}_2$ if R_1 is polyether. R is ethyl, n-propyl or isopropyl. 28.1.77 as 763601 (5pp974)

SAKA/ D16 65669A/37 =US 4177-108
Antitumour emitanin prodn. - from mycelial cultures of certain fungi

SAKAKIDA K 17.06.77-JA-071130 (02.03.77-JA-021456)

B04 (04.12.79) *DT2809-092 C12d-13

Emitanin is produced by inoculating mycelia or *Tricholoma matsutake*, *T.baka-matsutake*, *Volvariella volvaea* or *Tremella fuciformis* in a medium to grow and then fermenting the grown mycelia in a liq. medium contg. a carbohydrate and a N source; isolating solids from the broth; extracting with hot water; and isolating the active ingredients.

Emitanin may be sep'd. into three components by pptn. and separation. It has antitumour activity. 27.2.78 as 881744 (5pp974)

ALST D16 81186Y/46 =US 4177-226
Injector to gasify liq. with tiny bubbles - which are detached from flexible tube outlet by controlled annular current of liq.

ALSTHOM-ATLANTIQUE 25.05.76-FR-015785

J02 (D15) (04.12.79) *BE-854-380 +C02c-05/04

Small gas bubbles are injected into a liquid by appts. which includes spaced tubes of small inside dia. Each tube has in use one end projecting into the liquid and the other into a gas supply pipe. Between the ends an annular chamber is formed in the pipe which has radial orifices which open out into a liquid supply pipe below the body of liquid being injected.

Liquid flows into the annular chamber which is open at its top and operates to detach quickly the bubbles from the tube top by causing an annular thrust. 10.8.78 as 932642 (+16.5.77-US-797036) (3pp1376)

ICIL ★ D16 91082B/50 ★US 4177-253
Composite magnetic particles for immunoassay - are cores coated with magnetic material and biologically active substance
IMPERIAL CHEM INDS LTD 30.07.76-GB-031839
B04 J01 K08 R16 (04.12.79) G01n-33

Composite magnetic particles, comprise a core of density less than 1.5 g./cc. coated at least partially with a magnetic material with a biologically active substance on the surface of the core and/or the magnetic coating.

The core material may be crosslinked polyacrylamide, silica gel or starch. The biologically active substance may be a drug, hormone, enzyme, protein, antigens and antibodies. The magnetic coating may be iron oxide. 6.7.77 as 813422 (7pp916)

KUBA/ D16 33495A/19 #US 4177-295
Treating drinks esp. beer and wine to stabilise and deactivate enzymes - using diol di:carboxylic polymers esp. polyethylene terephthalate
KUBANEK V (VYSO-) 06.01.78-BE-862715 (20.04.78-US-898413)
A97 (04.12.79) *BE-862-715 +A231-01/26

Stabilising the colloidal and taste qualities of beverages evidencing turbidity precursors and enzymes is described. Method comprises (a) contacting the beverage with PET isophthalic acid modified PET and/or PET and polybutylene terephthalate mixt. in amt. sufficient to reduce concn of cloudiness precursors and undesirable enzymes and, (b) sepg. the polymer from the beverage.

Specifically the polymer is dispersed in powder form in the beverage and sepd. by filtration or sedimentation. Alternatively the beverage is contacted with the polymer in a continuous throughflow plant. 20.4.78 as 898413 (4pp964)

See Also

D13 GB 1557390 D13 J7 9038187 D13 SU 654677
D15 US 4177150 D17 J7 9038182 D17 J7 9038183

D17: SUGAR; STARCH

SIEI ★ D17 89461B/50 ★DS 1567-316
Regulating the supersaturation of boiling sugar solutions - by constantly coupled and compared conductivity and solution levels
SIEMENS AG 28.02.66-DT-567316
(06.12.79) C13g-01/06

A monitor metering the conductivity of the soln. in a secondary boiler regulates the supersaturation by signals put out to the valves controlling the flow of juice and water into the boiler. At the same time a level monitor puts out signals representing the height of the sugar soln. in the boiler; the nominal value of the conductivity supplied to the conductivity monitor being made dependent upon the level of the sugar soln. in the boiler.

Used to overcome the problem that, under unfavourable boiling and vacuum conditions, the conductivity monitor cannot bring deviations from the rule into line with the time schedule, so that, when the time runs out, the vessel is not filled to the max. and the crystal size is unsatisfactory. The present arrangement make possible the continuous determination of the level and of the conductivity, so that the two values are constantly coupled and cannot wander away from each other. 28.2.66 as 567316 (7pp1045)

NOVO D17 88287Y/50 =GB 1551-444
Isomerising glucose to fructose using immobilised glucose isomerase - in presence of soluble phosphate to increase productivity

NOVO INDUSTRIA/S 10.08.76-GB-033166
E13 (D16) (30.08.79) *BE-857-648 +C13k-11
Glucose is isomerised to fructose by using ≥ 1 immobilised glucose isomerase as claimed in Claim 16 or 30 of patent GB 1516704, in the presence of ≥ 1 sol., food-grade salt (pref. a Na salt) of phosphoric acid, and in the presence of ≤ 3 ppm Ca^{++} .

Salt is esp. disodium hydrogen phosphate or dipotassium hydrogen phosphate, partic. used in a concn. of 0.0008-0.08 M. Productivity of the isomerase is improved by the salt (e.g. by 34%). 5.8.77 (4pp936)

CSRL- D17 25499Y/15 =GB 1551-797
Semicontinuous vacuum crystallising plant - with individually controlled steam heaters in crystallising pans of increasing capacity in stacked arrangement

CSRL LTD 01.09.75-AU-002997
J01 (30.08.79) *DT2639-637 B01d-09/02
A low head semi-continuous vacuum pan system for crystallising a substance from a soln. has a series of vacuum pans, each having a discharge volume at which its contents are discharged; a heat supply; a device for topping-up the soln.; and a device to allow transfer of the contents to the next pan in the series. The discharge volume of the pans increases up the series.

Each pan is pref. emptied before receiving the content

of the preceding pan. Uniformly sized crystals are produced. 24.8.76 as 035139 (6pp1376)

STAU D17 66818A/37 =GB 1551-809
High purity lactose prodn. - by washing solid lactose with a cold alkaline soln.

STAUFFER CHEMICAL CO (WITT/) 31.05.77-US-801874
E13 (30.08.79) *US4099-983 C13k-05
Lactose is purified by washing lactose crystals in an alkaline wash bath at pH 8.5-12.5 and isolating the washed crystals from the bath. The alkalising agent for the bath is sodium-, potassium- or calcium hydroxide, oxide or carbonate.

Pref. the wash bath is at 38-60°F and contains lactose crystals in amt. 5-60wt. % on a dry solids basis; and at pH 9.5-11.5. The isolated lactose crystals are water washed, isolated and dried.

Purified, decolorised lactose may be prepd. at low cost and used esp. in infant foods, certain dietary prods. and pharmaceuticals. 5.4.78 as 013272 (9pp931)

CUIN- D17 09679Y/06 =GB 1557-829
Clarifier for cane sugar syrup - having vessel with scraped trays and central collection of molasses

CUBA MINI IND AZUCA 30.06.75-CU-034295
(12.12.79) *DT2629-132 B01d-21/14
Sediment is removed from sugary (cane sugar) juices by appts. which includes a cylindrical container with a sediment outlet at the centre of a conical base, vertically-spaced conical settling trays in the cylinder each with a central opening, a thickening tray below the opening to thicken the sediment deposited and discharging it to the container bottom, scraper arms operating on the trays and bottom to move the sediment to the centre, and gas-exhaust and juice outlets from the spaces between the trays.

The juice inlet at the container top is pref. an annular channel with a crenellated wall top. 30.6.76 as 027284 (6pp1376)

UNTC ★ D17 89940B/50 ★GB 2022-13
Colour purificn. of polyhydric alcohol liquids esp. sugar syrup using filter aid material with ion exchange resins in filter bed

ECODYNE CORP 30.05.78-US-910628
A97 (12.12.79) C13d-03/12 C13k-01/04 C13k-11
Purifying a polyhydric alcohol-contg. liq., pref. sugar syrup, to remove chromophoric impurities, involves the use of a filter bed contg. particulate cation and anion exchange resins, each of particle size $\leq 150 \mu$, pref. 10-30 μ , and a filter aid material. The resins and filter aid material are co-deposited from a slurry onto a porous filter support.

The anion exchange resin is pref. quaternized, amine modified cross-linked acrylate ester polymer in chloride

and has a pref. moisture content of 45-80wt.%. The pref. cation exchange resin is a sulphonated cross-linked styrene-divinylbenzene polymer in sodium form. The pref. filter aid material is fibrous, esp. alpha-cellulose, and the fibres are of pref. dia. less than 50 microns and pref. length less than 1 mm.

The process is more economical than known processes for purifying sugar solns. and the prod. has greater stability w.r.t. crystallisation. 22.5.78 as 017795 (6pp1390)

AKI/★ D17 90198B/50 ★J5 4141-715
Synthesis of sucrose - by reacting eutectic mixt. of dextrin and sucrose with aq. carbonic acid soln.

AKI J 26.04.78-JA-050281

BE13 (05.11.79) C07h-03/04

Synthesis of sucrose comprises reacting eutectic mixts. of dextrin and sucrose with aq. carbonic acid soln.

Specifically starch and equivalent sucrose are treated with diluted H₂SO₄ soln. to give aq. H₂SO₄-acidic sucrose soln. and starch. The mixt. is heated around 100°C to give paste, which then gradually liquefies to give transparent aq. soln. The soln. is neutralised with milk of lime < 20°C to give white sol of eutectic mixt. of dextrin and sucrose and lime sulphate.

To the sol. is added carbonic acid soln. which is prep'd by adding CO₂ to cold water under increased pressure. When the mixt. is heated at ca. 100°C, it gradually liquefies to give a pale yellow-brown coloured and transparent sucrose soln. The lime sulphate is deposited with a small amt. of impurities. The mixt. is filtered to give a clear aq. sucrose soln. 26.4.78 as 050281 (2pp90)

AGEN★ D17 90506B/50 ★J7 9038-182
Recovering cane sugar - by decomposing condensed raffinose into galactose and cane sugar, subjecting to column chromatography and recycling raffinose fraction

AGENCY OF IND SCI TECH 14.05.70-JA-041828

(D16) (19.11.79) C13d-03

Condensed raffinose is decomposed into galactose and cane sugar with the use of α-galactosidase, the resultant is subjected to column chromatography to collect portions containing cane sugar mainly, and the portions are divided into two fractions, namely raffinose fraction and cane sugar fraction and the raffinose fraction is recycled to the raffinose decomposition process.

Pref. α-galactosidase include those obtained from *Mortierella vinacea*, var. *raffinoseutiliser*, etc. Pref. ion exchange resins used in the column chromatography include Amberlite IR-130, Dowex 50 X-4, etc. of particle size 50-100 mesh. Pref. the column chromatography is effected at 60-90°C. The sugar is recovered in a high yield. 14.5.70 as 041828, C13d-3/00, (19.11.79) AGENCY OF IND. SCI. TECH. (7pp22)

AGEN★ D17 90507B/50 ★J7 9038-183
Cane sugar prodn. from beet sugar - by decomposing using α-galactosidase, saturating with carbon dioxide and subjecting to ion exchange treatment

AGENCY OF IND SCI TECH (HOKK-) 05.12.70-JA-107789
(D16) (19.11.79) C13d-03

In recovering cane sugar from beet sugar with the use of ion exchange resin, the sugar material is subjected to decomposition to give cane sugar. The resulting sugar material containing D-galactose is saturated with CO₂ gas and then subjected to ion exchange resin treatment.

The α-galactosidase to be used includes the enzyme obtained by fermentation of a microorganism such as *Streptomyces olivaceus* var. *raffinoseutilizer*, *Mortierella vinacea* var. *raffinoseutilizer*, etc. Action of the enzyme is conducted at 45-55°C for 2-3 hrs. whereby 50-90% decomposition can be attained.

The cane sugar is obtained in high yield. 5.12.70 as 107789 C13d-3/00 (19.11.79) HOKKAIDO TOGYO KK, AGENCY OF IND. SCI TECH. (5pp22)

See Also

D13 DT 2922247
D16 SU 654682

D16 GB 1551897
D16 SU 655397

D16 GB 1557755

D18: SKINS; HIDES; LEATHER; TOBACCO

APT D18 66296V/38 =DS 2420-028
Automatic fibre distributing device - in which the fibres are sucked from the upper surface of a roller

IMPERIAL GROUP LTD 28.04.73-GB-020295

F07 P15 + Q35 Q36 (06.12.79) *BE-814-206 A24b-03/06

The outer mantle surface of the drum rotating in the housing of a tobacco fibre feeding machine, has a series of rakes extending across the drum, and offset to each other in the circumferential direction.

The machine which draws a fleece of tobacco through the annular cavity between the drum and the housing, has a feed inlet directed towards the rising section of the drum, and the stack of tobacco presses against this.

The fleece of tobacco held by the rakes is presented to a selected outlet leading to a cigarette making machine, and that part of the fleece which is not passed through the outlet, is taken round by the drum to the inlet so as to be presented to the outlet again.

There are many fewer parts than in existing machines so that wear is reduced to a great extent, and a much more delicate handling of the tobacco fibres is made possible. 25.4.77 as 420028 (6pp1045).

BBB★ D18 89864B/50 ★FR 2418-628
Embossing fibrous sheet for making cigarette filter tips - produces wide range of sheet textures, by adjusting continuous machine

SOC JOB ANC ETAB BARDOU 03.03.78-FR-006140

F07 P15 (02.11.79) A24c-05/50

Process and appts. for impressing a fibrous sheet to a profile of crests and indentations is claimed. This is preparatory to rolling the sheet into a cylindrical stick to be cut into filter tips for cigarettes. During the impressing operation the machine setting is adjustable to vary the

heights of the crests of the profile. This adjustment simultaneously alters the degree of lateral stretch of the sheet as well as its texture. The adjustment is infinitely variable within a range which at one extreme gives a sheet texture which is cleanly embossed, corrugated etc., and at the other extreme gives a texture of crinkles and creases through out the length of the sheet.

The impressing machine pref. employs a pair of rolls on parallel axes. Each roll has a surface profile of coaxial, annular grooves and crests and the crests of each roller engage to an adjustable depth in the grooves of the other roller. This adjustment is pref. achieved by having a fixed axis roll opposed to a roll on an adjustable axis.

Used for producing filter material for cigarette filter tips. A single machine can be used to produce a wide range of textures of filter sheet. Adjustment within the range is infinitely variable and can be effected during continuous operation of the machine. 3.3.78 as 006140 (13pp448)

YAGI/★ D18 90049B/50 ★J5 4140-701
Surface-finishing of natural leather - by coating liq. resin on release sheet, drying resin layer, transferring to natural leather and opt. forming intermediate layer

YAGI H 21.04.78-JA-047475
A32 (01.11.79) C14c-11

Method comprises (a) coating the liq. resin (soln., emulsion or paste) of polyurethane, polyamide, PVC, amino resin or acrylic resin, on the carrier showing good releasing property, (b) drying the coating layer to the degree that initial sticking property is remained, (c) transferring the coating layer continuously or intermittently to natural leather at normal temp. or with heating and (d) opt. form-

ing porous layer, adhesive layer, etc. between the transferred coating layer and natural leather.

Resin coating layer in wet state is not contracted with natural leather and the impregnation of the liq. resin can be suppressed. The new leather material which has good appearance, surface and water resistance is obtd.
21.4.78 as 047475 (3pp5)

TATA= ★ D18 90757B/50 ★SU-654-685
Fur skins treatment unit - includes a perforated chute inside the conical shell of reversibly driven partitioned drum
TATARSK FUR COMBINE 06.08.76-SU-395390
(30.03.79) C14b-01 C14b-15

Improved working conditions and efficiency of the unit handling fur skins are due to the discharge chute featuring perforations, and fitted inside the conical shell. Discharge ports are made in the end of the drum and in one section of the conical shell. The partitions of the said section are perforated.

The drum is reversibly turned to prevent fur skins rolling-up, and the perforated partitions ensure stirring of the load. The skins raised to the top with some treatment liquid drop from the sloping surface of the shell, the process repeated many times. The skins fall on the inclined perforated chute for discharge to the conveying carriage.

Troshin M. V., Blagodarov D. A., Veselov I. I., et al.
Bul. 12/30, 3.79 6.8.76 as 395390 (3pp89)

AMMA D18 51672A/29 =US 4176-668
Tobacco sheet, esp. for cigar tips - contains ethyl cellulose deposit contg. metal cation used to measure deposit thickness
AMF INC 02.05.77-US-793232
A97 P15 (A11) (04.12.79) *BE-864-799 A24b-03

Reconstituted tobacco sheet is coated on ≥ 1 surface with a hydrophobic coating comprising ethyl cellulose and, uniformly dispersed in latter, a spectrophotometrically determinable, pharmacologically acceptable metal cation, naturally occurring in tobacco Wt. ratio of cation to ethyl cellu-

lose is 1:30-80 and cation is present in amt. of ≥ 3 times the amt. naturally in tobacco sheet. Amt. of coating per unit area of sheet varies $< 5\%$ along sheet length.

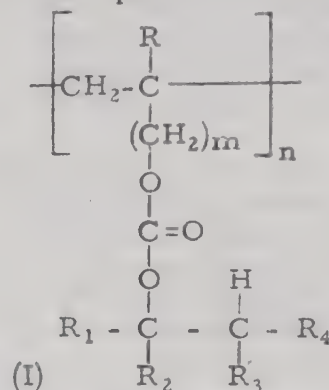
Pref. cation is present as inorganic acid salt, pref. metals being Zn, Cs, Li, Cu and Ba; esp. pref. is ZnCl_2 . Cigars having a wrapper of such a sheet contg. Zn ions are claimed.

Treatment aids quality control by permitting determinn. of coating efficiency and coating amt. of hydrophobic coating. 2.5.77 as 793232 (9pp963)

PHIM D18 35222A/20 =US 4177-3
Polymerised ethylenically unsaturated di:ester carbonate - used in smoking tobacco compsn. and pref. releasing anethole, isoprene or menthene aroma

PHILIP MORRIS INC 05.11.76-US-739291 (15.02.78-US-877978)
A97 P15 (A23) (04.12.79) *DT2749-189 C08f-118

Polymeric carbonate ester compsn. of mol. wt. 500-2 x 10^6 comprises recurring monomer units of formula (I):



In (I), R is H or aliphatic, alicyclic or aromatic 1-10C hydrocarbyl, provided that R is H, when m is 0; R₁ is unsatd. aliphatic radical or alicyclic or aromatic hydrocarbyl; R₂₋₄ are each H or aliphatic, alicyclic or aromatic hydrocarbyl. R₂ and R₃ when taken together with connecting elements form an alicyclic structure, the total number of C atoms in R₁₋₄ being ≤ 20 ; m is integer 0-8; and n is integer 2-10⁴.

(I) are incorporated as flavour-ant-release agents in tobacco compsns. They have high efficiency without masking the natural flavour of the resultant mainstream tobacco smoke. 15.2.78 as 877978 Div. ex. 4092988 (11pp936)

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

COLG D21 72325T/45 =DS 2218-604
 Clear toothpastes - contg a synthetic amorphous aluminosilicate complex of an alkali(ne earth) metal
COLGATE PALMOLIVE CO 30.04.71-US-139240
A96 E33 P33 (A11) (06.12.79) *BE-782-726 A61k-07/16
 Clear gel for cleaning teeth comprises a water insoluble, powdery polishing agent in a carrier gel. The polishing agent is a synthetic amorphous complex alkali or alkaline earth aluminosilicate contg. silicon dioxide-aluminium oxide bonds and contg. up to 3.3 wt. % aluminium oxide. The molar ratio of silicon dioxide to aluminium oxide is more than 45:1. The complex has a refraction index of 1.44-1.47, contains about 20 wt. % moisture measured as loss on ignition and contains up to 10 wt. % alkali or alkaline earth oxide.
 The carrier may be a natural or synthetic gum. The gel may also contain surfactants, flavouring, etc. 17.4.72 as 118604 (5pp068).

KAOS D21 18522Y/11 =DS 2639-505
 Tooth paste contg. water soluble fluorides - with montmorillonite or hectorite of defined compsn. to prevent fluoride loss on storage
KAOSOAP KK 04.09.75-JA-107421
B06 E37 (06.12.79) *DT2639-505 A61k-07/18
 Toothpaste compsn. comprises (a) a water soluble, fluorine-contg. anticaries cpd. in an amt. of 100-2000 wt. ppm. calculated as F, and (b) 0.3-13 wt. % of either (1) montmorillonite composed of (wt. % based on the anhydrous material) 60.0-70.0 SiO₂, 2.0-5.0 MgO, 0-2.0 Fe₂O₃, 20.0-30.0 Al₂O₃ and 2.0-5.0 Na₂O or (2) a hectorite composed of (wt. % based on the anhydrous material) 60.0-65.0 SiO₂, 2.5-5.0 Na₂O, 0-2.0 Fe₂O₃, 20.0-30.0 MgO and 0.6-2.0 Li₂O.
 The anticaries cpd. is e.g. Na, K, Li, NH₄, Zn or Mn fluoride and is pref. present at 300-1200 wt. ppm. calculated as F. The toothpaste gives longer lasting protection against caries. 2.9.76 as 639505 (6pp945).

HENK ★ D21 89531B/50 ★DT 2824-025
 Hair care compsn. contg. reducing sugar - esp. glucose, to improve structure and ease of combing
HENKEL KG AUF AKTIEN 01.06.78-DT-824025
E13 (06.12.79) A61k-07/06

The use of a reducing sugar (I) in cosmetic compsns. for improving the structure of hair and the ease with which it is combed when wet is new

(I) is pref. glucose, fructose, invert sugar, galactose, mannose, maltose and lactose, esp. glucose, and is 0.5-(1-5)wt. % on the total hair-care compsn.

Used esp. for treating hair which has been damaged by dyeing, bleaching or permanent wave treatment. Apart from being easier to comb the hair has improved shine, body and feel and does not accumulate static charge when brushed or combed. 1.6.78 as 824025 (7pp1251)

HENK ★ D21 89542B/50 ★DT 2824-198
 Guerbet fatty acid polyglycol ester(s) - useful as emulsifiers produced by reacting guerbet acids with ethylene oxide in the presence of sodium methoxide
HENKEL KG AUF AKTIEN 02.06.78-DT-824198
E13 (06.12.79) A61k-07/48 B01f-17/42 C07d-303/42
 New Guerbet fatty acid polyglycol esters consist of ethoxylation prods. of aliphatic monocarboxylic acids of formula R-CH₂-CH₂-CHR-COOH (I) contg. ethylene oxide residues in an amt. of 35-50wt. % based on the total wt. of the ester where R is 6-24C, pref. 12-18C satd. straight-chain aliphatic hydrocarbon residue).

(I) are water-in-oil emulsifiers which are stable to oxidn. and which have only a very weak intrinsic odour. They are partic. suitable for use as emulsifiers in cosmetic preparations such as skin creams, which contain other usual ingredients such as vitamins, hormone preparations,

plant extracts, etc. 2.6.78 as 824198 (15pp280)

RIES/ ★ D21 89546B/50 ★DT 2824-214
 Plastics moulding for connecting dental crown with tooth root - is made of polysulphone, polycarbonate, PMMA or polyester, for low water absorption

RIESS G 02.06.78-DT-824214

A96 P32 (A28) (06.12.79) A61c-08 A61c-13/30

Connecting elements between a dental superstructure and the natural or artificial root of a tooth is an intermediate piece near the gums (gingiva) and made of a physiologically inert polymer having a modulus of elasticity 1000-5000 (2000-3500) N/mm² so that it can absorb or at least dampen any movement of the superstructure w.r.t. the root of the tooth.

Specifically, the polymer has water absorption <1 (pref. <0.5)%. Suitable polymers are polysulphones, polycarbonates, PET, polybutyl terephthalate, PMMA or some other acrylic with low water absorption. The article is anchored in the core of the root and has an extension at that end facing the superstructure for direct fastening to the latter. 2.6.78 as 824214 (10pp267)

HENK ★ D21 89732B/50 ★EP ---5-805
 Cosmetic hair treating compsn. contg. boric acid - to improve structure and ease of combing when wet

HENKEL KG AUF AKTIEN 01.06.78-DT-823968

E36 (12.12.79) A61k-07/06

D/S: E(BE, CH, FR, GB, IT, NL, SW).

The use of boric acid (I) in cosmetic hair treating compsns. to improve the structure and the ease with which the hair is combed when wet is new.

Pref. (I) is used at 0.5-8 (esp. 1-5) wt. % of the total compsn.

(I) is esp. used with hair which has been damaged by dyeing, bleaching or permanent waving. Apart from improving combing properties, the compsn. improves the shine, body and feel of the hair.

25.5.79 as 101606 (9pp1251).

(G) ISR: BE-514899; CS-135889; GB-993967; CH-153325; US2290908; J52058709; FR-698074; FR-865747;

FR2357569; 2 Journal references.

HENK D21 89531B/50 =EP ---5-807
 Hair care compsn. contg. reducing sugar - esp. glucose, to improve structure and ease of combing

HENKEL KG AUF AKTIEN 01.06.78-DT-824025

E13 (12.12.79) *DT2824-025 A61k-07/06

D/S: E(BE, CH, FR, GB, IT, NL, SW).

The use of a reducing sugar (I) in cosmetic compsns. for improving the structure of hair and the ease with which it is combed when wet is new.

(I) is pref. glucose, fructose, invert sugar, galactose, mannose, maltose and lactose, esp. glucose and is used at 0.5-8 (pref. 1-5) wt. % on the total hair - care compsn.

Used esp. for treating hair which has been damaged by dyeing, bleaching or permanent wave treatment. Apart from being easier to comb the hair has improved shine, body and feel and does not accumulate static charge when brushed or combed.

25.5.79 as 101608 (9pp1251).

(G) ISR: CH-443567; SF--48532; US2383990; DT2141764; DT2141763; DS-905193; GB-552285; 1 Journal Reference.

SMIN ★ D21 89788B/50 ★EP ---5-922
 Lip cosmetic giving uniform layer - contg. wax dissolved in volatile solvent and dispersed pigment or other solid

SMITH & NEPHEW COSM 19.05.78-GB-020835

A96 (12.12.79) A61k-07/02

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Lip cosmetic comprises ≥ 1 orally acceptable non-toxic wax (like material) (I), at least partially dissolved in (b) a solvent (mixt.) sufficiently volatile to be evaporated by the heat of the lips and contg. (c) ≥ 1 dispersed pigment or other solid.

Pref. (I) is bees-wax, lanolin, carnauba or paraffin waxes, or a low mol. wt. polyolefin, and it esp. contains a microcrystalline wax. (I) may be mixed with a natural or synthetic resin to improve water and abrasion resistance of the wax film.

The solvent is esp. kerosene or a dimethyl silicone used at 10-80 (20-50) w/w%.

A uniform layer of wax is deposited which exactly follows the contours of the skin, so is adherent against normal abrasion.

10.5.79 as 300807 (19pp1251)

(E) ISR: US3088876; FR-915416; FR-935150; FR-998013; GB-525337; LU--52961; CH-224313; CH-264313; CH-519913.

PACE-★ D21 89886B/50 ★GB 1551-388
Thixotropic topical fluoride-phosphate gel compsn. - useful for preventing dental caries

PACEMAKER CORP 28.10.75-US-626068

A96 B06 (30.08.79) A61k-05

Compsn. for the control of dental caries, having a pH of 3-5, comprises a fluoride cpd. which is sol. in water to provide a source of fluoride ions under acid condition and an acidic phosphate cpd. which is sol. in water to provide a source of phosphate ions, and 3.5-12% of a thixotropic constituent which serves to impart thixotropic gel-like properties and is compatible with F ions under acid conditions and stable at pH of 3-5.

The compsn. is useful for the control and prevention of dental caries and is applied topically to the teeth. It is gel-like and by shaking its viscosity is greatly reduced so that it becomes readily flowable and substantially liq. thus enabling it to be readily and uniformly dispersed. The compsn. is highly heat and acid stable for substantial periods of time. 8.7.76 as 028408 (3pp957)

COLG D21 75934Y/43 #GB 1551-501
Buccal hygiene composition or dentifrice - contains a nitrogen-contg. germicide and a water soluble polyamino-polyphosphonic acid or its salts

COLGATE PALMOLIVE CO 16.06.77-BE-855751 (24.05.77-GB-021842)

B05 E11 (30.08.79) *BE-855-751 A61k-05 A61k-07/22

Oral compsn. comprises a N-contg. antibacterial antiplaque agent selected from cationic antibacterial antiplaque agents, long chain tert. amines contg. a 12-18C fatty alkyl gp., and their mixts. and to reduce or prevent staining, a water-soluble polyamine polyphosphonic cpd. of formula $(X_2O_3P-CH_2)_2-N(CH_2)_n-N(CH_2-PO_3X_2)_2$ where n is 1-10 and X is H or a cation, or their mixt.

Antiplaque agent as pref. present in amts. of 0.001-15 (0.01-5) wt. % (based on free base) and polyamine polyphosphonic cpd. is present in an amt. of 0.01-10 wt. % (pref. in a molar excess w. r. t. antiplaque agent). 24.5.77 as 021842 (11pp963)

OREA D21 06350A/04 =GB 1551-902
Polyether poly:ol surfactants with sequenced structure - for cosmetic and pharmaceutical compsns.

L'OREAL SA 16.07.76-LU-075406

A25 B04 (A97 B07) (05.09.79) *BE-856-854 A61k-07/13 C07c-93/04 C08g-65/26 + C07c-43/12

Novel block oligomers are (mixts. of cpds.) of formula $P-O(C_2H_3(CH_2B)O)_n(C_2H_3(CH_2A)O)_m(C_2H_5(CH_2B)O)_nQ$ (I). P or Q is H and the other is $\leq 20C$ (branched) alkyl. A is RCH_2 or $R'O$. R is 4-16C alkyl. R' is 4-20C (branched) alkyl. B is OH, $-NR_1R_2$, $-N(O)R_1R_2$, $-N(OH^+V^-)R_1R_2$, $-N(H^+V^-)R_1R_2$, $-N^+R_1R_2R_3Z^-$ or $-S(O)aR_4$. R_1 and R_2 are each 1-3C (hydroxy) alkyl or together complete a 6-membered heterocyclic ring. R_3 is (m)ethyl. R_4 is $\leq 3C$ ((di)hydroxy) alkyl. Z^- is an anion. $-N(OH^+V^-)R_1R_2$ and $-N(H^+V^-)R_1R_2$ are salts of amine or amine oxide, a is 0 or 1. m, n and n' are such that m is 2-10, n and n' are each 2-25 or one is 0. The CH_2A and CH_2B gps. are attached to either C atom in the C_2H_3 gp.

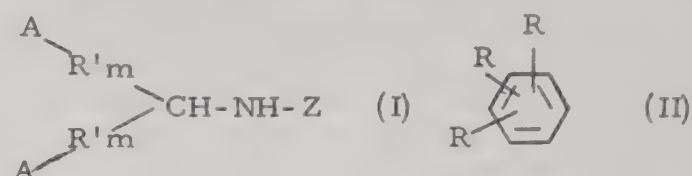
(I) are surface active agents with low aggressiveness which may be used as additives to shampoos and to dyeing carriers or as pharmaceutical excipients. 15.7.77 as 029936 (30pp974)

MERI D21 59726Y/34 =GB 1552-049
Antimicrobial diphenyl-polyamine derivs. - prepd. by reacting diphenyl-substd. ketones with amino-piperidine cpds. and reducing (NL 16.8.77)

MERCK & CO INC 12.02.76-US-657412

B05 C03 + P34 (B03 C02 D22) (05.09.79) *DT2705-800 A61k-31/44 C07d-211/26 + A01n-09/20

Novel diphenyl derivs. of piperidine amines are of formula (I) or their acid addn. salts. Each A is (II) each R is H or 1-4C alkyl. Each n is 0 or 1. Each R' is 1-4C alkylene. Z is 1-(trimethylene)-4-aminomethylpiperidine or 3-methylene-1-(2-(2-hydroxyethylamino)ethyl)piperidine.



Pref. each A is 4-t-butylphenol or 2,4,6-trimethylphenyl. Pref. each R' is (tri)methylene. 1-(2-(2-hydroxyethylamino)ethyl)-3-(1,5-di-(3-isopropylphenyl)-3-pentylamino-methyl)piperidine is specifically claimed.

Cpds. are broad spectrum antimicrobials and algae inhibitors. 10.2.77 as 005516 (9pp974)

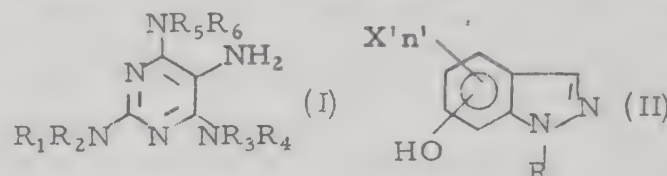
HENK D21 84706Y/48 =GB 1552-065
Oxidising dyes for hair - contg. tetraamino-pyrimidines and hydroxy-indazoles

HENKEL KG AUF AKTIEN 26.05.76-DT-623564

E13 (05.09.79) *BE-855-018 + D06p-01/32 D06p-03/08

Novel hair dye compsns. comprises as developer ≥ 1 tetraaminopyridine of formula (I) or its (in)organic salts and as coupler ≥ 1 monohydroxyindazole of formula (II).

R_1 - R_6 are each H, 1-4C alkyl, $(CH_2)_nX$, benzyl or (substituted) aryl, or R_1 and R_2 , R_3 and R_4 or R_5 and R_6 completes and opt. substd. 5-6 membered ring with 1 or 2 N or N and O atoms. R is H or 1-4C alkyl. X' is H, halogen or 1-4C



alkyl and n' is 1 or 2. Prods. give very intensive tints. 25.5.7 as 022011 Add to 14865 (5pp974)

BOOT ★ D21 89895B/50 ★GB 1552-119
Dentifrice compsns. contg. diatomaceous earth - in combination with other abrasive

BOOTS CO LTD 31.10.75-GB-045228

A96 (05.09.79) A61k-07/16

Dentifrice compsn. contains an abrasive and 0.01-5 (0.05-2 wt. %) of a diatomaceous earth. Although diatomaceous earth is too abrasive for use as the major abrasive in dentifrices, the use of a small amt. in combination with other abrasives gives improved cleaning and polishing properties without causing damage to teeth.

Pref. the diatomaceous earth has been dried, milled and fluxed calcined. The surface area is measured by ASTM method C-204 is pref. $> 1.5 M^2/g$ e.g. about $2 M^2/g$, and the particle size such that $\geq 45\%$ is of size $< 3 \mu$. Finer grades e.g. of surface area $4.5 M^2/g$ particle size such that $\geq 60\%$ is $< 3 \mu$ may be used. 29.10.76 (3pp955)

JOHJ D21 39800Y/23 =GB 1557-580
Water resistant sunburn creams - comprise oil-in-water emulsion of protection agent, film forming acrylic polymer and emulsifier

JOHNSON & JOHNSON 03.12.75-US-637255

A96 (A14) (12.12.79) *BE-848-881 A61k-07/42

Film-forming sunscreen compsn. comprises an oil in water emulsion of an oil soluble hydrophobic sunscreen agent (I) having a max. absorption peak of 280-320 nm; an emulsifying system (II); a nonionic, oil soluble emollient; a film-forming, water insoluble acrylic interpolymer (III); and > 50 wt. % of the compsn. of water. The compsn. is free of non-fugitive bases, i.e. bases which would not

porise from the skin after application of the compsn.

(II) consists of a salt of 12-18C fatty acid or of a carboxyvinyl polymer thickening agent having a mol. wt. at least a million and a carboxyvinyl content of 50-62.5wt. % the latter being the reaction prod. of the acid material with NH_4OH or a fugitive amine. (III) comprises 5-30wt. % of repeating units contg. carboxylic acid gps. which have been neutralised with NH_4OH or a fugitive amine. (I) is e.g. methyl dimethyl p-aminobenzoic acid.

Compsn. has excellent water resistance and affords long-lasting protection from the sun. 1.12.76 as 050170 (pp27)

C ★ D21 90055B/50 ★ J5 4140-714
Compsn. for forming film on skin e.g. cosmetic or medical dressing contains polyamide resin, esp. nylon, dissolved in volatile solvent
LION DENTIFRICE KK 24.04.78-JA-048596
A96 B05 (A23 D22) (01.11.79) A61k-09

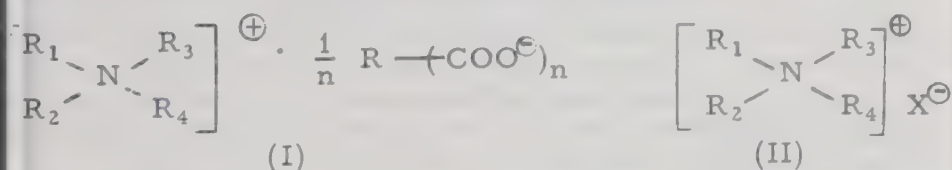
Film-forming liq. compsn. for skin contg., as film-forming agent, a polyamide resin, specifically soluble nylon, dissolved in a volatile solvent (e.g. methanol, ethanol, water-ethanol or propylene glycol). Pref. the polyamide resin is used in an amt. of 5-20 wt. % based on the compsn. The compsn. is useful for cosmetics, e.g., peel-off eye liners, packs, perfumes, sweat inhibitors or dressings, or medicines for external use. A transparent film is rapidly formed. The film has satisfactory adhesiveness to the skin, is soft and has moderate strength to conform with the movement of the skin. The film can easily be peeled off as a thin film. 24.4.78 as 048596 (4pp)

KK ★ D21 90067B/50 ★ J5 4140-736
Cosmetic contg. fine spherical silica gel - to facilitate smooth application to face and enhance spreading properties
POLA KASEI KOGYO KK 16.03.78-JA-030276
(01.11.79) A61k-07/02

Cosmetics contain fine globular silica gel having a dia. 0.3-0.6 μ , pref. 5-15 μ . Porous or non-porous silica gel can be used and it is used in amt. 3-40 w/w%, esp. 5-30 w/w% starch, etc. The fine globular silica gel has superior effect than conventionally used talc, kaolin, starch, etc. The silica gel also has excellent perfume-retaining property, adhesiveness to the skin, transparency and humidity resistance. Cosmetics in emulsion, stick, powder, etc. can be readily prepd. using the silica gel. 16.3.78 as 030276 (4pp5)

S ★ D21 90068B/50 ★ J5 4140-738
Hair treating compsn. - contg. quat. ammonium salts having carboxylic acid gp. anions
SHISEIDO KK 25.04.78-JA-048921
A97 E19 (01.11.79) A61k-07/06

Hair-treating compsn. contains ≥ 1 quat. ammonium salt having a carboxylic acid gp. as anion. Pref. the agent also contains the reaction prod. formed between ≥ 1 quat. ammonium salt (II) with 0.2-20 times in mol. on (II) of $\geq 6-30\text{C}$ carboxylic acid (salt) in aq. medium.



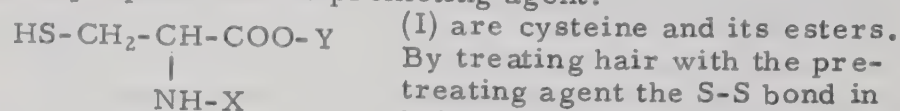
In the formulae, R_{1-4} are alkyl, alkenyl, benzyl, monohydroxy-alkyl or polyoxyalkylene gp. $-(\text{CHR}'\text{CH}_2\text{O})_m\text{H}$. R' is H or methyl. m is 1-100. One or two R_{1-4} should be 14-30C alkyl, alkenyl, monohydroxyalkyl gp. or the polyoxypropylene gp., of which R' is methyl and m is 30-100 and remainings should be 1-3C alkyl, monohydroxyalkyl gp., benzyl or the polyoxyethylene gp., of which R' is H and m is 1-30. $\text{R} - (\text{COO}^-)_n$ is a 6-30C carboxylic acid gp. which has ≥ 1 carboxyl gp., n is the number of carboxyl gps. included in the carboxylic acid. X is halogen, mineral acid ion such as H_2PO_4^- or lower alkylsulfate ion such as $\text{CH}_3\text{OSO}_4^-$, $\text{C}_2\text{H}_5\text{OSO}_4^-$, etc.

Both water soluble and difficultly water soluble quaternary ammonium salt with carboxylate ion show excellent conditioning effect and emollient effect for hair. Further water insoluble quat. ammonium salt is less irritating to the skin and eyes than the water soluble salt. Thus by

combining the water difficult soluble quat. ammonium salt (I) excellent safe hair-treating compsn. can be obtd. 25.4.78 as 048921 (8pp5)

SHIS ★ D21 90069B/50 ★ J5 4140-739
Pretreating compsn. for hair dyeing - contains cysteine and/or its ester(s) and an organic alcohol solvent as promoter
SHISEIDO KK 25.04.78-JA-048920
E17 (01.11.79) A61k-07/13

Pretreating agent contains 0.5-10 (1-8) w/w% of ≥ 1 cpd. of formula (I) (where X is H or $-\text{COCH}_3$; Y is H or 1-4C alkyl) as the major ingredient and opt. 1-50 (10-30) w/w% of ≥ 1 organic solvent selected from ethanol, i-propanol and n-propanol as the promoting agent.



(I) By treating hair with the pretreating agent the S-S bond in hair keratin can be partly opened and as the result dye molecules can be easily impregnated and diffused in hair.

Hair can be dyed excellently with direct dyes at low temp. in a short time at pH 6-10 (7-9) with small bathing ratio of 1:2. The pretreating agent is odourless and non-stimulative to skin. The dyeing effect can be further improved synergically by combining the promoting agent in pretreating agent. 25.4.78 as 048920 (6pp5)

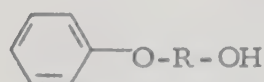
MATS/ ★ D21 90070B/50 ★ J5 4140-740
Dentifrice with good tooth cleaning and gingiva stimulating action - contg. fine granular, slow dissolving abrasive
MATSUURA H 23.04.78-JA-047997
E37 (01.11.79) A61k-07/16

Dentifrice can be prepd. by combining 10-20 wt. % fine granular and slow dissolving abrasive selected from calcium carbonate, calcium hydrogen phosphate dihydrate, calcium hydrogen phosphate, insoluble sodium metaphosphate, magnesium carbonate, silicic acid anhydride, aluminium hydroxide, sodium chloride, potassium chloride, ammonium chloride, sodium acetate, etc. in conventional tooth paste, wet tooth powder, tooth powder, etc.

The fine granular and slow dissolving abrasive objective dentifrice not only shows excellent cleaning effect for tooth, but also gives proper stimulus to gingiva. Thus the blood circulation in gingiva can be promoted and the gingiva can be constricted. As the result gingivitis and pyorrhea can be prevented and teeth can be protected from decaying. Pref. fine granular abrasive of dia. 0.2-0.6 mm is used. 23.4.78 as 047997 (2pp5)

KANE ★ D21 90071B/50 ★ J5 4140-741
Non-flammable nail varnish remover - comprises phenoxy:alkanol, aliphatic ketone, lower alcohol and water
KANEBO KK 24.04.78-JA-049064
E14 (E17) (01.11.79) A61k-07/04

The compsn. is obtd. by mixing and dissolving 28-68 w/w % of phenoxyalkanol (I) 5-15 w/w% aliphatic ketone, 6-25 w/w% aliphatic lower alcohol and 10-40 w/w% water, (where R : 2-4C alkylene).



(I)

The compsn. is non-combustible and can dissolve out nail enamel easily and rapidly without whitening nails while imparting disinfecting and sterilising effects. The compsn. is non-toxic and has improved dry-

ability.

The aliphatic ketone is acetone, methylethyl ketone, diacetone alcohol, acetyl acetone and/or acetonyl acetone. The aliphatic lower alcohol is ethanol, n-propanol, i-propanol, n-butanol and/or i-butanol. 24.4.78 as 049064 (6pp5)

SHOF ★ D21 90136B/50 ★ J5 4141-316
Easily castable, nickel-chromium dental alloy - contg. molybdenum, manganese, silicon, copper, aluminium, niobium and/or tantalum, boron and carbon
SHOFU TOSHI SEIZO KK 26.04.78-JA-049626
M26 P32 (02.11.79) A61c-13 C22c-19/05

Alloy is composed of 13-20% Cr, 0.5-8% Mo, 0.5-6% Mn, 0.1-3% Si, 0.5-7% Cu, 0.1-6% Al, 0.1-8% Nb and/or Ta,

D16 GB 1557755

D22: BANDAGES; DRESSINGS

D22 67159X/36 = DS 2506-524
 odour masking device - with bell cover for reducing evapn of the masking agent

KOCK F 15.02.75-DT-506524

P34 (06.12.79) *DT2506-524 A611-09/04

The unit contg. a flask filled with an odour-eliminating chemical, is covered at its upper end, by a bell in the form of a truncated cone, closed above, and widening downwards.

The device is fitted with a hanger or a support bracket. In the zone of the wall of the container unit in which there are perforations, the bell encloses it at a short distance from it, to give a practical and highly efficient odour-eliminating appts. 15.2.76 as 506524 (5pp1045).

D22 58214X/31 #DS 2511-825
 bactericidal and sporicidal compsn. - contg. glutar aldehyde and a highly ionizable salt

COWAN S M 22.11.73-GB-054331 (18.03.75-DT-511825)

B05 C03 P34 (06.12.79) *GB1443-786 A611-13

sterilising compsn. contains glutaraldehyde and an ionisable salt in soln. in water or a mixt. of water and a lower monovalent alcohol. The compsn. has a pH of ≤ 7 and includes ≥ 1 dissolved highly ionisable salt of a mono- or divalent cation base which is capable of exchange with Ca.

Pref. the glutaraldehyde is present in a concn. of 0.5-10 wt.%. Specifically, the highly ionisable salt is present in an amt. of 0.5-1 wt.% and consists of NaCl, NH_4Cl , Na nitrate, nitrate or nitrite and/or LiCl. The pH of the compsn. is pref. 2-4.5.

Compsn. exhibits good sporicidal activity in addn. to antibacterial action. 18.3.75 as 511825 (4pp927).

D22 89507B/50 ★DT 2823-685
 antimicrobials cleaning, disinfecting and preservative compsns. - contg. amino-hydroxy stearic acid amine as active component

HENKEL KG AUF AKTIEN 31.05.78-DT-823685

C03 E16 G03 P34 (06.12.79) A611-13 C07c-103/50 C11d-03/48

The use of amides of formula $\text{CH}_3-(\text{CH}_2)_a-(\text{CHA}.\text{CHB}.\text{CH}_2)_n-(\text{CH}_2)_6-\text{COX}$ (I) as antimicrobials is new. In (I) $n = 1$ and $a = 4$ or $n = 3$ and $a = 1$; one of A and B is OH, the other and X are the gp. $-(\text{NH}-(\text{CH}_2)_6)_m-\text{NR}_1\text{R}_2$; $b = 2-6$; $m = 1$ or 2 ; R_1 and R_2 are each H or 1-12C alkyl. (I) is used in an amt. of 0.1-10 (0.5-5)wt.% on the total antimicrobial compsn. as a preservative at 0.1-2wt.%.

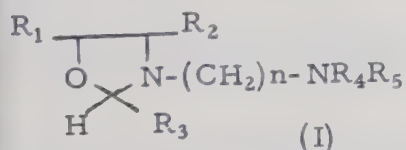
Compsns. contg. (I) are useful as cleaning and disinfectant compsns. for textiles, floors, floors, hospital equipment etc. and as preservatives for glues, dyes, etc. to protect them against spoilage by bacteria and fungi. 5.5.78 as 823685 (16pp1251)

D22 89576B/50 ★DT 2824-540
 Omega-aminoalkyl-oxazolidine derivs. - useful as antimicrobials cleaning, disinfecting and preservative compsns.

HENKEL KG AUF AKTIEN 05.06.78-DT-824540

C02 E13 G03 (06.12.79) C07d-263/04

Oxazolidine derivs. of formula (I) are new. R_1 and $\text{R}_2 = 1-17\text{C}$ alkyl, the total no. of C being 8-18. $\text{R}_3 = \text{H}$, 1-5C alkyl, phenyl (opt. substd. by halo, OH or CH_3O) or styryl. $n = 2-6$. R_4 and R_5 are each H or 1-3C alkyl. They are made by reacting corresp.



hydroxy-alkylamines with R_3CHO .

(I) are antimicrobials useful at 0.1-25 (0.5-20)wt.% of the total microbicidal compsn. or at 0.1-2wt.% as preservatives. They are included in cleaning and disinfecting compsns. for textiles, floors, hospital equipments, and in preservatives for preventing spoilage of dyes, glues, cutting oils, etc. 5.6.78 as 824540 (27pp1251)

D22 89585B/50 ★DT 2824-636
 Gem-aminoalkanol derivs. as antimicrobial agents - for cleaning, disinfecting and preservative compsns., prepd. from epoxidised olefin and alkylene di:amine

HENKEL KG AUF AKTIEN 05.06.78-DT-824636

C03 E16 G03 P34 (06.12.79) A611-13

The use of aminoalkanols of formula $\text{R}_1-\text{CHOH}-\text{CHR}_2-\text{NH}-(\text{CH}_2)_n\text{NR}_3\text{R}_4$ (I) as antimicrobials is new. (R_1 and $\text{R}_2 = 1-17\text{C}$ alkyl with a total of 8-18C atoms. $n = 2-5$. R_3 and $\text{R}_4 = \text{H}$ or 1-3C alkyl). (I) is used at 0.1-25 (0.5-20)wt.% of the total antimicrobial compsn. or at 0.1-2wt.% as a preservative.

Compsns. contg. (I) are useful as cleaning and disinfecting compsns. for textiles, floors, hospital equipment, etc. and as preservatives for protecting glues, dyes, cutting oils, etc. against microbial spoilage. 5.6.78 as 824636 (15pp1251)

D22 89654B/50 ★DT 2921-810

Multifilament suture material with good knotting properties - coated with a dried gel of a fatty acid salt and an organic solvent

ETHICON INC 30.05.78-US-910263

A96 E12 F01 P34 (06.12.79) A611-17

Multifilament suture material is coated with 1-5wt.% of the dry residue of a mass comprising a gel of a salt of an $\geq 6\text{C}$ fatty acid with a polyvalent metal ion in a volatile organic solvent.

The suture material is made e.g. of a homo- or copolymerised lactide and/or glycolide, or poly-(p-dioxanone). The gel is e.g. of a Ca, Mg, Ba, Al or Zn salt of a 12-22 C fatty acid (mixt.), esp. carbonate-free Ca stearate. The solvent used is e.g. benzene, toluene, xylene, mesitylene, 1,1,2-trichloroethane or CHCl_3 . The gel pref. contains 3-10% solids. The gel is applied to the multifilament suture material and the solvent is then removed to leave a 1-5wt.% dry coating of the fatty acid salt on the material.

The coatings give absorbable surgical sutures for internal use having improved knotting properties c.f. known multifilament suture materials. 29.5.79 as 912810 (16pp513)

D22 89507B/50 = EP ---5-806

Antimicrobials cleaning, disinfecting and preservative compsns. - contg. amino-hydroxy stearic acid amine as active component

HENKEL KG AUF AKTIEN 31.05.78-DT-823685

C03 E16 G03 P34 (12.12.79) *DT2823-685 A611-13 + C07c-103/50

D/S: E(DT, FR, GB, IT, NL).

The use of amides of formula (I) as antimicrobials is new.



($n = 1$ and $a = 7$; $n = 2$ and $a = 4$; or $n = 3$ and $a = 1$; one of A and B is OH, the other and X are

$-(\text{NH}-(\text{CH}_2)_b)_m-\text{NR}_1\text{R}_2$;

$b = 2-6$;

$m = 1$ or 2 ;

R_1 and R_2 are each H or 1-12C alkyl).

(I) is pref. used in an amt. of 0.1-10 (pref. 0.5-5) wt.% on the total antimicrobial compsn. or as a preservative at 0.1-2 wt.%.

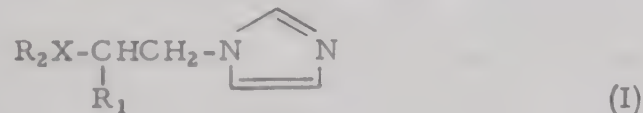
Compsns. contg. (I) are useful as cleaning and disinfectant compsns. for textiles, floors, hospital equipment etc. and as preservatives for glues, paints and cutting and drilling oils to protect them against spoilage by bacteria and fungi.

25.5.79 as 101607 (18pp1251).

(G) ISR: FR2249871; DS1174018; DT2355026.

SYNT ★ D22 89810B/50 ★ EP ---5-980
2-Phenoxy and 2-phenylthio-4-phenyl-N-butyl imidazole(s) - useful
as antifungal, antibacterial and antiprotozoal agents
SYNTEX (USA) INC 30.05.78-US-910978
B03 C02 (D13) (12.12.79) A61k-31/41 C07d-233/60
D/S: E(BE, CH, DT, GB, IT, LU, NL, OE, SW).

2-Phenoxy- and 2-phenylthio-4-phenyl-n-butylimidazoles
of formula (I) and their acid-addn. salts are new:



(R₁ is phenethyl and R₂ is phenyl each opt. ring substd. by
1-3 halogen, 1-4C alkyl or alkoxy; and
X is O or S;

provided that one of R₁ and R₂ is substd. by alkoxy).

(I) are antifungal, antibacterial and antiprotozoal
agents for use as therapeutic agents in man and animals,
as food preservation agents etc. Dose is 1-100 mg/kg
daily.

25.5.79. as 300962 (43pp1248).

(E) ISR: —

BROT- ★ D22 89875B/50 ★ FR 2418-821
Continuous mfr. of calcium alginate fibres - by passing calcium
chloride and sodium alginate solns. through spinneret

BROTHIER LAB 03.03.78-FR-006142

A11 F01 (02.11.79) D01d-05/06 D01f-02

The process comprises continuously introducing under
pressure into a multi-filiform current of sodium alginate
soln., a current of aq. calcium chloride soln. The cal-
cium alginate fibres resulting are recovered in the form
of ranges of successive parallel fibres which are entrain-
ed in a continuous movement during which they are sprayed
with pure water and then alcohol, followed by draining
and drying.

The process is carried out in an appts. comprising a
tube contg. a spinnanet into which is directed the sodium
alginate and linked to this is a calcium chloride soln.
feed. The assembly is mounted in a manner such that a
horizontal to-and-fro movement is imparted to the exit of
the tube where the fibres leave. The tube delivers onto a
perforated continuous belt which passes over the vessels
which called the drainings and washings from the fibres
with the appropriate spraying arrangement above each.

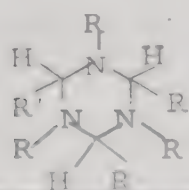
The process is cheaper enabling automation and the
prod. obtd. is uniform. 3.3.78 as 006142 (6pp597)

COAL D22 16788Y/10 =GB 1551-225
Aq. paint contg. aldehyde-amine condensate as biocide - esp.
substd. hexahydro-(1,3,5)-triazine derivs. NL230277)

COALITE & CHEMICAL PRODS 21.08.75-GB-034826

C02 E13 G02 (30.08.79) *DT2637-651 C09d-05/14 +A01n-
09/20

Aq. emulsion paint compsn. comprises a film-forming in-
gredient and a biocide which is a condensn. prod. of an ali-
phatic aldehyde R'.CHO (I) and a prim. monoamine RNH₂
(II) (where R' is H or 1-4C alkyl and R is cycloalkyl or 1-6
C alkyl). The biocide is present in an amt. sufficient to
reduce or inhibit the growth of microorganisms in the
compsn.



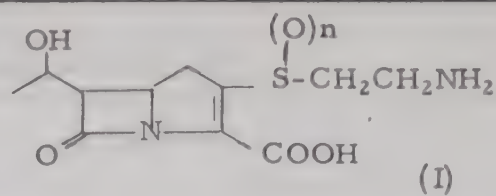
Pref. (I) is HCHO and (II) is
ethylamine, isopropylamine, sec.
butylamine, tert. butylamine and/
or cyclohexylamine. The biocide
is an N-subst. hexahydrotriazine
of formula (III). 5.8.76 (6pp982)

MERI D22 71984Y/40 =GB 1551-672
Thienamycin sulphoxide and sulphone - for use as broad-spectrum
antibiotics

MERCK & CO INC 16.03.76-US-667323

B02 C02 E13 + P34 (30.08.79) *NL7702-183 A61k-31/40 C07d-
209 C07d-487/04 + A01n-09/14 C07d-205

Thienamycin deriv. of formula (I) and their non-toxic salts
are new (where n = 1 or 2). (I) are useful as antibiotics,



and for preserving
foodstuffs, as dis-
infectants etc. They
are active against
S. aureus, S.
pyogenes, B. subti-
lis, E. coli, Proteus morganii and Klebsiella. They may
be prep. by mild oxidn. of cpds. (I: where n = 0) using e. g.
peracids. 11.3.77 as 010479 (5pp997)

DICK/ D22 86308Y/48 #GB 1557-409
Grain or flour fumigator for storage silo - comprises vertical pipe
with bags of solid phosphine chemical hung by chain from sealing
cap

DICKSON R D 07.05.76-US-684084 (10.10.77-GB-042108)

(12.12.79) *US4059-048 A23b-09

A fumigating appts. for agricultural materials (e. g. grain)
includes a container; an elongate member in the chamber
forming a passage-like gas chamber in the material; a
closure for sealing the bottom of the member; a cap for cl-
osing the top of the member which extends above the cont-
ainer; a device suspended from the cap for inserting a fum-
igant into the gas chamber; and ports in the chamber to all-
ow pressurised fumigant gas access to the material. The
fumigant is solid and then gasifies.

The fumigant is pref. attached to a chain at varying
heights. 10.10.77 as 042108 (6pp1376)

JOHJ D22 64965A/36 =GB 1557-460
Absorbent under-pad for hospital beds - has an absorbent layer on
impervious backing provided with outer pressure-sensitive adhesive
strips

JOHNSON & JOHNSON 09.12.75-GB-050427

A96 P32 + P33 (12.12.79) *US4097-943 A61f-13 + A61g-07/04

Absorbent pad comprises a fluid-impervious backing sheet,
a fluid-absorbent fabric layer (pref. cellulosic) adhering
to one face of the backing sheet, and ≥ 2 strips of pressure-
sensitive adhesive tape adhered to the backing sheet on
margins of the fluid impervious face of the pad, for adher-
ing the pad to a substrate.

The strips of tape each bear pressure-sensitive adhes-
ive (pref. acrylic) on both sides. The adhesive strength on
the side of the tape adhered to the backing sheet is greater
than the adhesive strength on the other side of the tape.

The pad is esp. suitable as an incontinence pad and is
disposable, does not cause discomfort, etc. 17.12.76
(4pp393)

ANDP D22 27188A/15 =GB 1557-636
Colorimetric determination of sterilising agent dosage - by indicator
dye mixt. with salt of strong acid and weak base

ANDERSEN HW PROD INC 04.10.76-US-729552

A97 J04 P34 + R14 R16 (12.12.79) *DT2729-711 G01n-21/06

Device for measuring the effectiveness of a gaseous or
vaporisable sterilant comprises a container impermeable
to the sterilant having an opening for entry of the sterilant.
It contains a mixt. of acid-alkali indicator dye and a salt
of a strong acid and a weak base coated on an interstitial
inert carrier whose interstices define passageways for the
sterilant. The salt can react with the sterilant to cause a
change in the pH of the mixt. and hence a colour change of
the indicator dye.

When the container is placed in an enclosed space to
which the sterilant is supplied, a progressive colour ch-
ange of the indicator takes place (giving a discernable
demarkation line) as the sterilant passes along the passage-
ways away from the opening.

The salt may be MgCl₂, and the indicator bromophenol
blue Na salt or methyl red. The container may comprise
two spaced strips of polyester or polyamide joined along
their edges. The sterilant is e. g. ethylene oxide or pro-
pylene oxide.

The effects of time, temp. and sterilant concn. during
a sterilisation are integrated, and the device is easy to
mfr. and use and reliable. 5.9.77 as 036928 (7pp945)

HC **D22** 32731Y/19 = GB 1557-687
 Antibacterial di-(N)-subst. diaminoglycosyl diamino-cyclitols -
 useful as therapeutic or disinfectant
 SCHERICO LTD 04.11.75-US-628637
 B03 C02 (12.12.79) *BE-847-900 A61k-31/35 C07d-309/28
 + C07d-309/14
 or 1,6'-di-N-substd. derivs. of 4,6-di-O-aminogly-
 syl-1,3-diaminocyclitols and their acid addn. salts are
 The 4-O-aminoglycosyl unit is substd. by prim.
 amino gps. which occupy one or both of the 2' and 6' posns.
 The substituents may be the same or different and are of form
 (H₂X where X is alkyl, alkenyl, cycloalkyl, cycloalkyl-
 phenyl, benzyl, tolyl, hydroxyalkyl, aminoalkyl,
 alkylaminoalkyl, aminohydroxyalkyl or alkylaminohydroxy-
 alkyl. X has up to 7C and if substd. by amino and hydroxy
 groups the substituents on different C atoms.
 The derivs. are antibacterials having a higher activity
 and a broader spectrum of activity than the parent cpds.
 Specific derivs. include 1,2'-di-N-CH₂X-gentamicin C,
 1,6'-di-N-CH₂X. Antibiotic JI-20A and JI-20B and 1,6'-di-
 ethylsisomicin. 2.11.76 as 075553 (14pp945)

HC **D22** 89914B/50 ★GB 2021-947
 Hypochlorite-based disinfectant and antiseptic - contg. soluble
 hypochlorite and citrate of alkali or alkaline earth metals
 DHP CORP 26.05.78-US-909829
 E12 (E33 E34) (12.12.79) A61k-31/18 A61k-33
 Compsn. which is diluted with water to form an aq. antimi-
 crobial agent comprises 45-70wt. % of ≥ 1 alkali or alkaline
 earth metal hypochlorites, 10-35wt. % of 1 alk-
 ali or alkaline earth metal hydroxides, and 2-35wt. % of
 1 alkali or alkaline earth citrates. A soln. of the
 compsn. in water should have a pH of ≥ 11.5 and contains
 1-5000 ppm available chlorine.
 The compsn. may be used as a general disinfectant, or
 for topical application to burns, wounds. 21.5.79 as
 7619 (6pp955)

HC **D22** 89916B/50 ★GB 2021-952
 Timber treatment by immersion in pressurised liquid - after vacuum
 treatment, then application of high pressure gas, e.g. air, after
 treatment
 PROTIM INT LTD 29.06.79-GB-022721 (31.03.78-GB-012650)
 C03 F09 P63 (12.12.79) A01n-17 B27k-03/08
 Timber is treated by initially placing it in a vacuum cham-
 ber, after which it is contacted with a soln. of preserva-
 tive in an organic solvent. A positive pressure is applied
 to the soln. to force it into the timber and after a predet-
 ermined period the soln. is drained from the timber. Opt.
 second vacuum treatment may be applied to remove ex-
 cess preservative.

Finally the timber is subjected to a high pressure gas,
 e.g. air, to cause further penetration of the preservative
 into the timber. Typically the complete treatment takes
 minutes to 3 hrs.

The treatment is applied to less permeable species of
 timber, e.g. spruce or whitewood. The method reduces
 the hazards to operating staff by cutting down the amt. of
 preservative present on the surface of the wood after
 treatment. 29.6.79 as 002721 (4pp295)

HC **D22** B/50 ★HU T017-291
 Drying appts. for air purification - with removal of steam, dust and
 aerosols
 SZOT MUNKAVEDELM 01.06.76-HU-SA2924
 J01 P41 (28.11.79) B03c-03

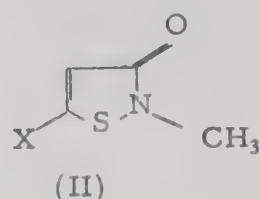
HC **D22** 90003B/50 ★J5 4093-200
 Prod. of sterilised fibres for bandages etc. - by forming chitosan-
 iodine addn. prod. on natural or synthetic fibres
 NIPPON TENNEN GAS K 28.12.77-JA-157544
 A87 F06 (A11) (24.07.79) D06m-15/04
 The natural or synthetic fibres are satd. with an acid soln.
 of chitosan, then dried. The fibres with the chitosan are
 then satd. with a soln. which contains iodine. The chito-
 san is obtd. by heating and hydrolysing chitin with caustic
 soda. The chitosan-iodine addn. prod. is formed on the
 fibres instantly by contacting chitosan with the iodine soln.
 at room temp. Pref. water, alcohol or their mixt. is used
 as the medium for contacting chitosan with the iodine soln.
 The sterilised fibres are used in prodn. of bandages,

white dresses, cushions for shoes, etc. 28.12.77 as
 157544 (4pp142)

SOMA **D22** 90059B/50 ★J5 4140-726
 Synergistic slime-controlling agent for paper pulp industry - contains
 a bis (di- or tribromomethyl)-sulphone cpd, and a 3-isothiazoline
 cpd.

SOMAL KOGYO KK 24.04.78-JA-048439
 C02 E16 F09 (C03 E13) (01.11.79) A01n-09/12

Slime controlling agent in paper pulp industry contains as
 active component bis(di or tribromomethyl)sulphone of
 formula O₂S(CH₂Br₂+m)₂ (I) and 3-isothiazoline of formula
 (II): (where X is H or chlorine) or its metal complex salt.



The compsn. shows a very strong
 fungicidal effect and has a broad
 fungicidal spectrum. (I) is a suit-
 able fungicide, since it does not
 have irritating property and smell
 and can be prepd. in low cost. (II)
 has been used widely as slime-con-
 trolling agent, and has a very broad

fungicidal spectrum. The compsn. shows the broad fungi-
 cidal spectrum at low concentration (1-5 ppm). The effect
 is synergistic. 24.4.78 as 048439 (5pp108)

NISC **D22** 90064B/50 ★J5 4140-732
 Tablet for deodorising urine pots - contains para-di:chlorobenzene,
 chlorinated isocyanuric acid and ortho-boric acid

NISSAN CHEM IND KK 22.04.78-JA-048148

E14 P34 (E13 E36) (01.11.79) A01n-17/08 A611-09 A611-11

Compsn. for deodorant tablet, contains 15-90 wt. % of para-
 dichlorobenzene, 3-35 wt. % of chlorinated isocyanuric
 acid and 5-50 wt. % of ortho-boric acid.

The compsn. brings about good releasability at the time
 of tableting and good shape-stability of the tablet. The
 deodorant tablet is placed in an urine pot, in station, hos-
 pital, etc. The deodorant tablet is used for sterilisation,
 deodorisation, repelling of insects and cleaning of urine
 pot.

In order to obtain a good quality of tablet, chlorinated
 isocyanuric acid, para-dichlorobenzene and ortho-boric
 acid are pref. granular or powdered. The amt. of para-
 dichlorobenzene is pref. 30-85wt. %, and para-dichloroben-
 zene is used for deodorisation and repelling of insects.
 The amt. of chlorinated isocyanuric acid is pref. 5-30 wt.
 %. Ortho-boric acid is used to impart good releasability,
 good shape stability to the tablet. Its amt. is pref. 10-40
 wt. %. If desired, there can be added aroma, dye, pigment
 and carriers. Tableting pressure is 20-100 kg/cm².
 22.4.78 as 048148 (3pp108)

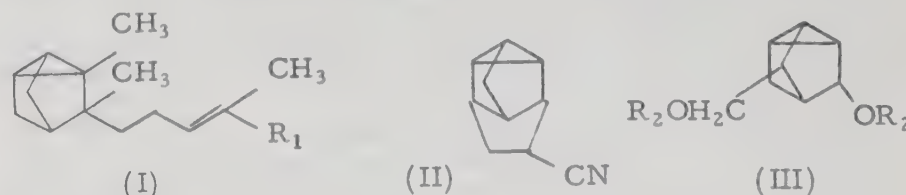
KAOS **D22** 90065B/50 ★J5 4140-733
 Deodorant contg. tri:cyclo(2.2.1.0^{2,6})heptane derivs. - is effective
 against mercaptan and hydrogen sulphide and does not irritate
 nose or throat

KAO SOAP KK 24.04.78-JA-048591

E15 P34 (01.11.79) A611-09/*

Deodorant contains as active component a tricyclo[2.2.-
 1.0^{2,6}] heptane deriv. of formulae (I)-(III): (where R₁ is
 methyl, hydroxymethyl, or formyl; and R₂ is H, formyl or
 acyl).

The active cpd. is used as a liq., solid or powder or
 aerosol. To increase compatibility of the active cpd. with



the solvent, methanol, ethanol, propanol, methylcello-
 solve, butylcellosolve, glycerine, etc. can be added. To
 solubilise the active cpd. and aroma polyoxyethylene alkyl
 ether, polyoxyethylenepheryl ether, etc. nonionic surfact-
 ant, alkylallylsulphonate, olefin-sulphonate etc. anionic
 surfactant and alkyl pyridinium halide, etc. cationic sur-
 factant.

In an example, 1.0 wt. % of (I)(R₁=CHO), 1.0 wt. % of
 polyoxyethylene dodecylether (in which average number of
 moles of ethylene oxide added is 8), 1.0 wt. % lemon oil,

5.0 wt. % ethanol and 92.0 wt. % water are mixed to prepare the deodorant. 24.4.78 as 048591 (5pp108)

CHUX ★ D22 90157B/50 ★ J5 4141-378
Deodorising appts. for particulate material - in which particles are vibrated, sprayed with liq. and heated to evaporate odorous components

CHUO KAKOKI KK 25.04.78-JA-049401
J01 (02.11.79) B01j-02 B01j-08/16

A treating container for accommodating the required amt. of particles is vibrated by means of a vibrator and a liq. is sprayed from a sprayer into the container, so that the particles are naturally agitated and mixed under vibration flow to contact and mix uniformly with the sprayed liq. A heating medium is continuously passed through a jacket to evaporate the liq., so that particular odour components contained in the particles are evaporated and discharged together with the liq. stream from an exhaust hole, to deodorise the particles.

The particles contg. odour components may be inexpensively and efficiently deodorised, and particles of various physical qualities may be uniformly treated by adjusting the power and direction of the vibration in response to the physical qualities. 25.4.78 as 049401 (3pp35)

PERC ★ D22 90214B/50 ★ J5 4141-738
Antimicrobial aromatic bromo:nitro:alcohol derivs. - esp. useful as fungicides and preservatives

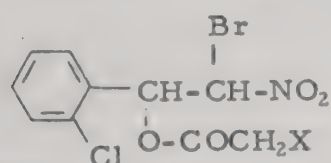
PERMACHEM ASIA LTD 26.04.78-JA-048756
C03 E14 F09 (05.11.79) A01n-09/20 C07c-79/22

Aromatic bromonitroalcohol derivs. of formula (I) are new (where X is Cl or Br). Prepn. of (I) comprises condensing aromatic bromo-

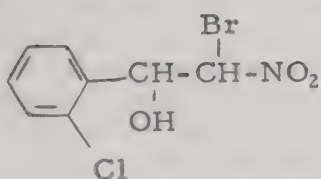
nitroalcohol of formula (II) with a cpd. of formula XCH_2COY (where Y is halogen).

(I) shows excellent microbicidal effect against bacteria, fungi and yeast. It is partic. useful as fungicide or preservative for various industrial materials. Further, it inhibits the growth of bacteria which has strong resistance such as Pseudomonas at a concn. of <10 ppm. (I) can be added to metal machining oil, emul-

sion, paint or industrial waste liq. It can be used as slime control agent in paper mfr. 26.4.78 as 048756 (6pp)



(I)



(II)

UNIC- ★ D22 90279B/50 ★ J5 4141-857
Mfg. powder-contg. laminated sheets - used as paper diapers, catamenial napkins, sanitary or deodorising materials etc.

UNI CHARM KK 22.02.78-JA-019433
A96 P73 (05.11.79) B29c-27/06 B29d-09/02 B32b-31/12

Powder-contg. sheets are produced by scattering appropriate amts. of powders on a first sheet nearly homogeneously prior to lamination of the first sheet with a second sheet during conveyance of the first sheet in the definite direction, embossing the laminated sheet nearly homogeneously simultaneously with or after adhesion of the first sheet to the second sheet, and thereby fixing the powder matters between the first and second sheets. The powder matters include, e.g. active carbon, zeolite, ion exchange resin, CMC, polyethylene oxide.

The mfg. speed is improved markedly. As the first and second sheets laminated are embossed after scattering of powders the adhesive strength of the laminated sheet is increased and the fixation of the powders is improved. The sheets contg. water-absorbing powder matters are used for paper diaper, menstruation napkin. Those contg. water-absorbing powder matters and adsorbing powder matters are used as deodorising material and water-absorbing material for sanitary use. Those contg. adsorbing matters are used as masks for agricultural and medical use. 22.2.78 as 019433 (4pp136)

TAIS D22 33475V/18 = J7 9038-16
Polyethylene oxides in therapeutic wet dressings - used for treating der-matitis

TAISHO PHARMACEUT KK 14.03.72-JA-026027
A96 (19.11.79) *J48092-521 + A61k-09/70

Wet therapeutic dressings, for the treatment of dermatitis with adequate viscosity and adhesive props. are prepd. by adding polyethylene oxides (mol. wt. $0.1-1.0 \times 10^6$) to the dressings.

In an example, 10 pts. polyethylene oxide (av. mol. wt. 10^5) and 10 pts. polyethyleneoxide (av. mol. wt. 10^6) were dissolved in 40 pts. water, and this soln. was mixed with poly(vinyl methyl ether), kaolin and Ti oxide (10, 10, and 1 pts resp). Therapeutic agents were then added to this prepn. to produce an objective wet dressing. 14.3.72 as 026027 A61k-9/70 (19.11.79) TAISHO PHARM CO. LTD. (3pp) (J4 8092521)

MOOC D22 51689S/32 = J7 9038-170
Nickel cpds for the control of chrysosporiumlignorum

MO OCH DOMSJO AB 18.07.67-SW-010667
E31 F09 (E12) (19.11.79) *CA-877-275

PPCA D22 05852X/04 = SU -654-176
Modified cellulosic textiles - treated by swelling, dehydrating and forming the salt to improve fluid retention

PULP & PAPER RES CA INST 26.06.74-CA-203445
A11 F06 P32 (25.03.79) *DT2528-555 C08f-251/02 D01f-11/02

Modified cellulose with better water and body fluid retention, is prepd. by grafting (1) an olefinic unsatd. polymerisable monomer with hydrolysable functional gps. or (2) a monomer with a carboxy gp. onto a fibrous cellulosic and hydrolysing or treating the prod. with alkali are further treated by washing the prod. with water until max. swelling is obtd., lowering the pH until min. swelling is reached, treating the prod. to form a salt in solvent conditions allowing no swelling and drying the prod. The prod. may be used for nappies, tampons or surgical bandages. Lepotre P., Bul. 11/25.3.79 25.6.75 as 147405 (2pp)

UFAP ★ D22 90685B/50 ★ SU -654-600
Di:chlorobenzene pesticide, e.g. insecticide, prepn. - by reacting chlorobenzene with hydrogen chloride or chlorine in oxygen-contg. gas over metal chloride and lead oxide

UFA PETROLEUM INST (ASBA=) 28.09.76-SU-408718
C03 E14 (05.04.79) C07c-17/12 C07c-25/08

Dichlorobenzenes, useful as pesticides, e.g. insecticide or disinfectant, are prepd. by reacting benzene or chlorobenzene with hydrogen chloride or chlorine in oxygen-contg. gas at elevated temp. over copper or lithium chloride catalyst on a carrier.

The yield of final prod. (pref. p-dichloro-benzene) is increased by conducted chlorination at 285-295°C using catalyst comprising copper chloride, lithium chloride and additional lead oxide on alumino-silicate carrier. The $CuCl_2:LiCl:PbO$ wt. ratio is 1:(0.5-0.7):(0.02-0.04) for max prod. yield.

Gorkova S.A., Potapov A.M., Rafikov S.R., Bul. 12/30.3.79 28.9.76 as 408718 (4pp938)

SCOP ★ D22 90923B/50 ★ US 4176-426
Web formation employing intermediate foraminous spreading section - produces wide webs of uniform thickness giving enhanced prod. efficiency

SCOTT PAPER CO 02.08.78-US-930174
F04 (04.12.79) D04h-01

An apparatus for increasing the width of a fluid-entrained fibre stream, includes a first conveying duct through which a fluid-entrained stream of fibres is passed. The stream is intercepted at the downstream end by a rotatable spreading roll, which is orientated obliquely to the first duct. This roll includes a foraminous surface which receives the fibres, the fluid passing through it. The foraminous outer surface has a lateral dimension (between the duct sidewalls) that is greater than the width of the duct at its open downstream end, as measured in a direction normal to the direction of fibre flow.

A second conveying duct spaced downstream from the first duct receives the fibre from the surface of the spreading roll. Pressure differentials are established in the ap-

apparatus to aid the initial fibre deposition on the spreading roll, and to relaunch the fibres into the second conveying duct.

The process is used for the production of items such as cosmetic pads, household towels, facial tissues, etc. The fluid can be air or water. 2.8.78 as 930174 (5pp1307)

COP ★ D22 90924B/50 ★ US 4176-427
Web formation employing intermediate spaced discs spreading section - produces wide webs of uniform thickness giving enhanced prodn. efficiency

SCOTT PAPER CO 02.08.78-US-930175

F04 (04.12.79) D04h-01

In appts. for increasing the width of a fluid-entrained stream of fibres, is described. The fibre stream is fed through a conveying duct to a rotatable spreading roll. This roll comprises a number of axially spaced-apart discs which provide flow-directing channels between them. The rotational axis of the spreading roll is orientated obliquely to the direction of flow through the conveying duct.

This results in the width of the spreading roll being greater than the conveying duct width. The fibres are diverted by moving through the channels and are then released from the channels of the roll as a stream of fluid-entrained fibres wider than the stream in the conveying duct.

The appts. is useful for the prodn. of fibrous prods. such as household towels, facial tissues, sanitary napkins, and the like. The fluid medium can be either in air or water. 2.8.78 as 930175 (6pp1307)

ALI/ ★ D22 90949B/50 ★ US 4176-664
Adhesive bandage with impregnated gauze and absorbent pad - separated and covered by removable protective strips

KALISH S 13.03.78-US-885620

P34 (04.12.79) A611-15

An impregnated bandage comprises an adhesive backing sheet with an absorbent pad attached to its adhesive face. An impregnated gauze strip rests on the absorbent pad but during storage is sepd. from it by a protective strip. This strip extends beyond the pad and is folded back to cover one face of the pad and also to form a flap. A second protective strip is also folded to cover the face of the impregnated gauze and itself carries a leg.

At the time of use, the leg of each protective strip is grasped and pulled to expose the impregnated gauze and to remove the strip which separates it from the absorbent pad.

Medicament within the impregnated gauze is covered during storage by the protective strips and is not wicked into the absorbent pad. 13.3.78 as 885620 (10pp295)

ADUL- ★ D22 90950B/50 ★ US 4176-667
Disposable liq.-absorbent pad e.g. nappy, sanitary napkin or bandage - formed by laying acrylic polymer film over creped paper and spraying with liq., causing it to gel and adhere to sheet

ADULT CARE PROD INC 25.10.77-US-845377

A96 P32 P34 (04.12.79) A61f-13/16 A611-15

The pad is made by forming a film of polymer which gels on application of liq. across a crinkled absorbent sheet apexes, and producing controlled amounts of gel on the film forming a limited bond with the sheet at the apexes.

The arrangement facilitates wicking of liq. applied to the composite pad through voids between the apexes. The pad is pref. interposed between top and bottom sheets. The gel is pref. formed by spraying with a limited amt. of liq. The film is pref. of acrylic polymer and the sheet is of paper.

The pad provides rapid uptake of large amts. of liq. 25.10.77 as 845377 (5pp1358)

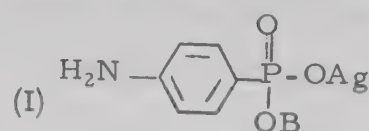
BRIM ★ D22 91057B/50 ★ US 4177-199
Antibacterial mono- and di-silver phosphanilate(s) - obtd. from phosphanilic acid and silver nitrate

BRISTOL MYERS CO 11.12.78-US-968315

B05 (04.12.79) C07f-01/10

Mono- and di-silver phosphanilates of formula (I) (where B is Ag or H) are new. An aq. suspension of phosphanilic acid is mixed, pref. at room temp. with an aq. soln. contg. about 1 or 2 molar proportions of AgNO₃, then an organic solvent e.g. actone with the optional addn. of a small amt.

of NH₄OH, is added, slowly to ppte. (I).



(I) are antibacterial agents, esp. active against Pseudomonas strains, and are suitable for use e.g. in the topical therapy of burns. In tests in vitro against

organisms such as P.aeruginosa, Str. pyogenes, Staph. aureus, E.coli, K.pneumoniae, Pr. mirabilis, and Str. faecalis they are shown to have equal or superior activity to silver sulphadiazine. 11.12.78 as 968315 (5pp476)

ALKU ★ D22 91073B/50 ★ US 4177-236
Shaped regenerated cellulose articles prodn. - by mixing extrudable viscose soln. with sodium lignate or sodium lignosulphonate crosslinked with formaldehyde, and spinning
AKZONA INC 17.03.78-US-887793 (20.07.76-US-706995)
A11 F01 (A96) (04.12.79) D01f-02

Sodium lignate or sodium lignosulphonate is reacted with formaldehyde to produce a crosslinked prod. which is in soluble in a cellulose regeneration bath. The crosslinked prod. (1-40 wt.%), and/or an aliphatic ether thereof, is mixed with viscose soln. and spun into the regeneration bath. For sodium lignate ≥3.8 wt.% HCHO is used and for sodium lignosulphonate, ≥10 wt.% HCHO is used.

The crosslinked lignin deriv. is a cheap expender for viscose providing absorbent fibres for use in diapers, sanitary napkins and tampons. 17.3.78 as 887793 (6pp1302)

SCHW/ ★ D22 91123B/50 ★ US 4177-345
Sulphation of PVA or a polysaccharide - which is partially nitrosated, followed by removal of nitrite gps., providing thickening, suspending, and emulsifying agents

SCHWEIGER R G 18.08.78-US-934818 (25.05.70-US-040442)

A11 F01 (A96) (04.12.79) C08b-05/14

A polysaccharide or PVA, contg. free OH gps., n trite gps., and ether and/or ester other than nitrite gps., is reacted with SO₃ or complex thereof at 0-25°C. The prod., contg. a mixt. of nitrite and sulphate gps.; is reacted with a protic solvent to remove nitrite gps., and is then made neutral or slightly alkaline by addn. of base. The product contains a uniform distribution of sulphate gps. (in the form of its salt), along with ether and/or ester other than sulphate gps.

The prods. are highly compatible with metal ions and have high soln. viscosities. Some of the products can be used in diapers, towels, etc.

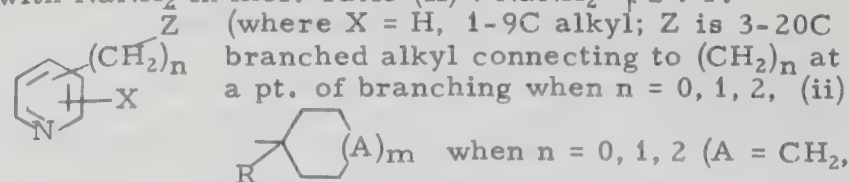
The polymeric starting material (I) is e.g. derived from starch, guar gum, alginic acid, xanthan gum, etc. (I) is suspended in a solvent contg. a swelling or solubilising agent (II) and a proton acceptor (III). Solvents which act also as (II) and (III) are e.g. pyridine, DMF. The wt. ratio of solvent : (I) is ≥3:1. 18.8.78 as 934818 Div.ex. 4035569; C.i.p. 3702843; 4143226 (+18.10.72; 10.7.74; 23.3.76; 11.4.77-US-298580; 487196; 669483; 786209) (16pp904)

REIL ★ D22 91126B/50 ★ US 4177-349
Alkyl-substd.-2,2'-bi:pyridyl(s) prepn. - useful as fungicides and chelating agents, from alkyl-pyridine(s) and sodamide

REILLY TAR & CHEM CORP 27.07.78-US-928396

C02 E13 (04.12.79) C07d-213/22

2, 2'-Bipyridyls (I) are prepd. by heating an alkylpyridine (II) with NaNH₂ in mol. ratio (II) : NaNH₂ < 2 : 1.



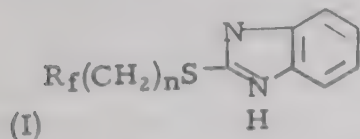
O, S when m = 0, 1, R = H or 1-4C alkyl), (iii) Ph when n = 1, 2, 3; and the 2- or 6-posn. is H).

Efficient, practical method gives high yields of (I) suitable for commercial applicn. Unlike known methods, the process does not require expensive catalysts, and gives only very low yields of 2-aminopyridine by-prods. (I) are chelating agents, fungicides, and bactericides, and pickling inhibitors, etc. 27.7.78 as 928396 (8pp478)

PENN ★ D22 91127B/50 ★ US 4177-351
Fluorinated heterocyclic sulphide(s) - useful as surface tension depressants and antibacterials

PENNWALT CORP 17.06.75-US-587794 (21.08.71-US-171325)
C02 E13 (04.12.79) C07d-235/04

New fluorinated alkyl sulphides are of formula (I), (where R_f is 5-13C perfluoroalkyl, perfluoroisoalkyl or perfluoromonochloroalkyl; and n is 2 or 3). In preferred cpds. n is 2 and R_f is 7-11C perfluoroalkyl.



The new cpds. are useful as surface tension depressants of organic and aq. systems, and the acid salt, quat-

ernary salt and amphoteric derivs. of the cpds. are particularly useful surfactants due to their excellent ability to lower surface tensions in aq. systems. The cpds. may also be used to kill or inhibit the growth of bacterial microorganisms, including *Staphylococcus aureus* and *Aspergillus niger*.

US3933819 claimed new cpds. of formula: $\left[\overline{R}_f(\text{CH}_2)_n - \text{S} \right]_z \text{Q}$ (where R_f is 5-13C perfluoroalkyl, perfluoroisoalkoxyalkyl or perfluoromonochloroalkyl; Q is pyridyl, pyrimidyl, triazinyl, piperazinyl, piperidyl or quinolinyl; and z is 1 or 2). 17.6.75 as 587795 Div.ex. 3933819 (5pp990)

See Also

D15 J5 4142171
D25 GB 1551224

D21 GB 1552049

D21 J5 4140714

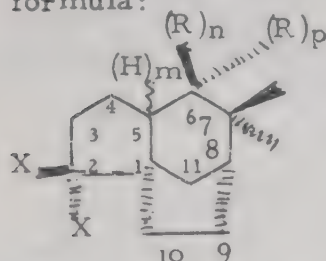
D23: OILS; FATS; WAXES

FIRM D23 32038V/17 = DS 2350-388
Tricyclic undecane derivs - useful as perfume ingredients and organoleptic modifiers to replace natural etherial oils

FIRMENICH SA 10.10.72-CH-014783

E15 (06.12.79) *NL7313-920 A61k-07/46 C11b-09

Fragrance ingredients for perfumes are tricyclic cpds. of formula:



(where in position 5, 6 there is a single or a double bond; m , n and p are 0 or 1; X and X together represent O or one X is acyl, hydroxy, O-acyl, CH_2OH , CH_2O -acyl or COO -alkyl and the other is H; R is lower alkyl when m and p are both 0 and $n = 1$, R is lower alkylidene when m

and $n = 1$ and $p = 0$ or one R is lower alkyl and one R = H when m , n and p all are 1), e.g. 7,7-dimethyl-6-methyltricyclo[6.2.1.0^{1,5}]undecan-2-one (I).

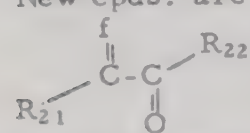
(I) has a wood fragrance which is stable and easily reproducible. 8.10.73 as 350388 (5pp068).

INFL D23 52578Y/30 = DS 2700-688
Higher carbonyl cpds. having organoleptic properties - prepd. by reacting a substd. halide or substd. aldehyde with a carbonyl cpd. (NL 19.7.77)

INT FLAVORS & FRAGR INC 22.12.76-US-753617 (15.01.76-US-649544)

E15 P15 (D13) (06.12.79) *DT2700-688 A23I-01/22 A24b-15/04
A61k-07/46 C07c-45 C07c-47 C07c-49

New cpds. are carbonyl cpds. (I) of formula:



(where the gp. C = f is a 6C cycloalkyl or cycloalkenyl gp. which has a dimethyl substd. in the 3-position and either (1) R_{21} is H and R_{22} is a carbon atom substd.

by one or two allyl or methallyl gps. or by $-\text{CHR}_{24}$ where R_{24} is ethyl or isobutyl gp. or (2) R_{22} is methyl or H and R_{21} is an allyl or methallyl gp. or the C = f gp. is an acyclic hydrocarbon gp. in which case cpd. (I) is 2,4,7-trimethyl-2,6-octadienal). Cpds. (I) may be prepd. by reacting a suitable halide or aldehyde with a suitable carbonyl cpd. in presence of a tert. amine, toluene, tert.-butanol or macrocyclic ether and also a base or a boron oxide-boric acid mixt.

Cpds. (I) are useful as flavouring for foods, beverages, tobacco and/or perfumes. 8.1.77 as 700688 (+ 15.1.76, 11.8.76(2), 11.11.76(2), 22.12.76 - US - 649552, 713357, 713429, 740948, 741088, 753453) (38pp068).

INDU- ★ D23 89476B/50 ★ DT 2822-426
Decorative self extinguishing wax candle - with tongs gripping spiral wax strand near wick end

IND ELEKTRIK OHG 23.05.78-DT-822426

(06.12.79) C11c-05

A decorative candle consists of a disc with feet and a central column, around which a long thin strand of wax with a wick in the centre is wound in a multilayer steep-pitched spiral. The end of the strand is held at a certain distance from the protruding wick by two thin arms of spring-loaded

tongs.

The distance from the free end to the tong application fixes the length of time before the candle extinguishes itself because the heat softens the wax and the arms pinch together thus preventing further wax from having access to the flame. Such a candle is simple and safe to use. The desired lighting time can be readily set. 23.5.78 as 822426 (7pp39)

LABO D23 27889B/15 = GB 1557-550
Hydrogenating oils, esp. cooking oils, using nickel catalyst - in presence of a specified amt. of a basic nitrogen cpd. to avoid formation of solid products

LABOFINA SA 02.12.77-LU-078621

(D13) (12.12.79) *BE-872-477 C11c-03

Partial and selective hydrogenation of vegetable oils having ≥ 2 -C=C- bonds in the presence of a Ni catalyst, is carried out in the presence of a basic N-cpd. which is free from alcoholic OH gps. The amt. of the basic N-cpd. is such that there are 5-40 atoms of N per 100 atoms of Ni.

Pref. N-cpd. is urea, hexamethylene tetramine or 8-22C aliphatic amine or their mixt. Pref. the reaction is carried out at 100-175°C under a H_2 pressure of 0.5-10 kg/cm^2 . Pref. the hydrogenation is carried out until the iodine value of the prods. is 10-40 units lower than that of the starting oil. 17.5.78 as 020158 (3pp924)

METG D23 25277A/14 = GB 1557-751
Recovering solvent from aq. organic solvent oil seed extract - esp. of soya using alcohol in multistage distillation

DRAVO CORP 26.11.76-US-745397

(12.12.79) *BE-861-229 B01d-03

A miscella obtd. by extracting oleaginous seed material comprising dissolved sol. components in an aq. organic solvent, is distilled to recover the solvent in fractions of different concns.

The process comprises introducing the miscella into an evaporation zone to separate the miscella into liq. and vapour-streams; contacting part of the vapour stream with a liq. reflux in a rectifying zone; condensing the vapours withdrawn from the rectifying zone and returning a portion of the resulting condensate to the zone as the liq. reflux, the remaining portion of the condensate contg. part of one of the aq. organic solvent fractions; withdrawing a liq. stream from the bottom of the rectifying zone; contacting the liq. stream from the evapn. zone with vapours in a stripping zone; withdrawing a liq. stream contg. the sol. components from the stripping zone; and condensing the vapours withdrawn from the stripping zone.

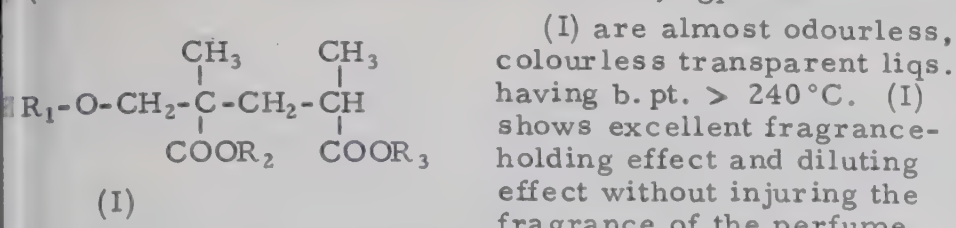
Extraction of carbohydrates and alcohols from seed material such as soybeans, renders the resultant soy flour fit for human consumption. 25.11.77 as 049217 (9pp931)

KYOX ★ D23 90072B/50 ★ J5 4140-742
Perfume compsn. - contains di:basic acid di:ester prepd. e.g. by reacting methacrylic acid ester with alcohol

KYOWA GAS CHEM IND 20.04.78-JA-047054

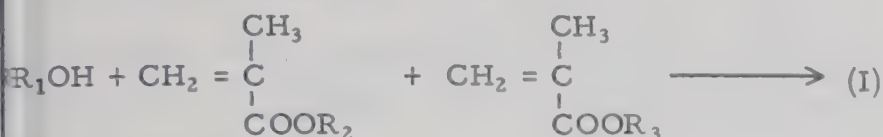
E17 (01.11.79) A61k-07/46

perfume compsn. contains dibasic acid diester of formula (where R_1, R_2, R_3 : are each 1-10C alkyl gp.



(I) are almost odourless, colourless transparent liqs. having b. pt. $> 240^\circ\text{C}$. (I) shows excellent fragrance-holding effect and diluting effect without injuring the fragrance of the perfume.

(I) can be prepd., for example, by reacting methacrylic acid ester with alcohol according to the equation:



The reaction is practised at 0-200 (50-150) $^\circ\text{C}$ at the presence of excess alcohol using alkali metal alcoholate catalyst. 20.4.78 as 047054 (4pp5)

PSC ★ **D23** **90194B/50** ★ **J5 4141-711**
geraniol and linalool prodn. from nerol - by heating in presence of molybdenum catalyst

NISSAN CHEM IND KK 22.04.78-JA-048149
B05 E17 (05.11.79) B01j-23/28 C07c-29 C07c-33/02

prodn. of geraniol and linalool, comprises converting 50-100% of nerol by heating at 170-200 $^\circ\text{C}$ in the presence of 0.01-0.05 wt. % molybdenum catalyst. Typical molybdenum catalysts are metallic molybdenum, molybdenum oxide, molybdenum chloride, ammonium molybdate, alkali metal molybdate, and molybdic acid esters.

Geraniol and linalool are useful as a starting material for perfumes and pharmaceuticals. The process gives geraniol and linalool in a higher state of yield and selectivity with lower cost, when compared to the known method. 22.4.78 as 048149 (3pp33)

HOHN **D23** **76778X/41** = **J7 9037-882**
roasting pretreatment of beans prior to oil and fat extraction - to reduce phosphorus content without degradation

HOHNEN OIL KK (HOHN-) 24.02.75-JA-022666
(17.11.79) *J51097-604 C11b-01/04 C11b-03/16

pretreatment method for extraction of fatty oils and fats from beans by the use of solvents, consists of roasting raw material beans (heating beans to 230-350 $^\circ\text{C}$ for 3-60 mins. in the absence of water), controlling the water content of the beans to 8-13%, pressing and flattening the beans, collecting bean crude oil by extraction with solvents, hydrating the crude oil with water, inorganic or organic acid aq. solutions, and removing gum from the hydrated crude oil by centrifugation, filtration, etc.

By roasting beans for fatty oil and fat-extraction use, phosphorus fatty matters contained in oil-contg. cells of beans are thermal-modified and tend to swell and coagulate in the presence of water and to be removed by the gum-removal process. Consequently, amounts of the residual phosphorus fatty matters contained in raw oil (gum-removed oil) are reduced without deteriorating the quality of bean oil products, and excellent food oil of good taste is obtained. 24.2.75 as 022666, C11b-1/04, 3/16 (17.11.79) HOHNEN OIL KK (3pp) (J5 1097604)

SE= ★ **D23** **90584B/50** ★ **SU -653-291**
eucalyptus oil rich in cineole prodn. - by boiling oil in presence of air and nichrome wire and fractional distillation

ESSENTIAL OILS CULT 21.09.77-SU-528856
(25.03.79) C11b-09/02

eucalyptus oil can be enriched in cineole by rectification. The yield of this process can be increased and the quality

of the prod. improved by the removal of heavy and light oil fractions before and during the rectification. Before fractionation the oil is treated at b.pt. with atmospheric oxygen in presence of a nichrome wire acting as a catalyst. The air is pref. bubbled through the oil.

Ivanova L.G., Chipiga A.P., Bagaturiya N.Sh., Bul. 11/25.3.79 21.9.77 as 528856 (3pp70)

LENI ★ **D23** **90748B/50** ★ **SU -654-674**
Prodn. of metal-working lubricant - by oxidising petroleum schist concentrate in alkali and treating prod. with fatty acid distillation tarry residues

LENINGRAD LENSOFET TECH (UMET= NIZH=) 15.07.76-SU-394363

E17 H07 M21 (30.03.79) C10m-05/14 C10m-07/22

Metal-working lubricant for e.g. hot-rolling, hot-pressing, cold-working etc. is obtd. by oxidising a petroleum schist concentrate in aq. alkali at 180-220 $^\circ\text{C}$ and 30-50 kg./sq. cm. pressure; sepg. the resulting liq. fraction; and treating it with tarry residues from the distilln. of fatty acids obtd. from vegetable oils, soapstocks or technical fats.

The method provides a lubricant having high wear protection props. In a pref. method, the amt. of alkali used in the oxidn. step is 30-50 wt. % on schist concentrate wt., and the oxidn. time is pref. about 3 hrs.

Postolov Yu.M., Prostkuryakov V.A., Yakovlev V.I. et al. Bul. 12/30.3.79 15.7.76 as 394363 (3pp314)

SVAT= ★ **D23** **90895B/50** ★ **SU -655-718**
Deodorisation unit for fats and oils - has a column with part of deflectors above partitions and part above the bowls

SVATOVO OIL FAT IND 13.04.77-SU-477274
(05.04.79) A23d-03/02 C11b-03/14

Intensified deodorisation of fats and oils, as well as compactness of the unit are ensured with each bowl featuring additional deflectors inside the column. The screen bottom is inclined towards the level setters, and part of the deflectors is mounted above the partitions forming inverted troughs. The other part is fitted above the bowls.

The raw material preheated to 190-220 $^\circ\text{C}$ is fed to the upper bowl for mixing with live steam which entrains the volatiles, while oil flows between the partitions reaching the cup of the level controller. The latter is connected to the valve with oil discharged into the bowl below. The steam with distillate and oil particles impacts the particles ensuring oil sepn. for its return into the bowl, while steam and distillate reach the free space of the column for condensation and removal. The oil passes through the remaining bowls for repeat treatment before the discharge. Lozheshnik V.K., Syркиn G.E., Shcherbakov V.I. et al. Bul. 13/5.4.79 13.4.77 as 477274 (3pp89)

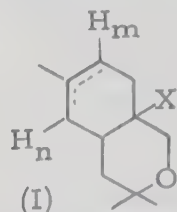
ALBR **D23** **02358B/02** = **US 4177-170**
Tetra:methyl-oxa-bi:cyclo:decene derivs. - prep. by cyclising alcohol in presence of acid catalyst and used in perfumery compsns.

BUSH BOAKE ALLEN LT 21.06.77-GB-025863
E13 (04.12.79) *EP-----257 C11b-09

3, 3, 7, 8-Tetramethyl-2-oxabicyclo(4, 4, 0)decane derivs. of formula (I) are new. In (I) X is H or 1-4C alkyl.

$m = 0$ or 1, $n = 1$ or 2, $n+m = 2$ and the dashed line indicates alternative positions for a unit of unsaturation. Pref. X is Me or H and n and m are each 1.

(I) are used in perfume compsns. They have a fresh floral type of odour with a blend of prominent neroli bitter orange notes. 19.6.78 as 916494 (5pp964)



See Also

D14 GB 1557501

D24: SOAP; SOAP DETERGENTS

NOTHING TO REPORT

D25: OTHER DETERGENTS

BURG/ ★ D25 89423B/50 ★BE-878-104
Continuous vehicle washing process and appts. - with washing, treating, rinsing and blow drying stages
BURGER H 07.08.78-DT-834582
E16 Q17 (03.12.79) B60s

The vehicles pass through a washing installation by being drawn into a washing track and are washed one after the other with a detergent, then rinsed with water, treated with a protecting agent and then dried.

To assist drying, the rinsing water is applied without pressure from a low height on the vehicle surfaces; an agent for increasing the surface tension of the water and for making the rinsed surface dry and shining having been applied previously in a separate operation. The residual drops of water are removed from the surface by a ventilating appts.

The process is carried out in an appts. comprising a gantry with a rinsing bar which extends the width of the vehicle and which is adjustable in height. The bar is mounted on a support and has openings along its length.

The process enables quieter washing and drying with less energy consumption without increasing the cost or operating time. 6.8.79 as 878104 (12pp597)

UNIL D25 08504W/05 =DS 2432-942
Liquid foaming cleaning agents - based on high foaming amine salt of alkylaryl sulphonic acid

UNILEVER NV 10.07.73-GB-032849
(06.12.79) *NL7408-904 C11d-01/12 C11d-03/16

Liquid cleanser contg. a foaming cleaning agent comprises an aq. soln. contg. (a) 5-15 pts. wt. of a high foaming alkali metal ammonium or amine salt of an alkylaryl sulphonic acid (8-16C alkyl gp.) and/or a high foaming amphoteric detergent, (b) 1-10 pts. wt. of an alkali metal, ammonium or amine salt of an alkylsulphuric acid (8-18C alkyl gp.) (c) 1-8 pts. wt. of an alkali metal or ammonium salt of toluene- or xylene-sulphonic acid as solubiliser, (d) 2-15 pts. wt. of a 2-4C alcohol and (e) 0.5-7.5 pts. wt. of an alkali metal salt of a polyhydroxycarboxylic acid or aminocarboxylic acid or their mixts. as builders. The aq. soln. has a pH of 7-11 and may also contain sodium metasilicate.

The agent may be used to clean the interiors of cars, trains, aeroplanes, buildings, etc. where the surfaces may be plastic or aluminium alloys without damage. 9.7.74 as 432942 (5pp068).

KAOS D25 47975W/29 =DS 2460-016
Preventing yellowing of washed clothing - with detergent contg. chain radical formation inhibitor, oxidn. protector and oxygen-type bleaching agent

KAO SOAP KK 27.00.74-JA-004220
E14 (E15) (06.12.79) *DT2460-016 C11d-03/20

Cleansing agent for textiles contains (1) anionic or nonionic organic surfactants or their mixts., (2) water soluble inorganic salts or organic cpds. or their mixts. as builder and chief constituent, (3) 0.001-1.0 wt. % of at least one antioxidant and (4) 0.5-50 wt. % oxygen bleaching agent, pref. sodium percarbonate. The antioxidant is 4,4'-butylidene-bis(6-tert-butyl-3-methylphenol), 2,2'-butylidene-bis(6-tert.-butyl-4-methylphenol), a cresol with one or two styrene gps., a phenol with one or two styrene gps. or 1,1'-bis(4-hydroxy-phenyl)cyclohexane.

The cleansing agent reduces yellowing of the textiles. 19.12.74 as 460016 (6pp068).

KAOS D25 09451Y/06 =DS 2642-894
Granular or powdery nonagglomerating detergent compsn. - contg. agglomerating type surfactant and specified antiagglomerating agent

KAO SOAP KK 30.09.75-JA-117815
A97 E19 (06.12.79) *BE-846-687 C11d-01/12 C11d-03/37

Granular detergent compsn. comprises (1) 2-40 wt. % of a surfactant with a tendency to agglomerate and which is an alkylethoxysulphate, alkylphenylethoxysulphate, branched alkylsulphate, alkane sulphonate, sulphonate salt of

a vinylidene olefin or internal olefin or a polyoxyethylated nonionic surfactant or a mixt. of such cpds., (2) 0.2-20 wt. % of a nonionic surfactant of formula $RO(CH_2CH_2O)_nH$ (where R is a 12-18C alkyl or alkenyl gp. and $n = 100-300$), (3) 0-20 wt. % of a further surfactant which is an alkylbenzene sulphonate, a linear alkylsulphate or an α -olefin sulphonate or their mixts. and (4) 10-4 wt. % of a water soluble builder. The wt. ratio of components (2) to (1) is at least 10:100.

Component (2) reduces the tendency of the compsn. to agglomerate. 24.9.76 as 642894 (9pp068).

KAOS ★ D25 89604B/50 ★DT 2918-255
Liq. cleaner for oily kitchen soil - contains alkanolamine, polyoxyalkylene alkyl ether and surfactant

KAO SOAP KK 05.06.78-JA-067530
A97 E19 (06.12.79) C11d-01/83 C11d-03/30

Liq. cleaning compsn. comprises (a) 0.5-30wt. % ≥ 1 alkanolamine of formula $(C_nH_{2n}OH)_mNH_3-m$ (n and $m = 1-3$); (b) 0.5-30wt. % ≥ 1 polyoxyalkylene-mono or di-alkyl ether of formula $RO(C_2H_4O)_x(C_3H_6O)_yR'$ R and $R' = H$ or (m)ethyl, but not both H. $x+y = 3-10$ (3.5-6) and 0.0 x 0.25 y) and (c) 0.1-20wt. % ≥ 1 water-soluble, synthetic organic surfactant; the balance being mainly water.

Specified surfactants are salts of alkylbenzenesulphonates, monoalkyl sulphates, alkylsulphonates or olefin sulphonates (olefin and alkyl gps. 8-22C); salts of 8-22C alkyl-polyoxyethylene ether sulphates (1-6 EO), salts of 8-18C alkylphenylpolyoxyethylene ether sulphates (1-6 EO), 8-18C alkylphenylpolyoxyethylene ethers (6-12 EO); 8-22C alkylpolyoxyethylene ethers (6-12 EO) and mono- or diethanolamides of 8-22C fatty acids.

Used esp. for rapid removal of (decomposed) oily soil and marks in kitchens and associated equipment such as ventilators. The compsn. do not have the unpleasant smell of organic solvents or amines, and are of low toxicity. 5.5.79 as 918255 (18pp1251)

ALBR ★ D25 89638B/50 ★DT 2921-366
Conc. aq. compsn. of surfactants in the G-phase - contg. amphoteric and nonionic components

ALBRIGHT & WILSON LTD 25.05.79-DT-921366 (26.05.78-GB-022991)
E19 (06.12.79) B01f-17

Aq. surfactant compsn. contains ≥ 20 but ≤ 55 wt. % water and a mixt. of surfactants comprising (a) ≥ 5 wt. % first amphoteric surfactant (I) and (b) ≥ 5 wt. % ≥ 1 nonionic surfactant (II) and/or another amphoteric surfactant (III) which is not homologous with (I). The mixt. is able to form a G-phase in the presence of water and the concn. is such that the compsn. exists mainly as such a phase. Pref. the mixt. contains n components each forming a G-phase at concn., g , and the concn., C , in the mixt. is defined by the eqn. $C_1/g_1 + C_2/g_2 \dots C_n/g_n = 1$.

These mixts. form fluid G-phases at (slightly above) ambient temp. and are pumpable at concns. $\geq$ twice that otherwise possible. Such high concns. reduce transport and storage costs and provide bacteriostatic action. The compsns. are readily diluted with water. 25.5.79 as 921366 (26pp1251)

BADI ★ D25 89726B/50 ★EP ---5-789
Stabiliser and flow enhancer for zeolite slurry used in detergent mfr. - is aliphatic di:carboxylic acid or salt, effective at low concn.

BASF AG 03.06.78-DT-824443
E17 (12.12.79) C01b-33/28 C11d-07/14
D/S: E(BE, CH, DT, FR, IT, NL, OE, SW).

Storable, fluid and pumpable aq. suspensions (slurries) contg. 20-60 (wt. %) finely-divided, water-insol. Na aluminosilicate (zeolite) contain a stabiliser and flow improver consisting exclusively of an OH-free (un)satd. aliphatic 3-10C dicarboxylic acid (I) or its alkali salt. (I) is used in amts. of 5-15% based on the suspension.

The slurries are used in the prodn. of detergents. They are stable for at least 24 h. and contain readily

available and cheap additive, which is compatible with washing active substances and is effective even in small amounts.

2.05.79 as 101556 (10pp016)

(G) ISR: DT2615698; DT2527 388; US4018622.

ARH ★ D25 89744B/50 ★EP ---5-829
Anionically emulsified wax emulsion contg. cationic germicide - prep. in presence of nonionic surfactant, useful for cleaning floors
HOECHST AG 06.06.78-DT-824716
A82 G02 P34 (A17 A97) (12.12.79) A611-13 C09g-01/08 C11d-03/48
S: E(BE, DT, FR, GB, IT, NL).

Prepn. of aq. wax emulsion comprises first separately preparing an anionically-emulsified wax emulsion of 5-20 wt.% active content, and an aq. soln. of cationic biocide (I) which is a salt or quaternization prod. of a long-chain fatty amine.

Then a condensate (II) derived from an 8-34C fatty alcohol and/or 8-22C alkylphenol with 6-50 moles ethylene oxide is added to one or both mixts. The mixts. are then combined so that the final emulsion contains (wt.%) wax 1-20; (I) 1-10; (II) 1-10. Pref. the wax is emulsified in presence of (same) (II).

The emulsions themselves are also claimed.

The emulsion is used for treating floors. The compsns. have good cleaning and flow props. and in presence of (II) the normally incompatible wax and biocide can be combined to give storage stable compsns.

2.05.79 as 101655 (12pp1251)

(G) ISR: -

HENK ★ D25 89752B/50 ★EP ---5-850
Aq. cleaner contg. quat. ammonium textile softener - and two different alcohol-ethylene oxide condensates
HENKEL KG AUF AKTIEN 01.06.78-DT-824024
A97 E19 F06 (A25) (12.12.79) C11d-01/83
S: E(BE, CH, DT, FR, IT, NL).

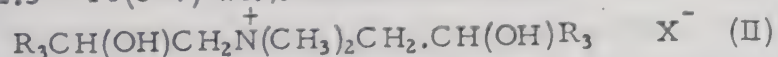
liq. cleaner contains (a) 5-18 wt.% glycol ether



R_1 = linear alkyl and R_2 at 20-75 wt.% (on alcohol combined in (I)) is 1-4C alkyl and otherwise H. $R_1 + R_2$ contain 11-15 C and $n = 5-9$ such that the ethylene oxide (EO) content of the cpd. is 50-65 wt.%;

(b) 5-18 wt.% Similar (I) but R_2 may be H, $R_1 + R_2$ contain 10-10C, $n = 3-8$ and EO content is 55-70 wt.%; and

(c) 2.5 - 10(3-7) wt.% textile softener



$R_3 = 14-16C$ opt. branched alkyl, $X^- = Br$, ethylsulphate, dimethane- or toluenesulphonate or pref. Cl^- or methylsulphate). The ratio (a) : (b) is 2:1-1:2.

For machine or hand washing of textiles (synthetics or their blends with wool) giving simultaneous softening and antistatic effect. Compsns. are fluid, storage stable (even at low temp.), foam well and do not adversely effect the odour of perfumed prods.

2.06.79. as 101726 (22pp1251).

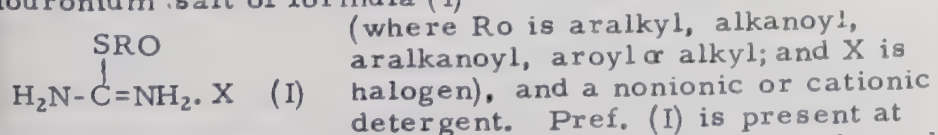
(G) ISR: DS1220956; US3636114.

COAL ★ D25 89880B/50 ★GB 1551-224
Bactericidal detergent - contg. an S-substd. thio-uronium salt and a nonionic or cationic detergent

COALITE & CHEMICAL PRODS 02.05.75-GB-018456

E16 P34 (D22 E14) (30.08.79) A01n-09/12 A611-13 C11d-03/48

A bactericidal detergent compsn. comprises an S-substd. thiouronium salt of formula (I)



0.001-10 (0.1-1)wt.%. Typically (I) is S-(p-n-propylbenzyl)thiouronium chloride.

The compsn. has bactericidal properties against e.g. *Pseudomonas pyocanea*, *Escherichia coli*, *Staphylococcus aureus* etc., and (I) provide the bactericidal properties used in e.g. cleaning of soiled crockery or glasses.

20.4.76 (6pp957)

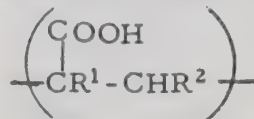
PROC ★ D25 89881B/50 ★GB 1551-239
Detergent contg. orthophosphate and pyrophosphate builders - has poly:carboxylate deposition inhibitor

PROCTER & GAMBLE CO 13.08.76-GB-033786 (22.09.75-GB-038784)

A97 E34 (A18) (30.08.79) C11d-03/06 C11d-10/02

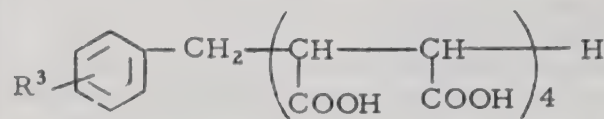
A detergent compsn. comprises 1-70wt.% of an organic surfactant, 5-50wt.% of a mixt. of Na and/or K ortho- and pyro-phosphate and 0.1-10wt.% of a polycarboxylate deposition inhibitor. The wt. ratio of orthophosphate to pyrophosphate is 9:2-3:7.

The deposition inhibitor is (i) a homopolymer of m. wt. 500-250000 and repeating units:



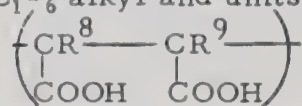
where R^1 is H or OH and R^2 is H or COOH or (ii) a copolymer of m. wt. 500-250000 of maleic acid with ethylene vinyl methyl ether or styrene

or (iii) aryl maleic acid oligomers of formula-



where R^3 is H or CH_3 or (iv) copolymers of m. wt. 500-100000 contg. units of the formula

$-(\text{CR}^4\text{R}^5-\text{CR}^6\text{R}^7)-$ (I) where R^4 , R^5 , R^6 and R^7 are each H or C_{1-6} alkyl and units of the formula:



or the equiv. anhydride, where R^8 and R^9 are each H, OH, OCH_3 , OC_2H_5 , OC_3H_7 , OC_6H_5 or OCH_2COOH the ratio of units (I) to units (II)

being 10:1 to 1:10. Any of the polycarboxylic acids can be in salt form.

The polycarboxylates prevent deposition of insol. phosphates on fabrics and drums and heating elements of washing machines. 21.9.76 (11pp1302)

PROC D25 23635A/13 =GB 1557-568
Detergent contg. granular bleach - comprising quat. ammonium salt, per-salt and acid percussor (BE 20.3.78)

PROCTER & GAMBLE CO 20.09.76-GB-038821

E19 (12.12.79) *DT2741-680 C11d-01/62 D061-03/02

Granular laundry compsn. comprises an agglomerate of (a) 1-50% by wt. of the agglomerate of a quat. ammonium surfactant (I) and (b) 10-90% by wt. of the agglomerate of an organic acid precursor (II) as activator for a persalt bleaching agent. Wt. ratio of (I) to (II) is 5:1-1:10, pref. 3:1-1:8.

(I) is e.g. ditallowdimethylammonium chloride or distearyldimethyl ammonium chloride (II). is e.g. N, N, N', N'-tetraacetylenediamine or N-acetyl imidazole. The agglomerate may further comprise an agglomerating aid and/or an inorganic carrier salt. The agglomerate particles pref. have a mean size of 0.3-2.6 mm

Compsn. allows bleaching at low temps. without 'pin-point' spotting damage to fabrics. 20.9.76 as 038821 (13pp927)

TENC D25 51670A/29 =GB 1557-756
Prepn. of expanded polyurethane contg. detergent and filler - useful as sponge for cleaning

TENNECO CHEMICALS 24.03.77-US-780701

A25 E12 (A97) (12.12.79) *BE-864-796 C08g-18/14 C11d-17 + C08k-05/42 C08l-75/08

Mfr. of a filled detergent hydrophilic flexible polyurethane foam comprises (a) forming a mixt. (I) of clay filler and alkyl aryl sulphonate detergent, (b) mixing the mixt. with a normally liq. polyether polyol and (c) introducing the mixt. (II) obt'd., tolylene diisocyanate and water as blowing agent into the mixing chamber of a foam machine.

Pref. the filler is kaolin coated with 0.2-2wt.% polyamine, esp. ethylene diamine. Pref. the detergent is linear dodecyl benzene sodium sulphonate. The tolylene diisocyanate is pref. a mixt. of 65wt.% 2,4-tolylene diisocyanate and 2,6-tolylene diisocyanate. 9.3.78 as 009310 (9pp393)

SOLV D25 76317A/43 =GB 1557-760
Reducing the molecular weight of hydroxy-carboxy polymers - esp. hydroxy-acrylate(s), using oxidising agent in a solvent

SOLVAY & CIE 25.04.77-LU-077196

A97 (12.12.79) *BE-866-224 C08f-08/50

Mfr. of a salt of a hydroxycarboxylic polymer from a poly-

mer salt which is similar to the desired polymer salt except that it has a higher mol. wt. comprises reacting the starting polymer salt with an oxidising agent in the presence of a solvent.

The polymer salts are esp. of formula $(-CR^1R^2-C(OH)(COOM)-)$ where R^1 and R^2 are H or unsubst. or hydroxy- or halo-subst. 1-3C alkyl and M is alkali metal or ammonium. Specifically the polymer salts are Na polyalpha-hydroxyacrylates. The mol. wt. of the starting polymer salt may be e.g. 10000-800,000. A pref. solvent is water and a pref. oxidising agent is H_2O_2 .

The polymer salts are used as builders in detergent compns., and are obtd. with a high degree of whiteness. 24.4.78 as 016082 (4pp945)

SOLV D25 76318A/43 = GB 1557-771
Poly-alpha-hydroxyacrylic acid salts prepn. - from corresp. polylactone and base in presence of an oxidising agent

SOLVAY & CIE 25.04.77-LU-077195

A97 (12.12.79) *BE-866-225 C08f-08/44

Prepn. of a salt of a poly-alpha-hydroxyacrylic acid contg. monomeric units of formula $(-CR^1R^2C(OH)(COOM)-)$ where R^1 and R^2 are H or 1-3C alkyl and M is cation is claimed. Process comprises reacting a solid polylactone derived from the appropriate polyalpha-hydroxyacrylic acid with the base from which M is derived in a liq. medium contg. diluent in addn. to water but which does not dissolve the polylactone or the salt being produced. In addn., an oxidising agent is added to the liq. medium.

Suitably the oxidising agent is H_2O_2 and is present at 0.01-15 mol% based on the number of hydroxyacrylic units present in the starting polylactone. The salt is obtd. with a high degree of whiteness and can be used directly in detergent compns. or as a sequestering agent. 24.4.78 Add to 1450758 (5pp945)

KAOS ★ D25 89939B/50 ★ GB 2022-126
Liquid detergent compns. for bathrooms etc. - contg. polyether solvent, surfactant and acid

KA O SOAP KK 05.06.78-JA-067531

A97 E19 (E34 E36) (12.12.79) C11d-03/20 C11d-10/02

Acidic or weakly acidic detergent compns. are claimed contg. (a) 0.1-20wt. % of ≥ 1 solvent of formula (I) $RO(C_2H_4O)_x(C_3H_6O)_yR'$ (where R and R' are H, Me, Et with the proviso that both cannot be H simultaneously, and $x+y$ is 3-10, and $0.0 \leq x \leq 0.25 y$); (b) 0.1-10wt. % water sol. synthetic anionic or nonionic surfactant, (c) 0.1-20wt. % of a water-sol. acidic substance or mixt. of acidic substances, and (d) water.

The compsn. is for use in clearing bathrooms and toilets. The solvents (I) have good cleaning and emulsifying power for organic soils and satisfactory odour. 14.5.79 as 016627 (6pp955)

NORD- ★ D25 B/50 ★ IT 1033-617
Slightly detergent aq. alcohol soln.

LA NORDICA INDERBI 06.11.74-IT-083637

(10.08.79) C11d

LIOY ★ D25 90371B/50 ★ J5 4142-209
Detergent additive giving durable softness to textiles - contains quat. ammonium type cationic surfactant, CMC or polyacrylic acid and water soluble polymer contg. cationic nitrogen

LION FAT & OIL KK 28.04.78-JA-050098

A97 E19 F06 (A11 A25) (06.11.79) C11d-10/02 D06m-13/46 D06m-15/24

An additive for cleaner which contains (a) cationic surfactant $((R_1).(R_2).(R_3).(R_4).N)^+.X^-$ (where R_1, R_2, R_3 and R_4 are alkyl, oxyalkyl, polyoxyalkylene or benzyl, and one or two of these are 8-22C alkyl, X is halogen), (b) CMC and/or polyacrylic acid and (c) water-soluble polymer contg. cationic nitrogen having density of electric charge of cation > 0.0005 . (Density of electric charge of cation = (number of cation of monomer)/(mol. wt. of monomer).).

It gives favourable appearance and durable softness to cloths at their washing time by the combined use with a cleaner consisted of anionic surfactant as a principal component.

The cationic surfactant: (a) is e.g. $((R).(R).(CH_3).CH_3).N^+Cl^-$, $((R).(CH_3).(CH_3).(CH_3).N)^+.Cl^-$, $((R).(CH_3).CH_3).(CH_2.C_6H_5).N^+Cl^-$, $((R).(CH_2CH_2O)_m.H.(CH_2CH_2O)_n$

$H.(CH_2).N^+Cl^-$, etc., (where R is 16-22C alkyl, m and n are 1-10). It is pref. present at ≥ 5 wt. % in this additive As (I), alkali metal salt of CMC having 0.4-1.2 of carboxy methyl gp. per glucose unit and/or alkali metal salt of polyacrylic acid having 200000-7000000 of mol. wt. are employed. Pref. it is present at 1-5 times the wt. of the equiv. for the neutralisation of electric charge of cationic surfactant (a). The water-soluble polymer (c) is e.g.

$(-CH(CH_2CH_2OR_1)-CHOR_2-CHOR_3-CH-O-)_n-$ (where R_1 is H or

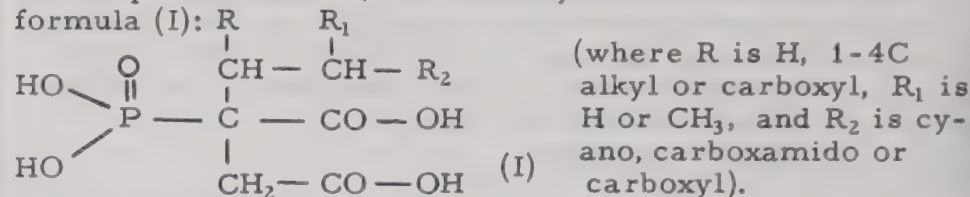
$(C_2H_4O)_mR'$, R_2 are R_3 are H or $(C_2H_4O)_lR'$. R' is $CH_2CH(OH).CH_2.N^+(CH_3)_2.Cl^-$, n is a finite number, $1+m$ is 1-3 per unit structure. It is pref. present at 0.1-1 times the wt. of (a). This additive is desirable to be used so that the amt. of (a) should be > 0.05 wt. % of the washing cloths. 28.4.78 as 050098 (5pp170)

FARB D25 42037T/26 = J7 9038-086
2-phosphonobutane-1,2-dicarboxylic acid derivs - useful as sequestering agents eg in detergents

FARBENFAB BAYER AG 16.12.70-DT-061838

E11 (19.11.79) *BE-776-727 B01j-31/02 C07f-09/38 C09k-03 C11d-07/36 + B01j-23/02

2-Phosphonobutane-1,2-dicarboxylic acid derivs. are of formula (I):



(I) are complexing agents for alkaline earth metals, their complexing power being higher than that of known complexing agents. 15.12.71 as 101100 (clg. 16.12.70-DT 061838) C07f-9/38, B01j-23/02, 31/02, C09k-3/00, C11d-7/26 (19.11.79) FARBENFAB. BAYER AG. (-pp) (J47012414)

ELDI- D25 02457W/02 = J7 9038-122
Detergent compsn. contg. citrates as builders - has good cleaning props. and reduced irritation effect

ELDIB ENG & RES INC 27.04.71-US-138001

A97 (19.11.79) *GB1379-734 C11d-03/37

A cleansing and laundering compsn. contains (a) ≥ 1 org. water-sol. surfactant (b) a water-sol. alkali metal or ammonium salt of citric acid as a builder (c) an alkalising agent chosen from Na carbonate, Na bicarbonate, Na sesquicarbonate or a mixt. of these. Other usual, additives may also be present.

The surfactant(s) may be zwitterionic, ampholytic, polyethylene oxide condensates with a phenol or an alcohol, alkyl benzene sulphonates, salts of alcohol or phenol ethylene oxide ether sulphates. The citrate builders are good cleaners in heavy-light duty detergents and do not cause skin irritation. The wt. ratio of citrate to surfactant is in the range 1:5 to 10:1 and the pref. wt. ratio of citrate to alkalising agent is 12:1 to 1:15. 29.5.71 as 036732 (clg. 27.4.71-US-138001) C11d-3/37 (19.11.79) ELDIB ENG. & RES. INC. (28pp) (J4 7039306)

DIKI D25 11995V/07 = J7 9038-123
Solid detergent compsns - contg zirconium phosphate

DAIICHI KIGENSO KK (DAII) 13.07.71-JA-052247

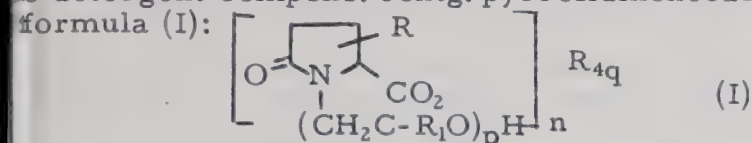
E32 (19.11.79) *J48017-810 + C11d-03/06

Solid detergent compsn. contg. anionic surfactant, nonionic surfactants and 0.1-91.0% (based on surfactants) Zr phosphate is a heat resistant, good foaming ion-exchanging, and anti-caking powder.

In an example (10 pts. of Zr phosphate prepd. from $ZrOCl_2.8H_2O$, 85% H_3PO_4 , and 95% H_2SO_4 in water was mixed with Na alkylbenzenesulphonate, 13.4 $Na_2SO_4.10H_2O$ 21.0, Na silicate 2.6, and water 53.0 pts. and the slurry was dried at $100^\circ C$ to give a detergent powder compsn. which was stable at 200° during > 10 hr. compared with black discoloration for a similar compsn. contg. Na tripolyphosphate in place of Zr phosphate. 13.7.71 as 052247 C11d-3/06 (19.11.79) DAIICHI KIGENSO KK. INC. (7pp) (J4 8017810)

RU/ D25 50874V/28 = J7 9038-124
 photeric surfactants mild to the skin - contg. pyrrolidinone
 oxyates and subst. hydroxyl amines
 MARUMO H 19.04.72-JA-038604
 E19 (19.11.79) *J49001-604 +C11d-01/90

the detergent compsns. contg. pyrrolidinonecarboxylates



$\text{CR}_3/\text{N}/(\text{CH}_2\text{CHR}_1\text{O})_p\text{H}_2/\text{CO}_2/\text{nR}_{4q}$, and/or $\text{RCH}(\text{OR}_4)-$
 $\text{H}_2/\text{NR}_2(\text{CH}_2)_t/\text{mNR}_3\text{R}_5$ [R = 4-30C hydrocarbonyl, $\text{R}_1 = \text{H}$
 Me, $m = 0-2$, $\text{R}_2 = \text{H}$, $(\text{CH}_2\text{CHR}_1\text{O})_p\text{H}$, or 1-18C acyl,
 $s = 0-100$, $\text{R}_3 = \text{H}$, Me, CH_2CHMe_2 , CH_2Ph , or $(\text{CH}_2)_s\text{CO}_2$,
 $(\text{H}_2)_r\text{NH}_2$, $(\text{CH}_2)_r\text{NR}_2/[\text{CH}_2\text{CH}/\text{O}(\text{CH}_2\text{CHR}_1\text{O})_p\text{H}/\text{R}_t$, $s = 1$ or
 $r = 3$ or 4, $t = 0-2$, $\text{R}_4 = \text{H}$, amine, metal, org. acid or
 org. acid, $n, q = \text{integer}$, $\text{R}_5 = \text{H}$ or $\text{CH}_2\text{CH}(\text{OR}_4)\text{R}/$ are
 mild to the skin.

In an example, a 10% aq. $[\text{Me}(\text{CH}_2)_5\text{CH}(\text{OH})\text{CH}_2\text{NHCH}_2-$
 $\text{D}_2]$ Ca soln. had no effect to the skin after 24 h. of tests
 with 10 persons, compared with some effect for soap der-
 ived from 80:20 beef tallow and coconut oil fatty acid.
 19.4.72 as 038604, C11d-1/90 (19.11.79) MARUMO H
 (pp) (J4 9001604)

ESQ ★ D25 90496B/50 ★ J7 9038-130
 water based chemical bleach compsn. - contains dispersed
 ammonium-4,4'-bis(2-amino anilino-1,3,5-triazinyl-6-amino)-
 stilbene-2,2-sulphonate

SHIN-NISSO KAKO KK 26.05.71-JA-035489
 E23 F06 (19.11.79) C09b-67 C11d-03/42

chemical bleach compsn. comprises ammonium 4,4'-bis
 -amino-4-anilino-1,3,5-triazinyl-6-amino)-stilbene-2,
 -sulphonate (I) dispersed in water contg. glycol (II) and/
 glycerin (III).

(I) has excellent whiteness and is easily dispersible in
 water. (II) is e.g. ethylene glycol, propylene glycol, poly-
 ethylene glycol, etc. The dispersion may also contain pro-
 tective colloid and/or urea. 26.5.71 as 035489, C09b-67/00
 C11d-3/42 (19.11.79) SHIN-NISSO KAKO KK (3pp83)
 4 8000827)

UTO= ★ D25 90585B/50 ★ SU -653-292
 compsn. for cleaning metallic surfaces with ultrasonic vibrations -
 contg. alkanol-amine(s) and their salts with fatty acids, with
 addition of surfactants derived from ethylene glycol ether(s)
 AUTO IND EXP DES 23.02.77-SU-455208
 A97 E19 (25.03.79) C11d-01/04

compsn. for cleaning metallic surfaces with the application
 of ultrasonic vibrations contains alkanolamines and alkenol-
 amine salts of 10-17C fatty acids.

The compsn. is rendered more effective by addn. of
 mono- 1-4C alkyl ether of ethylene glycol and a polyeth-
 ylene glycol ether of a monoethanolamide of synthetic 10-
 16C fatty acids or a polyethylene glycol ether of synthetic
 prim. 8-20C fatty alcohols. The compsn. contains (in
 wt. %) mono 1-4C alkyl ether of ethylene glycol 20-40,
 polyethylene glycol ether of a monoethanolamide of synth-
 etic 10-16C fatty acids or a polyethylene glycol ether of
 synthetic prim. 8-20 C fatty alcohols 15-25, an alkanola-
 mine 20-40; the balance is an alkanolamine salt of 10-17
 fatty acids.

Leinik M.M., Kotsyuk A.M., Mikhailova N.A. et al.
 Bul.11/25.3.79 23.2.77 as 455208 (4pp70)

UTO= ★ D25 90586B/50 ★ SU -653-293
 compsn. for cleaning metal component surfaces - contg. alkenyl-
 succinimide, alkyl-salicylate, mono. or di:alkyl-aryl-di:thio-
 phosphate and halogenated hydrocarbon cpds.

AUTO IND EXP DES 07.10.75-SU-179193
 E19 M14 (25.03.79) C11d-01/37 C11d-03/36

compsn. for cleaning metallic surfaces of machine com-
 ponents contg. an alkenylsuccinimide surfactant dissolved
 in a halogenohydrocarbon, is rendered more effective by
 addn. of zinc or an alkaline earth metal dialkyl and/or
 dialkylaryl dithiophosphate and an alkaline earth metal al-
 kyl salicylate.

The compsn. contains (in wt. %) alkenylsuccinimide
 surfactant 0.01-5, zinc or an alkaline earth metal dialkyl

and/or dialkylaryl dithiophosphate 0.01-2.5, an alkaline
 earth metal alkyl salicylate 0.01-2.5; the balance is a hal-
 ogenohydrocarbon.

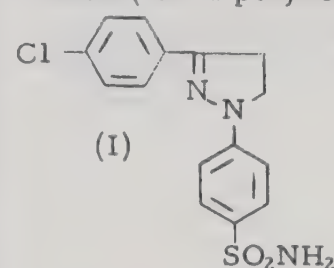
Shemelyuk M.P., Galkin A.V., Bul.11/25.3.79 7.10.75
 as 179193 (6pp70)

SALO/ ★ D25 90699B/50 ★ SU -654-616
 Sulphamoyl-phenyl chlorophenyl pyrazoline prepn. - from
 chlorophenyl chloroethyl ketone and hydrazino-phenyl
 sulphonamide, used as acrylic and acetate fibre brightener

SALOVA RA 29.04.75-SU-129504

A60 E23 F06 (A11 A14) (30.03.79) C07d-231/06 D06l-03/12

1-(4'-Sulphamoyl-phenyl)-3-(4''-chloro-phenyl)-pyrazoline
 of formula (I) is used as optical brightening agent for
 Nitron (RTM polyacrylonitrile) and acetate fibres. It is



during surface treatment of above
 materials or added to a detergent-
 compsn.

Cpd. (I) is prepd. by reacting p-
 chloro-phenyl β-chloroethyl ketone
 with p-hydrazino-phenyl-sulphon-
 amide in aq. ethanol at pH 0-1. The
 prod. is purified by recrystallising
 it from chloro-benzene and dimethyl

-formamide (5:1) mixt.

The above method simplifies the mfg. procedure and
 gives prod. of improved purity (the prod. has m.pt. 222.5
 -223.5°C), without the use of toxic reagents (e.g. methanol
 or pyridine).

Salova, R.A., Petrovich, P.I., Sakharova, G.N. Bul.12/
 30.3.79. 29.4.75 as 129504 (3pp938)

TENC D25 79162B/44 = US 4177-151
 Conditioning article for textile fabrics during tumble drying -
 comprises flexible polyurethane foam sheet impregnated at surface
 with conditioning agent

TENNECO CHEMICALS 30.06.78-US-921023

A97 F07 (A25) (04.12.79) *BE-877-376 +D06m-13

A fabric conditioner for adding to damp fabrics in a laun-
 dry dryer comprises a flexible resilient polyurethane
 foam sheet 0.025-0.250 inch thick and with a cell count of
 20-100 per linear inch and a density of 1.1-1.8 lb./ft.³
 One or both surfaces of the sheet have a discontinuous
 coating of conditioning agent.

The coating extends for no more than 1/3 of the sheet
 thickness and not appreciably above its surface, while the
 sheet core remains free. The arrangement provides more
 efficient utilisation of the agent. The polyurethane may be
 a polyester or polyether polymer, and the agent includes a
 fabric softener with an anti-static agent and fragrance.
 30.6.78 as 921023 (12pp1358)

AQOR D25 11212T/07 = US 4177-208
 Sepn of sulphonic acids - from solns also contg sulphuric water and
 unsulphonated hydrocarbons

ATO CHIMIE (SNPA) 22.07.71-FR-026794 (07.08.70-FR-029211)

E17 H08 (04.12.79) *BE-771-038 C07c-143/02 +C07b-13

Sulphonic acids are sepd. from untreated paraffin sulphon-
 ic acid soln. also contg. H_2SO_4 , water and non-sulphonated
 paraffins, by (a) admixing with the soln. ≥ 1 slightly polar
 (cyclo)aliphatic alcohol which forms an azeoptrope with
 water, to form a mixt. having an organic phase contg. the
 dissolved sulphonic acids, and an aq. phase contg. the
 H_2SO_4 , (b) sepg. the organic phase from the aq. phase,
 (c) neutralising the organic phase, and (d) removing the vol-
 atile components from the neutralised organic phase to re-
 cover the sulphonates under temp. and pressure conditions
 whereby the sulphonates are in a molten state.

The organic phase is neutralised with a compsn. selec-
 ted from alkali metal hydroxides and carbonates, and
 alkali(ne earth) metal (hydr)oxides, to convert the sulphon-
 ic acids to sulphonates. The ratio of the amt. of water to
 the amt. of polar alcohol in the neutralised phase is at
 most equal to the corresp. ratio for the azeoptrope which
 forms between the water and alcohol.

The prods. are esp. suitable for use in the detergents.
 12.4.78 as 895795 (+4.8.71; 18.9.74; 29.12.75; 13.10.76-
 US-169145; 507246; 645092; 732120) (6pp924)

CPI INDEXES

ALERTING PATENTEE INDEX (III)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

M22

*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

In Country Alerting Bulletin only

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502-292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or # sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U A97D15M14
*645 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
*654 49862X A88H01Q4
*655 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A-M cumulations of from a quarter up to 5 years are available as COM.

CALI

Nitrile rubber smooth rolled sleeve for well impression packer - also contg natural rubber, hydrated 49862X/26 *US 3963-654

CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01

Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying earth in dams 49433X/26 *DT 2554-327

CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02

CANA

Emulsifying agents of microbial origin - used esp. for oil spills, are made by cultivating a species of 48076X/26 *CA -990-668

CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180
Europe	150
France	740
Germany, W. unexamined	1050
Japan unexamined	845*
Netherlands unexamined	240
PCT	40
Research Disclosure	20
South Africa	100
Sweden	260
United Kingdom unexamined	600
	<u>3325</u>

Slow publishing

Canada	450
Germany, E.	100
Germany, W. examined	465
Japan examined	340*
Netherlands examined	60
Soviet Union	1200
Switzerland	260
United Kingdom examined	300
United States	1200
	<u>4375</u>

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140
Denmark	120
Finland	60
Norway	80
Portugal	30
	<u>430</u>

Slow publishing

Austria	125
Czechoslovakia	180
Hungary	35
Israel	40
Italy	155
Rumania	25
	<u>560</u>

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. In the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MW
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

- * ADAM/ 28.02.78 ADAMS C M D15 J01 M25 *US 4177-051
Sepp. constituents from mixtures by liquation - 91001B/50
- * ADUL- 25.10.77 ADULT CARE PROD INC A96 D22 *US 4176-667
Disposable liq.-absorbent pad e.g. nappy, sanitary napkin or bandage - 90950B/50
- * AGAE- 26.05.78 ALGEMENE AEROSOL AS D21 G04 *NL 7805-762
Aq. aerosol emulsions - 90542B/50
- * AGEN 14.05.70 AGENCY OF IND SCI TECH D17 (D16) *J7 9038-182
Recovering cane sugar - 90506B/50
- * AGEN 05.12.70 AGENCY OF IND SCI TECH D17 (D16) *J7 9038-183
Cane sugar prodn. from beet sugar - 90507B/50
- ALBR 21.06.77 BUSH BOAKE ALLEN LT D23 E13 =US 4177-170
Tetra:methyl-oxa-bi:cyclo:decene derivs. - 02358B/02
- * ALBR 26.05.78 ALBRIGHT & WILSON LTD D25 E19 *DT 2921-366
Conc. aq. compsn. of surfactants in the G-phase - 89638B/50
- * ALBR 31.05.78 BUSH BOAKE ALLEN D16 *DT 2836-823
Isomerised hop extract prodn. - 89590B/50
- ALBR 08.12.78 ALBRIGHT & WILSON LTD D25 E19 =GB 2022-125
Prepn. of conc. surfactant mixt. forming liq. lamellar phase - 47415B/26
- ALCG 21.06.75 ALLIED COLLOIDS LTD A97 D15 J02 =CA 1066-881
Mixing particles esp. polyelectrolyte flocculating agent in water - 02389Y/02
- ALEX- 04.11.70 ALEXANDRE SRL D21 E17 =IT 1033-505
Hair-treatment compsn - 32174T/20
- ALFA 06.09.76 ALFA-LAVAL AB D15 =US 4177-044
Carbonating water for brewing and soft drinks industries - 17680A/10
- ALFA 24.04.78 ALFA-LAVAL AB D15 J01 =SW 7903-590
Sludge centrifuge with automatic sludge discharge - 64574B/35
- ALIG- 23.01.75 ALIGENA AG A88 D15 J01 =CH -614-127
Porous membrane for separating ionised materials - 60069X/32
- * ALKU 20.07.76 AKZONA INC A11 D22 F01 (A96) *US 4177-236
Shaped regenerated cellulose articles prodn. - 91073B/50
- ALKU 26.01.77 AKZONA INC A91 D15 J01 M14 =US 4177-140
Eliminating weak acids from aq. solns. using anion exchange resin - 40386A/23
- * ALLI- 31.05.78 ALLIBERT EXPL A92 D13 *GB 2021-923
Cocoa or chocolate prodn. by fermenting cacao beans or cocoa nibs - 89913B/50
- ALLI/ 17.04.78 ALLIGER H D22 #BR 7802-350
Germicidal compsn. prepn. from sodium chlorite - 41958A/23
- ALLI/ 20.04.78 ALLIGER H D22 #J5 4140-718
Germicidal compsn. prepn. from sodium chlorite - 41958A/23
- ALMI= 11.10.73 AS LATV MICROBIOL C03 D13 (D16) =IT 1033-580
L-Lysine fermentative prodn - 27469W/17
- * ALMI= 27.12.76 AS LATV MICROBIOLOG B05 D16 E16 *SU -654-681
L-glutamic acid microbiological prodn. - 90755B/50
- ALPI- 30.05.78 ALPI MILCHIND D13 =DT 2919-659
Preparing whey products equiv. to skimmed milk in protein - 71817B/40
- ALPI- 30.05.78 ALPI MILCHIND REG G D13 =GB 2021-922
Preparing whey products equiv. to skimmed milk in protein - 71817B/40
- ALST 25.05.76 ALSTHOM-ATLANTIQUE D16 J02 (D15) =US 4177-226
Injector to gasify liq. with tiny bubbles - 81186Y/46
- AMCA 28.04.78 AMERICAN CAN CO A97 D22 F09 (A18 A23 A96) #DK 7801-872
Pre-moistened toilet tissue prepn. from nonwoven fabric - 67132A/38
- AMCY 19.04.74 AMERICAN CYANAMID CO A96 D22 F04 =CH -614-118
Styptic surgical felt prodn. - 74394W/45
- AMCY 19.04.74 AMERICAN CYANAMID CO A96 D22 F04 =CH -614-123
Flexible composite wound dressing - 63680W/38
- * AMFI 02.06.78 AMERICAN FILTRONA CORP D11 *GB 2021-919
Packaged hamburger buns with opposed slits - 89912B/50
- AMHP 10.04.73 AMERICAN HOME PROD CORP D16 =CH -614-465
Identification of unknown bacteria - 75231V/43
- AMMA 02.05.77 AMF INC A97 D18 (A11) =US 4176-668
Tobacco sheet, esp. for cigar tips - 51672A/29
- * AMMA 01.05.78 AMF INC D11 *US 4177-030
Dough dividing by pushing through grid - 90989B/50
- * AMOS/ 13.06.74 AMOS PT D15 F09 *CA 1066-857
Sec. bacteriological sludge disposal in paper mills - 89436B/50
- AMPO- 03.05.66 AMERICAN POTATO CO D13 =DS 1692-581
Dehydrated potato products - 30668R/18
- ANDP 04.10.76 ANDERSEN HW PROD INC A97 D22 J04 =GB 1557-636
Colorimetric determination of sterilising agent dosage - 27188A/15
- ANIS 23.03.76 ANIC SPA D15 M25 =DS 2712-848
Treating waste water to remove transition elements, esp. vanadium - 68835Y/39
- * ANON 23.05.75 ANONYMOUS D15 *IT 1033-664
Organic effluent biological purification appts. - B/50
- ANVR 29.08.75 AGENCE NAT VALORISATION B04 D16 =GB 1557-712
Acyated peptidoglycan-type adjuvant for vaccine - 14598Y/09
- * AOKI/ 26.04.78 AOKI J D17 E13 *J5 4141-715
Synthesis of sucrose - 90198B/50
- AQOR 07.08.70 ATO CHIMIE D25 E17 H08 =US 4177-208
Sepn of sulphonic acids - 11212T/07
- ARMO 14.07.76 ARMOUR CO D14 =GB 1557-431
Pattie moulding apparatus - 03893A/02
- * ASAE 20.04.78 ASAHI DENKA KOGYO A97 D13 (A11) *J5 4140-773
Low calorific value foodstuff - 90080B/50
- * ASAG 28.04.78 ASAHI GLASS KK D15 J01 (D22) *J5 4142-171
Deodorising waste gas or water - 90350B/50
- ASAH 08.09.76 ASAHI KASEI KOGYO A14 D15 J01 L03 (A32 A85 D16) =US 4177-150
Porous polyacrylonitrile membranes with compact skins - 30455A/17
- * ASAH 20.04.78 ASAHI CHEMICAL IND KK B03 C02 D16 E13 *J5 4141-762
O-(Maleimidoacyl) hydroxylamine derivs. - 90225B/50
- * ASAH 22.04.78 ASAHI CHEMICAL IND KK B03 C02 D16 E13 *J5 4141-763
O-(Maleimidoacyl)-hydroxamic acid deriv. - 90226B/50
- * ASAH 24.04.78 ASAHI CHEMICAL IND KK D13 *J5 4140-762
Seasoning base comprising beta-1,4-glucan - 90076B/50
- * ASAH 25.04.78 ASAHI CHEMICAL IND KK B03 C02 D16 E13 *J5 4141-765
Maleimido-acyloxy-phenyl derivs. - 90228B/50
- ASBA= 11.10.73 AS USSR BAKHA BIOCHEM C03 D13 (D16) =IT 1033-580
L-Lysine fermentative prodn - 27469W/17
- * ASBA= 28.09.76 AS USSR BASHKIR CHEM INS C03 D22 E14 *SU -654-600
Di:chlorobenzene pesticide, e.g. insecticide, prepn. - 90685B/50
- * ASBI= 12.05.76 AS BIOL INSTR SPEC D15 *SU -653-220
Unit for controlling aq. waste BOD processes - 90578B/50
- * ASNA= 01.08.75 CENT ASIA NATURAL G D16 *SU -655-364
Green algae culture unit - 90817B/50
- ASPR 31.05.78 NICHOLAS PTY LTD A96 B04 D21 (A11) =DT 2921-697
Inhibition of dental caries with cationic polysaccharide - 71825B/40
- ASPR 30.05.79 NICHOLAS PTY LTD A96 B04 D21 (A11) =GB 2021-949
Inhibition of dental caries with cationic polysaccharide - 71825B/40
- ATKI/ 22.05.78 ATKINSON A B04 D16 =DT 2920-764
Storage stable glycerol dehydrogenase enzyme prepn. - 88095B/49
- * ATLA- 15.11.77 ATLAS PACIFIC ENG D14 *US 4176-594
Fruit peeling cutter - 90941B/50
- ATLS 05.05.75 ATLANTIC RES INS LT D16 E14 =GB 1551-354
Synthetic humulones from phloroglucinol with higher yields - 72204X/39
- AUTO- 12.05.76 AUTOTROL CORP D15 =CA 1067-219
Treating aqueous effluent by the activated sludge process - 82885Y/47
- * AUTO- 07.08.78 AUTOMATED DONUT SYS D11 *US 4176-590
Doughnut frying appts. having conveyor through oil bath - 90939B/50
- * AUTO= 07.10.75 AUTO IND EXP DES D25 E19 M14 *SU -653-293
Compsn. for cleaning metal component surfaces - 90586B/50
- * AUTO= 23.02.77 AUTO IND EXP DES A97 D25 E19 *SU -653-292
Compsn. for cleaning metallic surfaces with ultrasonic vibrations - 90585B/50
- * AUZC= 10.11.77 AS UZB CHEM INST A91 D15 E31 G01 (A14) *SU -654-547
Removing suspended iron oxide from water - 90635B/50
- * BABW 06.04.78 SAMIFI BABCOCK SPA D14 E36 *BR 7902-099
Equipment for generating nitrogen and absorption of carbon dioxide - B/50
- BADI 24.07.73 BASF AG A82 D18 G02 =CA 1066-856
Nitrocellulose-contg. aqs. leather finishing compsn. - 12884W/08
- BADI 01.10.76 BASF AG C03 D13 =HU T017-282
Aq. preservative for animal feed - 25194A/14
- * BADI 03.06.78 BASF AG D25 E17 *EP ---5-789
Stabiliser and flow enhancer for zeolite slurry used in detergent mfr. - 89726B/50
- * BAKI= 17.12.76 BAKINSK VODGEO RES D15 *SU -654-548
Waste water biochemical purificn. quality control - 90636B/50
- BAMA- 26.05.78 BAMACH BV D14 =GB 2021-924
Conveyor forming of meat olive, tortilla etc. - 71762B/40
- BAMA- 26.05.78 BAMACH BV D14 =NL 7805-735
Conveyor forming of meat olive, tortilla etc. - 71762B/40
- * BAST= 21.04.76 BAST FIBRES IND RES INST D16 F01 *SU -653-311
Biological maceration of bast fibre-contg. plant tissue - 90593B/50
- * BATT 10.05.74 BATTELLE DEV CORP D12 *CH -614-351
Protein-contg. foodstuff film - 89452B/50
- * BEAN/ 10.05.78 BEANE FT C03 D13 *US 4176-748
Packaged agricultural salt block - 90964B/50
- BECK/ 01.03.78 BECKER D J C03 D15 (D13) =FR 2418-774
Treatment of effluent waters contg. fats and proteins - 33446B/18
- BEDD/ 21.04.78 BEDDING P M J D25 (D16) =NO 7901-335
Cleaning soln. for soft contact lenses - 79480B/44
- BEEC 28.12.73 BEECHAM GROUP LTD A14 B02 D16 =SU -654-170
Penicillin acylase/methacrylic polymer complex - 46071W/28
- BEEC 21.05.75 BEECHAM GROUP LTD B04 D16 =HU T017-371
Culturing animal cells in vitro - 90600X/49
- * BELC- 11.05.78 BELCO POLLUTION CON D15 J01 *BR 7902-869
Regeneration of mixed bed of cation and anion exchange resins - B/50
- BERG 02.06.76 BERGWERKSVERBAND GMBH A88 D15 J01 =DS 2624-639
Membranes with an adjustable pore system - 91397Y/51
- BERP 25.11.74 BEROL KEMI AB A97 D25 E19 =CH -614-463
Aqueous liquid detergent composition - 30216X/17
- * BIOC= 31.03.77 BIOCHEM INST D16 (D17) *SU -654-682
D-glucose-isomerase microbiological prodn. - 90756B/50

BIOG

- *BIOG 05.07.77 BIOGALGYOGYSZERGYA B04 D16 *HU T017-370
Neomycin prepn. by aerobic fermentation - B/50
- BIOT 26.05.78 BIOTEST SERUM INST GMBH B04 D16 =NL 7902-746
Culture flask for collecting liq., esp. urine, for germ. count - 71802B/40
- *BIOT= 13.12.77 BIOTECH RES INST D16 (D17) *SU -655-397
Horizontal extractor for reacting fibrous solids and extractant - 90822B/50
- *BLAC- 24.04.78 BLACK KNIGHT INVEST A96 D21 *NO 7801-417
Anatomical intra-oral mouldable cast for taking tooth impressions - B/50
- BOEF 04.10.73 BOEHRINGER MANNHEIM B04 D16 J04 =CH -614-534
Enzyme kinetic substrate determ. - 28444W/17
- BOEH 14.06.74 BOEHRINGER INGELHEIM D11 (D13) =CH -614-106
Bread-coated emergency food snack - 00058X/01
- BOEH 12.08.76 BOEHRINGER INGELHEIM B04 D16 =GB 1557-645
Immobilised enzyme on hardened porous protein support - 12290A/07
- *BOHN/ 01.09.78 BOHNKE B D15 *DS 2838-204
Activated sludge tank aeration system - 89466B/50
- *BONA/ 05.06.75 BONACINA E D14 *IT 1033-734
Programmed appts. for fruit treatment and conservation - B/50
- *BOOT 31.10.75 BOOTS CO LTD A96 D21 *GB 1552-119
Dentifrice compsns. contg. diatomaceous earth - 89895B/50
- BRAX/ 28.04.78 BRAXTON E J B04 D16 =DK 7901-728
Adsorption to obtain trace constituents esp. urokinase from urine - 66356B/37
- BRAX/ 28.04.78 BRAXTON E J B04 D16 =SW 7903-712
Adsorption to obtain trace constituents esp. urokinase from urine - 66356B/37
- BREW 26.05.78 BREWING PATENTS LTD D16 E17 =DT 2919-448
Iso alpha-acids for brewing prepd. by alkaline isomerisation - 85956B/48
- BREW 26.05.78 BREWING PATENTS LTD D16 E17 =NL 7904-151
Iso alpha-acids for brewing prepd. by alkaline isomerisation - 85956B/48
- BREW 17.05.79 BREWING PATENTS LTD D16 E17 =GB 2022-083
Iso alpha-acids for brewing prepd. by alkaline isomerisation - 85956B/48
- BRIM 28.08.75 BRISTOL MYERS CO B04 C03 D16 =HU T017-358
Complex glycopeptide antibiotics Bu-2231 A and B - 14578Y/09
- *BRIM 11.12.78 BRISTOL MYERS CO B05 D22 *US 4177-199
Antibacterial mono- and di-silver phosphonate(s) - 91057B/50
- *BROT- 03.03.78 BROTHIER LAB A11 D22 F01 *FR 2418-821
Continuous mfr. of calcium alginate fibres - 89875B/50
- BROV 23.05.78 BBC AG BROWN BOVERI CIE D15 E36 J01 =NL 7903-952
Regeneration of activated carbon used for water treatment - 87900B/49
- BRWI 17.11.75 BROWN & WILLIAMSON CORP D18 (D16) =CA 1067-027
Cultivation of nicotine degrading microorganisms - 19791Y/11
- *BURG/ 07.08.78 BURGER H D25 E16 *BE -878-104
Continuous vehicle washing process and appts. - 89423B/50
- *CALG 05.06.78 CALGON CORP D15 M14 *EP ---6-065
Corrosion inhibiting compsn. for water treatment appts. - 89851B/50
- CALP- 16.07.75 CALPIS SHOKUHIN KOG A97 D13 =CA 1066-942
Quick cooking rice prepn. - 08021Y/05
- CAMP- 07.07.77 CAMPBELL SOUP CO D13 (D12) #GB 1552-092
Texturising vegetable protein using steam injection - 55773Y/31
- CAMP- 07.07.77 CAMPBELL SOUP CO D12 #GB 1552-093
Textured protein pieces prodn. - 57439Y/32
- CAMP- 07.07.77 CAMPBELL SOUP CO D12 F01 #GB 1552-094
Texturising protein by centrifugal spinning - 91774Y/51
- *CANA 03.03.78 CANADIAN PAT & DEV LTD A88 D15 J01 (A32) *US 4177-031
Casting tubular polymeric membranes - 90990B/50
- *CANN= 18.08.76 CANNING & VEG DRYIN D13 *HU T017-283
Sterilising appts. for liquid and pasty foodstuffs - B/50
- CARL- 18.04.78 CARLE & MONTANARI D11 #BR 7802-431
Wafer cutting and feeding machine - 58110B/32
- CARP- 27.08.75 CARPIGIANI BRUTO M D13 =IT 1033-977
Ice lollipop machine - 18475Y/11
- *CHUS 29.05.78 CHUGAI SEIYAKU KK B04 D16 *DT 2921-829
Antitumour compsns. contg. bacterial cells - 89657B/50
- *CHUX 25.04.78 CHUO KAKOKI KK D22 J01 *J5 4141-378
Deodorising appts. for particulate material - 90157B/50
- CIBA 18.05.78 CIBA GEIGY AG A60 C03 D22 E36 =GB 2022-082
Hydrogen peroxide, hydroxylamine and hydrazine adducts - 86210B/48
- *CIBA 26.05.78 CIBA-GEIGY UK A97 D15 L02 (A14) *DT 2921-374
Treating hard water systems contg. suspended solids - 89640B/50
- *CLOV- 22.07.75 CLOVER SPA D15 *IT 1033-680
Aq. sewage purification appts. - B/50
- CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 =NL 7805-584
Anaerobic effluent treatment tank with reaction and settlement zones - 85962B/48
- CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 =NL 7805-585
Supply system for anaerobic biological treatment tank - 85963B/48
- *COAI 02.05.75 COALITE & CHEMICAL PRODS D25 E16 (D22 E14) *GB 1551-224
Bactericidal detergent - 89880B/50
- COAI 21.08.75 COALITE & CHEMICAL PRODS C02 D22 E13 G02 =GB 1551-225
Aq. paint contg. aldehyde-amine condensate as biocide - 16788Y/10
- COLG 30.04.71 COLGATE PALMOLIVE CO A96 D21 E33 (A11) =DS 2218-604
Clear toothpastes - 72325T/45
- COLG 21.01.74 COLGATE PALMOLIVE CO D25 E12 =CH -614-232
Abrasive cleaning compsn. - 39265W/24
- COLG 12.06.74 COLGATE PALMOLIVE CO D22 E34 =CH -614-375
Alkali-bicarbonate aerosol deodorant - 75807W/46
- COLG 11.11.76 COLGATE PALMOLIVE CO D21 =CA 1067-048
Container for dispensing marbleised column - 81867A/45
- COLG 24.05.77 COLGATE PALMOLIVE CO B05 D21 E11 #GB 1551-501
Buccal hygiene composition or dentifrice - 75934Y/43
- COLG 17.03.78 COLGATE PALMOLIVE CO A97 D25 E19 =DT 2855-519
Conc. single phase liq. detergent-softener compsn. - 17866B/09
- COLG 25.05.78 COLGATE PALMOLIVE CO A84 D25 E16 F06 (A25 E13) =DT 2920-452
Polyurethane foam dispenser - 71792B/40
- COLG 25.05.78 COLGATE PALMOLIVE CO D25 E19 F06 =DT 2920-453
Liq. bleach and fabric softening compsn. - 68037B/37
- COLG 25.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25 E33) =NL 7903-191
Dentifrice paste compsn. contg. calcium carbonate - 71767B/40
- COLG 25.05.78 COLGATE PALMOLIVE CO D25 E19 F06 =NL 7904-143
Liq. bleach and fabric softening compsn. - 68037B/37
- COLG 25.05.78 COLGATE PALMOLIVE CO A84 D25 E16 F06 (A25 E13) =NL 7904-147
Polyurethane foam dispenser - 71792B/40
- *COLG 13.10.78 COLGATE PALMOLIVE CO D21 E19 *US 4177-258
Dentifrice for dental re-mineralisation - 91084B/50
- COLH 04.09.74 COLLO GMBH A97 D25 =IT 1033-965
Porous walled flexible scouring pad pref. for household use - 07463X/05
- COMS 01.03.78 COMMISS ENERGIE ATOMIQUE D16 J04 K07 =FR 2418-702
Automatic handling appts. for weighing - 65030B/36
- CONF- 13.07.74 CONFUGA GMBH D12 F04 =IT 1033-818
Knitted fabric sausage skin - 09437X/06
- CONN/ 09.12.76 CONNELLY R F D15 J01 =GB 1557-899
Tubular filter for sepg. liquid components - 55760A/31
- COOP- 21.06.71 COOP VER SUIKER UNI D13 =IT 1033-509
Fondant sugar preps - 01924U/02
- *COPE- 17.11.76 COPE WHELOH & CO D12 *GB 1557-886
Chilling poultry carcasses in tank - 89911B/50
- *CORA- 19.06.75 CORAZZA DI NATALINO D13 *IT 1033-667
Soup pasta products dosing system - B/50
- CORP 09.03.77 CPC INTERNATIONAL INC B07 D16 F06 H01 (B04 D13 D17 D21) =GB 1557-755
High-viscosity acidic polysaccharide(s) obtd. by Bacillus lentus cultu - 67001A/38
- CORP 12.05.78 CPC INTERNATIONAL INC A89 B04 D16 =GB 2022-096
Immobilising enzymes, esp. glucose isomerase on supports - 69966B/39
- COWA/ 18.03.75 COWAN S M B05 C03 D22 #DS 2511-825
Bactericidal and sporicidal compsn. - 58214X/31
- CSRL- 01.09.75 CSR LTD D17 J01 =GB 1551-797
Semicontinuous vacuum crystallising plant - 25499Y/15
- CUIN- 30.06.75 CUBA MINI IND AZUCA D17 =GB 1557-829
Clarifier for cane sugar syrup - 09679Y/06
- DAGM- 21.03.75 DAGMA DEUT AUTOMATE D15 =DS 2556-067
Carbonated drinks mfr and distribution - 61611X/33
- *DAIL 17.07.67 DAICEL KK D13 E12 *J7 9038-171
Potassium sorbate granules prodn. - 90503B/50
- *DALL/ 17.07.75 DALL OMO A D14 *IT 1033-679
Appts. eliminating microflora from food products - B/50
- *DAVY- 03.06.78 DAVY BAMAG GMBH D15 *DT 2824-446
Trickling filter bed for effluent nitrification - 89568B/50
- DEGM 02.03.78 DEGEMONT SA D15 J01 =FR 2418-668
Continuous treatment of spent ion exchange resins - 64705B/36
- DEGS 02.10.74 DEUTSCHE GOLD & SILBER D15 J01 =CH -614-423
Hydrated zeolite molecular sieves for softening water - 30126X/17
- *DESC= 21.11.77 DES-CONS BUR D12 *SU -653-183
Suspended rod conveyor for animal carcasses on trolleys - 90576B/50
- *DHPC- 26.05.78 DHP CORP D22 E12 (E33 E34) *GB 2021-947
Hypochlorite-based disinfectant and antiseptic - 89914B/50
- *DIAC- 24.04.78 DIA-CHEMIFA KK D13 *J5 4140-747
Pasteurising and storing of dry vegetables and spices - 90074B/50
- *DIAS 06.04.78 DIAMOND SHAMROCK CORP B04 D16 J04 *J5 4142-183
Coagulation of chemically and or biologically active material - B/50
- DICK/ 10.10.77 DICKSON R D D22 #GB 1557-409
Grain or flour fumigator for storage silo - 86308Y/48
- DIKI 13.07.71 DAIICHI KIGENSO KK D25 E32 =J7 9038-123
Solid detergent compsns - 11995V/07
- DORO 24.05.78 DORR OLIVER INC D15 J04 =GB 2021-968
Flow distributor for fluid bed reactor - 86324B/48
- DOWC 23.04.76 DOW CHEMICAL CO A97 D25 (A11 A23) =CA 1066-981
Detergent compsn. for textiles, esp. of polyester - 79793Y/45
- *DOWC 30.05.78 DOW CHEMICAL CO C03 D15 E14 J01 *EP ---5-827
Removing high boiling point organic contaminants from water - 89742B/50

- DSOM- 06.09.75 DSO MLETSCHNA PROM D13 =DS 2638-307
Continuous cheese making appts. with vertical mixer column - 05693Y/04
- DYNN 19.05.78 DYNAMIT NOBEL AG B04 D16 =GB 2022-097
Regeneration of enzyme immobilisates - 71746B/40
- EAST 11.12.75 EASTMAN KODAK CO A97 B04 D16 =GB 1551-452
Cholesterol oxidase and cholesterol esterase, prodn. - 41723Y/24
- *EBAI 22.04.78 EBARA INFILCO KK D15 J01 *J5 4141-040
Desalination of sea water, etc. to give fresh water - 90103B/50
- *EBAI 22.04.78 EBARA INFILCO KK D15 *J5 4141-052
Biological denitrification of effluent contg. nitrogen and phosphate - 90104B/50
- *ECOL- 19.07.78 ECOLOTROL INC D15 J04 *US 4177-144
Fluidised bed reactor for denitrification of waste waters - 91039B/50
- *EGOS/ 30.05.78 EGOSID D15 *EP ---5-825
Generating heat, cooling capacity and pure water - 89740B/50
- ELDI- 27.04.71 ELDIB ENG & RES INC A97 D25 =J4 7039-306
Detergent compsn. contg. citrates as builders - 02457W/02
- ELDI- 27.04.71 ELDIB ENG & RES INC A97 D25 =J7 9038-122
Detergent compsn. contg. citrates as builders - 02457W/02
- ELEC- 28.05.70 ELECTRO FOOD AB D13 =IT 1033-504
Electric treatment of potatoes prior to deep frying - 76471S/48
- ELED 31.03.76 DENKI KAGAKU KOGYO A97 B04 D16 (A91) =GB 1551-518
Enzyme immobilisation - 74422Y/42
- ELIL 21.06.76 ELI LILLY & CO D22 =CH -614-122
Killing microorganisms in a container using plasma - 60904Y/34
- *ELIL 25.05.78 ELI LILLY & CO B04 D16 *EP ---5-956
Antibiotic A-38533 complex contg. four separate factors - 89800B/50
- ELLC- 12.02.76 ELLCO PROTEIN AB D13 =GB 1551-532
Savoury flavouring agents prodn. - 41784Y/24
- ELPA 19.05.78 EL PASO PROD CO D13 E15 =GB 2022-081
2-Hydroxy-2-cyclopentene-1-one synthesis from glutarate di:ester - 71627B/39
- ENDE/ 19.12.72 ENDER F C03 D13 #SU -654-151
Iron-supplemented raw fish diet for esp mink - 70581W/42
- EPPE- 04.10.73 EPPENDORF GERATEBAU B04 D16 J04 =CH -614-534
Enzyme kinetic substrate determ. - 28444W/17
- *ESSE= 21.09.77 ESSENTIAL OILS CULT D23 *SU -653-291
Eucalyptus oil rich in cineole prodn. - 90584B/50
- ETHI 07.01.75 ETHICON INC A96 D22 F06 =CA 1066-965
Completely absorbable surgical suture - 54564X/29
- *ETHI 30.05.78 ETHICON INC A96 D22 E12 F01 *DT 2921-810
Multifilament suture material with good knotting properties - 89654B/50
- ETHI 30.05.78 ETHICON INC A96 D22 E12 F01 =GB 2021-977
Multifilament suture material with good knotting properties - 89654B/50
- EURT 23.07.76 EUROCEV AB D15 #GB 1551-781
Treating effluents contg. fats, polysaccharide(s) and/or protein(s) - 10527A/06
- FARB 16.12.70 FARBENFAB BAYER AG D25 E11 =J7 9038-086
2-phosphonobutane-1,2-dicarboxylic acid derivs - 42037T/26
- FARB 26.04.78 BAYER AG B02 C02 D13 E13 (D22) =DK 7901-688
Imino-acetamido beta-lactam antibiotic derivs. - 79405B/44
- FARB 26.04.78 BAYER AG B02 C02 D13 E13 (D22) =NO 7901-246
Imino-acetamido beta-lactam antibiotic derivs. - 79405B/44
- FARH 01.08.74 HOECHST AG D25 E11 =CH -614-462
Powder or liq cleaning agents contg alk(en)yl phosphonate - 13079X/08
- FARH 31.08.74 HOECHST AG A11 D22 F06 (A87) =CH -614-338
Increasing water absorption of synthetic fibres - 21023X/12
- FARH 31.03.78 HOECHST AG A92 D12 =BR 7901-974
Tubular package sheath - 73767B/41
- FARH 06.04.78 HOECHST AG A97 D12 =BR 7902-071
Protective sheath for corrugated sausage skin stack - 75663B/42
- FARH 10.05.78 HOECHST AG A60 D25 E13 F06 =BR 7902-845
Optical brightening stilbene derivs. - 84282B/47
- FARH 22.05.78 HOECHST AG D25 E36 =NL 7903-986
Granular compsn. used as detergent auxiliary - 85940B/48
- FARH 26.05.78 HOECHST AG A97 D12 (A11 A21 A92) =EP ---5-765
Tubular packing film, esp. sausage skins - 87852B/49
- *FARH 06.06.78 HOECHST AG A82 D25 G02 (A17 A97) *EP ---5-829
Anionically emulsified wax emulsion contg. cationic germicide - 89744B/50
- FIND- 29.11.76 PROD FINDUS SA D14 =HU T017-284
Machine for trimming vegetables etc. partic. cauliflower - 15940A/09
- FIRM 10.10.72 FIRMENICH SA D23 E15 =DS 2350-388
Tricyclic undecane derivs - 32038V/17
- FIRM 31.05.76 FIRMENICH SA B05 D13 E15 =CH -614-354
(2,6,6)-Trimethyl (3)-oxo cyclohex-(1)-ene carbaldehyde - 90478Y/51
- *FISO 22.07.76 FISOONS LTD D15 *GB 1557-473
Biological treatment of fluids - 89898B/50
- FMCC 11.02.74 FMC CORP D15 J02 =CA 1067-220
Gas diffuser, cutting off bubbles without turbulence or vena contracta - 56031W/34
- *FMCC 31.05.78 FMC CORP D13 *EP ---5-958
Powder for stabilising and enhancing quality of dairy prods. - 89801B/50
- *FMIC- 27.06.75 FMIC FAB ITAL MACCH D11 *IT 1033-905
Fragile food products sorting and bundling appts. - B/50
- *FRES- 06.06.78 FRESSENIUS CHEM PHAR B04 D13 E13 *GB 2022-249
Determn. of ascorbic acid in test liquids - 89954B/50
- *FRPO- 05.06.78 FRANCE PONTE D13 *EP ---6-067
Preservation of whole, cooked eggs without shells - 89853B/50
- *FUJI 21.04.78 FUJISAWA PHARM KK B05 D16 *J5 4140-793
Di:hydro-coenzyme/Q 10 prodn. - 90085B/50
- *FUJI 11.05.78 FUJISAWA PHARM KK B04 C03 D16 *EP ---5-751
Stable and potent hyaluronidase BMP-8231 - 89715B/50
- FUJW 08.04.77 FUJIMOTO SEIYAKU D13 E15 (E24) =J7 9037-965
Simultaneous pure carotene and red pigment sepn. from chlorella - 88719A/49
- FULL- 01.10.76 FULLPACK WIELAND D13 =GB 1557-401
Carbon di:oxide injector for carbonated drinks - 27139A/15
- GENO 13.07.76 GENERAL FOODS CORP D13 #CA 1066-945
Crystalline sucrose contg. acetaldehyde in the matrix - 06877Y/04
- *GEOS- 05.05.78 GEOSOURCE INC D14 J04 *BR 7902-807
Selector with programmable classifier for materials analysis - B/50
- *GEOS- 05.05.78 GEOSOURCE INC D14 J04 *BR 7902-812
Selector for materials analysis - B/50
- *GEOS- 05.05.78 GEOSOURCE INC D14 J04 *BR 7902-813
Ejector delay control for selector - B/50
- *GEOS- 05.05.78 GEOSOURCE INC D14 J04 *BR 7902-820
Universal selector for materials analysis - B/50
- *GERK 01.06.78 GERLACH E CHEM GMBH C03 D13 *DT 2824-042
Compsns. in foil form for use as foods, fodder or pesticide bait - 89533B/50
- GERU- 09.04.73 VEB GERUNGSCHMIE D16 J02 =SU -655-400
Continuous degassing of gas/liq. dispersions - 50273V/28
- GHIS- 28.05.75 GHISALBERTI SPA D15 J01 (J03) =IT 1033-890
Breaking down stable emulsions, esp. factory effluents - 95570X/51
- *GIDR= 27.09.76 GIDROLIZPROM HYDROL C03 D13 (D16) *SU -654-677
Animal fodder yeast culture unit - 90751B/50
- *GILA/ 10.03.75 GILARDI M D15 *IT 1033-748
Reservoir for sewage purification - B/50
- GLAX 26.04.78 GLAXO GROUP LTD A97 B04 D16 =DK 7901-698
Acremonium chrysogenum strains for cephalosporin prodn. - 80819B/45
- GOLD 02.03.78 GOLDSCHMIDT TH AG D22 E16 =FR 2418-789
Microbicidal guanidinium salt derivs. - 66467B/37
- GRAC 24.05.78 GRACE W R CO D21 E36 =NL 7904-055
Dentifrice contg. hydrated silica gel polishing agent - 71785B/40
- *GRAC 07.08.78 GRACE W R CO A96 B04 D16 (A25) *BE -878-137
Enzymatic diagnostic compsns. - 89435B/50
- *HACH- 03.03.78 HACH CHEMICAL CO D15 J01 *US 4177-148
Polluted water analyser intake strainer - 91042B/50
- HAHG 06.10.73 HAHN DR C KG B05 D21 (B01) =CH -614-119
Compsns. for treating the skin and scalp - 24166W/15
- *HAKK- 26.12.77 HAKKO KENKYUSHO B03 D16 *J5 4090-112
1-Deoxy-d-erythro-heptulose and its 2,7-anhydro deriv. - 89997B/50
- HANR/ 03.03.78 HANRAHAN J R A83 D22 F07 (A86 A96) #FR 2418-630
Protective garment with moulded-on cushions - 65660A/37
- *HAYB 10.07.76 HAYASHIBARA BIOCHEM A97 D16 G02 *J7 9038-535
Solid granular ink prepn. - 90528B/50
- HEBE- 31.05.78 HEBENSTREIT GMBH D11 =GB 2021-920
Waffle iron roller - 42498B/23
- *HEIG- 31.05.78 HEIGHT INC D11 J02 *GB 2021-964
Dough mixer with temp. controlled jacket - 89917B/50
- HENK 01.07.74 HENKEL KG AUF AKTIEN A97 D25 =CH -614-231
Washing powder contg non-ionic surfactant - 03864X/03
- HENK 27.11.74 HENKEL KG AUF AKTIEN D23 =CH -614-233
Extruded soap of marbled appearance - 44050X/24
- HENK 22.11.75 HENKEL KG AUF AKTIEN A97 D25 =CA 1066-982
Powder for dish washing machines for washing and rinsing - 36246Y/21
- HENK 26.05.76 HENKEL KG AUF AKTIEN D21 E13 =GB 1552-065
Oxidising dyes for hair - 84706Y/48
- HENK 08.10.77 HENKEL KG AUF AKTIEN A97 D14 =US 4177-294
Cleaning product for fruit, vegetables and other foods - 27862B/15
- HENK 24.04.78 HENKEL KG AUF AKTIEN A97 D25 E19 F06 (A25) =DK 7901-361
Liquid washing product for hand or machine washing - 79104B/44
- *HENK 31.05.78 HENKEL KG AUF AKTIEN C03 D22 E16 G03 *DT 2823-685
Antimicrobials cleaning, disinfecting and preservative compsns. - 89507B/50
- HENK 31.05.78 HENKEL KG AUF AKTIEN C03 D22 E16 G03 =EP ---5-806
Antimicrobials cleaning, disinfecting and preservative compsns. - 89507B/50
- *HENK 01.06.78 HENKEL KG AUF AKTIEN D21 E13 *DT 2824-025
Hair care compsn. contg. reducing sugar - 89531B/50

- * HENK 01.06.78 HENKEL KG AUF AKTIEN D21 E36 *EP ---5-805
Cosmetic hair treating compsn. contg. boric acid - 89732B/50
- HENK 01.06.78 HENKEL KG AUF AKTIEN D21 E13 =EP ---5-807
Hair care compsn. contg. reducing sugar - 89531B/50
- * HENK 01.06.78 HENKEL KG AUF AKTIEN A97 D25 E19 F06 (A25) *EP ---5-850
Liq. cleaner contg. quat. ammonium textile softener - 89752B/50
- * HENK 02.06.78 HENKEL KG AUF AKTIEN D21 E13 *DT 2824-198
Guerbet fatty acid polyglycol ester(s) - 89542B/50
- * HENK 05.06.78 HENKEL KG AUF AKTIEN C02 D22 E13 G03 *DT 2824-540
3-Omega-aminoalkyl-oxazolidine derivs. - 89576B/50
- * HENK 05.06.78 HENKEL KG AUF AKTIEN C03 D22 E16 G03 *DT 2824-636
Gem-aminoalkanol derivs. as antimicrobial agents - 89585B/50
- HIEJ 26.05.76 HITACHI PLANT ENG CONST D15 J01 =US 4177-138
Dialyser with ion exchange membranes - 05231A/03
- HIRA/ 03.02.78 HIRANUMA Y D11 =J7 9038-185
Bread mfr. using flour and rice powder - 70795B/39
- HITA 26.05.76 HITACHI LTD D15 J01 =US 4177-138
Dialyser with ion exchange membranes - 05231A/03
- * HOFF 02.06.78 HOFFMANN-LA ROCHE AG D13 E24 *EP ---5-748
Synthesis of astaxanthin - 89713B/50
- * HOFF 02.06.78 HOFFMANN-LA ROCHE AG D13 E24 *EP ---5-749
Synthesis of red food dye astaxanthin - 89714B/50
- HOHN 24.02.75 HOHNEN OIL KK D23 =J7 9037-882
Roasting pretreatment of beans prior to oil and fat extraction - 76778X/41
- * HOKK- 05.12.70 HOKKAIDO TOGYO KK D17 (D16) *J7 9038-183
Cane sugar prodn. from beet sugar - 90507B/50
- HOLK 26.04.78 HOLSTEIN & KAPPERT MASC D15 =BR 7902-832
Saturation of drinks with carbon dioxide - 82654B/46
- * HONS 14.04.78 YAKULT HONSHA KK C03 D13 *J5 4141-275
Artificial feedstuff for silkworms - 90131B/50
- * HORT- 30.12.77 HORTOBAGYI ALLAMI D15 *HU T017-265
Water aerating appts. - B/50
- ICIC- 06.04.78 ICIC SPA D23 =GB 2022-124
Rotary cage continuous press to extract oil from seeds, etc. - 58060B/32
- ICIL 30.07.74 IMPERIAL CHEM INDS LTD D16 E13 (D17) =CH -614-464
Glucose isomerase continuous prodn. - 13369X/08
- ICIL 20.08.74 ICI UNITED STATES D17 E17 =CH -614-185
Polyhydric alcohol prepn from carbohydrates - 19125X/11
- * ICIL 30.07.76 IMPERIAL CHEM INDS LTD B04 D16 J01 K08 *US 4177-253
Composite magnetic particles for immunoassay - 91082B/50
- * ICIL 18.05.78 IMPERIAL CHEM INDS LTD A25 D15 K07 L02 (A81) *EP ---5-902
Aq. self-setting polyisocyanate resin compsn. - 89775B/50
- * ICIL 31.05.78 IMPERIAL CHEM INDS LTD A60 D16 E24 F06 *DT 2912-110
Compsn. contg. indigo and xanthan polysaccharide - 89599B/50
- ICIL 27.02.79 IMPERIAL CHEM INDS LTD A60 D16 E24 F06 =GB 2022-147
Compsn. contg. indigo and xanthan polysaccharide - 89599B/50
- IMPT 28.04.73 IMPERIAL GROUP LTD D18 F07 =DS 2420-028
Pneumatic fibre distributing device - 66296V/38
- * INDU- 23.05.78 IND ELEKTRIK OHG D23 *DT 2822-426
Decorative self extinguishing wax candle - 89476B/50
- INFL 29.05.75 INT FLAVORS & FRAGR INC D12 E13 =GB 1551-326
Substd. 2-pyrazinyl 3-furyl-sulphides - 84895X/45
- INFL 15.01.76 INT FLAVORS & FRAGR INC D23 E15 (D13) =DS 2700-688
Higher carbonyl cpds. having organoleptic properties - 52578Y/30
- INSP 14.04.78 INST PASTEUR B04 D16 =J5 4141-790
Modified lambda-bacteriophage DNA - 77170B/43
- JAAT 31.01.76 JAPAN ATOMIC ENERGY RES A96 B04 D16 (A14 D13)
=US 4177-107
Enzyme and bacterial cell immobilisation - 57917Y/33
- * JACK/ 29.11.75 JACKSON B J D15 *GB 1551-255
Flocculant for water treatment - 89883B/50
- * JIKK- 22.04.78 JIKKEN DOBUTSU CHUO B04 D16 *J5 4140-789
Cultivation of tumour cells producing colony stimulating factor - 90082B/50
- * JOBB 03.03.78 SOC JOB ANC ETAB BARDOU D18 F07 *FR 2418-628
Embossing fibrous sheet for making cigarette filter tips - 89864B/50
- JOHJ 03.11.75 JOHNSON & JOHNSON A97 D21 E16 (A25 E12) =US 4177-171
Nonirritant, high viscosity detergent compsns., esp. shampoos - 32748Y/19
- JOHJ 03.12.75 JOHNSON & JOHNSON A96 D21 (A14) =GB 1557-580
Water resistant sunburn creams - 39800Y/23
- JOHJ 09.12.75 JOHNSON & JOHNSON A96 D22 =GB 1557-460
Absorbent under-pad for hospital beds - 64965A/36
- JOHJ 30.03.78 JOHNSON & JOHNSON D21 M26 =DK 7901-248
Non-precious metal dental alloy - 79432B/44
- JOHJ 03.04.78 JOHNSON & JOHNSON D22 E12 (E16) =BR 7902-021
Liq. toilet compsns. of reduced irritating potential - 75719B/42
- JOHJ 04.04.78 JOHNSON & JOHNSON A81 D22 G03 (A18 A96) =BR 7902-035
Pressure sensitive adhesive tape for surgical use - 75725B/42
- KAL/ 11.06.74 KALIN J R D15 J02 =IT 1033-802
Agitation and aeration of fluids, esp sewage in tanks - 00435X/01
- * KALI/ 13.03.78 KALISH S D22 *US 4176-664
Adhesive bandage with impregnated gauze and absorbent pad - 90949B/50
- KALL 26.05.78 KALLE AG A97 D12 (A11 A21 A92) =EP ---5-765
Tubular packing film, esp. sausage skins - 87852B/49
- * KANA 10.07.76 KANAE KK A97 D16 G02 *J7 9038-535
Solid granular ink prepn. - 90528B/50
- * KANE 24.04.78 KANEBO KK D21 E14 (E17) *J5 4140-741
Non-flammable nail varnish remover - 90071B/50
- KAOS 27.00.74 KAO SOAP KK D25 E14 (E15) =DS 2460-016
Preventing yellowing of washed clothing - 47975W/29
- KAOS 04.09.75 KAO SOAP KK B06 D21 E37 =DS 2639-505
Tooth paste contg. water soluble fluorides - 18522Y/11
- KAOS 30.09.75 KAO SOAP KK A97 D25 E19 =DS 2642-894
Granular or powdery nonagglomerating detergent compsn. - 09451Y/06
- * KAOS 24.04.78 KAO SOAP KK D22 E15 *J5 4140-733
Deodorant contg. tri:cyclo(2.2.1.0²⁶)heptane derivs. - 90065B/50
- * KAOS 05.06.78 KAO SOAP KK A97 D25 E19 *DT 2918-255
Liq. cleaner for oily kitchen soil - 89604B/50
- * KAOS 05.06.78 KAO SOAP KK A97 D25 E19 (E34 E36) *GB 2022-126
Liquid detergent compsns. for bathrooms etc. - 89939B/50
- * KAZM= 25.10.76 KAZMEKHANOBRES D15 J01 *SU -654-550
Industrial waste water heavy metals removal - 90637B/50
- * KEKD- 07.07.78 KEK DUNA MEZOGAZDAS D13 *HU H002-482
Spice paprika semiproduct prepn. - B/50
- * KEMP/ 05.08.74 KEMPER K D11 *IT 1033-821
Bread dough pieces prepn. appts. - B/50
- KERJ 15.12.76 KERNFORSCHUNGS JULICH B07 C03 D16 K08 =GB 1557-649
Prodn. of cells loaded with active substance - 47931A/27
- * KIFO= 07.02.77 KIEV FOOD IND TECHN D11 *SU -655-375
Working chamber of bread-baking oven - 90819B/50
- * KIRI 18.03.78 KIRIN BREWERY KK B04 D16 *J5 4140-788
Anticancer monocycles prodn. - 90081B/50
- * KIRI 23.03.78 KIRIN BREWERY KK B04 D16 *J5 4140-711
Anticancer agent contg. KS substance - 90052B/50
- * KIRK/ 02.02.78 KIRK C F D15 *US 4176-779
Desalination in centrifugal rotor with diagonal baffle - 90968B/50
- * KIRO 25.10.76 LENINGRAD TEXTILE LIGHT A91 D15 E36 J01 (A14) *SU -654-623
Ion-exchanger contg. copper, e.g. for dissolved oxygen removal - 90705B/50
- KKIR= 21.06.76 KAZA KIROV UNIV D13 E14 =DS 2727-654
Catalyst for hydrogenolysis of dimethyl-dibutyl hydroxy-benzylamine - 00005A/01
- KOCK/ 15.02.75 KOCK F D22 =DS 2506-524
Odour masking device - 67159X/36
- KOHL/ 28.05.71 KOHLER G O C03 D13 =SU -654-149
Edible cytoplasmic protein - 79767T/50
- * KONN 05.06.78 GIST-BROCADES NV B04 D13 *EP ---5-891
Test unit for simplified testing of biological fluids - 89770B/50
- * KOWA 28.03.78 KOWA KK B03 D16 *J5 4141-701
Antibiotic KA-7038, I, KA-7038 II and KA-7036 III - 90186B/50
- * KOZP- 20.01.75 KOZPONTI ELELMISZER D13 J04 *HU T017-403
Quality control of agricultural and/or food prods. - B/50
- * KRAM/ 01.06.78 KRAMPITZ J D15 *DT 2823-952
Water purificn. by air injected by wind power - 89528B/50
- KRAT 25.04.78 BIZERBA-WERKE KRAUT KG D12 =DK 7901-677
Stabilising animal carcasses suspended on balance - 64755B/36
- KRFT 29.08.77 KRAFT INC D14 =US 4176-970
Dasher for whipping fluid food - 10019A/05
- KROY/ 02.03.78 KROYER K K K A81 D22 F04 =FR 2418-829
Binder-contg. fibrous sheet mfr. - 52566B/29
- KUBA/ 20.04.78 KUBANEK V A97 D16 #US 4177-295
Treating drinks esp. beer and wine to stabilise and deactivate enzymes - 33495A/19
- * KUBI 27.04.78 KUBOTA KK D15 *J5 4142-865
Waste water treatment appts. - 90460B/50
- KULZ 06.02.74 KULZER GMBH A96 D21 =CH -614-374
Strong high gloss dental material - 55845W/34
- KUNI/ 28.04.78 KUNITAKE T D25 E19 =J5 4142-185
Molecular aggregate having an ordered structure - 84395B/47
- KURE 30.08.76 KUREHA KAGAKU KOGYO B04 D16 =GB 1551-476
Basidiomycetes e.g. coriolus veriscolor cultivation - 18072A/10
- KURE 24.02.77 KUREHA KAGAKU KOGYO D16 (D13) #GB 1557-414
Microbial food prepd. by culturing Methylomonas probus - 26299Y/15
- KURI/ 20.05.75 KURIHARA S D12 =CA 1066-944
Seasonings prepd. from animal meat - 86888X/46
- KURK 22.02.74 KURITA WATER IND KK D15 J01 =J5 0114-859
Waste water treatment system - 90523B/50
- * KURK 22.02.74 KURITA WATER IND KK D15 J01 *J7 9038-417
Waste water treatment system - 90523B/50
- KYOW 19.04.77 KYOWA HAKKO KOGYO D16 E17 =DT 2857-338
Glycerol-oxidase, prepd. from Aspergillus or Neurospora microorganism - 80437A/45
- KYOW 03.03.78 KYOWA HAKKO KOGYO C B03 D16 E13 (D22) =FR 2418-795
Antibacterial fortimicin KG derivs. - 66600B/37

- * KYOW 24.04.78 KYOWA HAKKO KOGYO KK B04 D16 *J5 4140-794
Antibiotic G-52 prodn. - 90086B/50
- * KYOW 24.04.78 KYOWA HAKKO KOGYO KK B04 D16 *J5 4141-703
Antimicrobial antitumour substance DC-14 - 90188B/50
- * KYOX 20.04.78 KYOWA GAS CHEM IND D23 E17 *J5 4140-742
Perfume compsn. - 90072B/50
- LABO 02.12.77 LABOFINA SA D23 (D13) =GB 1557-550
Hydrogenating oils, esp. cooking oils, using nickel catalyst - 27889B/15
- LAIT- 02.03.78 LAITERIES HUBERT TRIBALL A97 D13 =FR 2418-626
Acidulation of milk using cationic resin followed by acid - 68506B/38
- LAND- 17.10.75 BUNDESAN LANDWIRTSC D14 =GB 1557-876
Air conditioned long term storage of bulk cereals - 12814Y/08
- LAND- 24.04.78 INST LANDBOUWPROD BEWAR D14 =DK 7901-672
Separator tank having two longitudinal compartments - 79533B/44
- LAND- 24.04.78 INST LANDBOUWPROD D14 =SW 7903-545
Separator tank having two longitudinal compartments - 79533B/44
- * LANG/ 05.06.78 LANG J L C03 D13 H09 *EP ---5-703
Fuel e.g. alcohol and plant and animal nutrient - 89704B/50
- LEEP 26.11.74 LEE PHARMACEUTICALS A96 D21 (A14) =CA 1067-012
Treatment of (finger) nails to repair or lengthen them - 63743X/34
- * LENI 15.07.76 LENINGRAD LENSOVET TECH D23 E17 H07 M21 *SU -654-674
Prodn. of metal-working lubricant - 90748B/50
- * LENL 01.06.76 LENINGRAD FORESTRY ACAD C03 D16 (D13) *SU -654-679
Animal feed yeast culture medium - 90753B/50
- LESI 31.05.78 LESIEUR COTELLE SA D13 (D23) =DT 2921-499
Treating fats, esp. palm oil - 71796B/40
- LINM 06.08.76 LINDE AG D16 =GB 1557-644
Hops ground and pelletised with liquid nitrogen feed - 12506A/07
- * LIOC 24.04.78 LION DENTIFRICE KK A96 B05 D21 (A23 D22) *J5 4140-714
Compsn. for forming film on skin e.g. cosmetic or medical dressing - 90055B/50
- * LIOY 28.04.78 LION FAT & OIL KK A97 D25 E19 F06 (A11 A25) *J5 4142-209
Detergent additive giving durable softness to textiles - 90371B/50
- * LIPO/ 21.08.73 LIPORIV D14 *IT 1033-515
Confectionery products prodn. press - B/50
- * LIVE= 04.04.77 LIVESTOCK FARM MACH D16 *SU -655-433
Horizontal deposition centrifuge for manure solid liquid phase sepn. - 90842B/50
- LKBP 31.05.78 LKB PRODUKTER AB B02 D16 J04 =DT 2921-975
Adenine tri:phosphate determn. by bio-luminescence - 71832B/40
- LKBP 31.05.78 LKB PRODUKTER AB B02 D16 J04 =GB 2022-247
Adenine tri:phosphate determn. by bio-luminescence - 71832B/40
- * LOMB/ 03.03.71 LOMBARDO F D12 *IT 1033-503
Meat juice for food products - B/50
- LOTT 01.04.77 LOTTE KK D13 =J5 3124-660
Chewing gum compsn. - 90508B/50
- * LOTT 01.04.77 LOTTE KK D13 *J7 9038-189
Chewing gum compsn. - 90508B/50
- * MAIH 30.05.78 MAIHAK H AG D15 J04 *DT 2823-587
Determining organic carbon content of salty water - 89502B/50
- * MAMA/ 14.07.77 MAMAILI D11 L02 *SU -655-547
Glazing mouldable materials, clay, dough, etc. - 90873B/50
- * MAOP- 11.05.77 MAGYAR OPTIKAI MUVE D15 J04 *HU T017-401
Spectral comparator for absorption measurements - B/50
- MARU/ 19.04.72 MARUMO H D25 E19 =J7 9038-124
Amphoteric surfactants mild to the skin - 50874V/28
- * MATS/ 23.11.76 MATSIEVSKII V A D15 J04 *SU -654-900
Automatic water-hardness meter - 90804B/50
- * MATS/ 23.04.78 MATSUURA H D21 E37 *J5 4140-740
Dentifrice with good tooth cleaning and gingiva stimulating action - 90070B/50
- * MATU 27.04.78 MATSUSHITA ELEC IND KK D15 E32 J04 *J5 4142-182
Oxidising agent for treating COD components, etc. - 90359B/50
- MECH- 24.05.78 STICHT INST MECHAN D15 =NL 7805-630
Scroll filter press for sepg. water from organic fibres - 85955B/48
- * MEGG 29.05.78 MEGGLE MILCHIND GMB D13 *DT 2823-339
Cheese prodn. - 89484B/50
- MEIJ 10.11.76 MEIJI SEIKA KAISHA D13 =J7 9038-188
Heat resistant chocolate - 48594A/27
- * MEIJ 17.07.78 MEIJI SEIKA KK D13 *US 4177-296
Prepn. of peanut curd having roasted flavour - 91101B/50
- * MELY- 17.04.76 MELYEPITESI TERVEZO D15 J01 *HU T017-288
Counter-current gravity filter for liquids, esp. water - B/50
- MERI 12.02.76 MERCK & CO INC B05 C03 D21 (B03 C02 D22) =GB 1552-049
Antimicrobial diphenyl-polyamine derivs. - 59726Y/34
- MERI 16.03.76 MERCK & CO INC B02 C02 D22 E13 =GB 1551-672
Thienamycin sulfoxide and sulphone - 71984Y/40
- MERI 24.04.78 MERCK & CO INC B04 D16 #J5 4140-715
Preservatives for vaccines - 78323A/44
- MERI 28.04.78 MERCK & CO INC B02 C02 D22 (D13) #DK 7801-857
1-Aza-bi:cyclo(3,2,0)heptene carboxylic acid derivs. - 86053B/48
- METG 26.11.76 DRAVO CORP D23 =GB 1557-751
Recovering solvent from aq. organic solvent oil seed extract - 25277A/14
- METG 26.11.76 DRAVO CORP D13 =GB 1557-752
Protein concentrate prodn. by oil seed extraction with alcohol - 25276A/14
- METG 12.02.77 METALLGESELLSCHAFT AG D15 H05 J09 =DS 2706-039
Incineration of (refinery) salt-contg. sludges - 60654A/34
- METT 26.04.78 M & T CHEMICALS INC A41 D15 E11 F06 =DK 7901-707
Tri:alkoxy-silane cpds. - 75330B/42
- METT 26.04.78 M & T CHEMICALS INC A41 D15 E11 F06 =NO 7901-349
Tri:alkoxy-silane cpds. - 75330B/42
- METT 26.04.78 M & T CHEMICALS INC A41 D15 E11 F06 =SW 7903-595
Tri:alkoxy-silane cpds. - 75330B/42
- * MGEI 02.06.78 MASCH H GEIGER D15 *DT 2824-204
Scraper for settling tank mounted on travelling bridge - 89544B/50
- MICR- 24.10.77 MICROLIFE TECHNICS C03 D13 (D16) #GB 1557-390
Lactic acid ferment flavoured pet food - 54429B/29
- MILE 22.05.78 MILES LABORATORIES INC D16 (D13) =NL 7900-315
Reducing thermal stability of microbial Mucor rennin - 87909B/49
- * MILE 13.10.78 MILES LABORATORIES INC D12 *BE -878-109
Food product, esp. sausage, not requiring cooking oil - 89424B/50
- * MITK 20.12.68 MITSUI TOATSU CHEM INC D16 *J7 9038-198
Fermentation prod. or cell body prepn. from microorganism - 90509B/50
- MITK 10.03.78 MITSUI TOATSU CHEM INC B04 D16 =J5 4140-710
Bacterial cell extracts from Mycobacterium species - 68364B/38
- * MITS 08.03.78 MITSUBISHI CORP C04 D15 *J5 4119-773
Treating pig urine and excrement - 90028B/50
- * MITU 24.04.78 MITSUBISHI CHEM IND KK A96 B04 D16 (A14) *J5 4140-790
Prodn. of immobilised enzyme - 90083B/50
- * MIYA/ 21.04.78 MIYATAKET D11 *J5 4140-752
Storage-stable rice powder noodles mfr. - 90075B/50
- * MLEK- 15.11.78 MLEKARENSKY PRUMYSL D13 *US 4177-293
Low calorie butter spread mfr. - 91100B/50
- * MLFO= 01.02.78 MOLD FOOD IND INST D14 *SW 7900-850
Rapid freezer for food - 90912B/50
- * MOME= 09.02.77 MOSC MEAT IND PRODN D12 *SU -654-500
Trough from meat loaf box removal mechanism - 90624B/50
- * MOMI 24.04.78 MORINAGA & CO LTD D16 *J5 4140-791
Polyphenol oxidase prodn. - 90084B/50
- * MONO- 24.05.77 MONORI MEZOGAZDASAG D12 *HU T017-280
Modular table construction for the food, esp. meat, industry - B/50
- MOOC 18.07.67 MO OCH DOMSJO AB D22 E31 F09 (E12) =J7 9038-170
Nickel cpds for the control of chrysosporium lignorum - 51689S/32
- MOOC 08.12.77 MO OCH DOMSJO AB D22 =DK 7902-181
Dressing for high fluid secretion wounds - 47480B/26
- MORG 19.07.75 MORINAGA & CO LTD D11 =DS 2631-863
Continuous pastry rolling machine - 06160Y/04
- * MOSU 06.12.76 MOSCOW LOMONOSOV UNIV A97 B05 D16 (A18) *SU -654-620
More active immobilised enzymes prepn. - 90703B/50
- MRSC 18.10.73 MARS LIMITED C03 D13 =CH -614-352
Animal food product contg. fermented protein - 19271W/12
- MRSC 11.04.74 MARS LIMITED C03 D13 =CH -614-353
Meat like substitute comprising protein in jelly - 58763W/36
- MRSC 24.04.78 MARS LTD C03 D13 =DK 7901-675
Frozen animal and human food prod. - 79531B/44
- * MURM= 07.09.76 MURMANSK GIPRORYBEL D12 *SU -655-376
Machine for washing fish before drying and smoking - 90820B/50
- * MYCO- 01.04.75 MYCOGEL LABS INC B04 C03 D16 (B02 B05) *CH -614-466
Inhibiting growth of bacteria in fungal culture media - 89457B/50
- * NALC 25.10.78 NALCO CHEMICAL CO D15 J01 *US 4177-143
Preventing strainer fouling in air conditioning units - 91038B/50
- * NATR 07.06.78 NATIONAL RES DEV CORP A96 B04 D16 *EP ---6-035
Bacterial beta-galactosidase of high thermal stability - 89839B/50
- NEST 24.06.76 SOC PROD NESTLE SA D13 =CH -614-104
Continuous extraction of coffee or tea - 02582A/02
- NICA 14.01.74 NIPPON CARBIDE KOGY KK A97 D15 =CA 1067-221
Effluent treatment with melamine resin - 49760W/30
- NIIG 13.08.75 NIIGATA ENG KK D15 =SU -655-303
Aerobic compost fermentation from organic sludge - 14994Y/09
- NIPC 25.12.75 NIPPON CHEM IND KK D15 J01 =J7 9037-588
Sedimentation promotor for industrial waste water - 58191Y/33
- NIPK 26.08.74 NIPPON KAYAKU KK A97 C04 D15 (C03 D13) =J7 9037-423
Industrial or domestic activated sludge treatment - 30608X/17
- * NIPK 24.04.78 NIPPON KAYAKU KK D12 *J5 4140-767
Agent for preventing degradation of dried fish prods. - 90078B/50
- NISA- 21.04.78 NIPPON SANGYO KIKAI A97 C04 D15 (A14) =J5 4141-050
Removing phosphate(s) from waste water - 79566B/44
- * NISC 22.04.78 NISSAN CHEM IND KK D22 E14 (E13 E36) *J5 4140-732
Tablet for deodorising urine pots - 90064B/50
- * NISC 22.04.78 NISSAN CHEM IND KK B05 D23 E17 *J5 4141-711
Geraniol and linalool prodn. from nerol - 90194B/50

- NISQ 26.05.71 SHIN-NISSO KAKO KK D25 E23 F06 = J4 8000-827
Water based chemical bleach compsn. - 90496B/50
- *NISQ 26.05.71 SHIN-NISSO KAKO KK D25 E23 F06 *J7 9038-130
Water based chemical bleach compsn. - 90496B/50
- *NISS 08.03.78 NISSHIN FLOUR MILL KK C04 D15 *J5 4119-773
Treating pig urine and excrement - 90028B/50
- *NITE- 28.12.77 NIPPON TENNEN GAS K A87 D22 F06 (A11) *J5 4093-200
Prodn. of sterilised fibres for bandages etc. - 90003B/50
- NITO 05.04.73 NITTO BOSEKI KK A12 C03 D15 (A60 A87 A91 A97) = DS 2416-675
Di-allyl-amine deriv. (co)-polymers and prodn. - 77829V/45
- NITY 11.05.74 NITTETSU KAKOKI KK D15 E35 J01 = J7 9038-418
Treating waste water contg. ammoniacal nitrogen - 13050A/07
- *NIZH= 15.07.76 NIZHNI TAGIL METALLURG D23 E17 H07 M21 *SU -654-674
Prodn. of metal-working lubricant - 90748B/50
- *NMHB 09.12.77 NORDISCH MASCH R BAADER D12 *GB 1557-600
Tool cutting and cleaning fish abdominal cavity - 89901B/50
- *NORD- 06.11.74 LA NORDICA INDERBI D25 *IT 1033-617
Slightly detergent aq. alcohol soln. - B/50
- *NOSA 08.03.78 NIPPON NOSAN KOGYO KK C04 D15 *J5 4119-773
Treating pig urine and excrement - 90028B/50
- NOVO 10.08.76 NOVO INDUSTRIA/S D17 E13 (D16) = GB 1551-444
Isomerising glucose to fructose using immobilised glucose isomerase - 88287Y/50
- NUTR 09.11.70 NUTRILITE PRODUCTS INC D13 E14 = DS 2155-321
Use of dihydrochalcone derivs - 32821T/21
- *NYBL- 07.06.78 NEW YORK BLOOD CENT B04 D16 *EP ---5-864
Sub:particulate mass contg. hepatitis B surface antigen - 89757B/50
- *ODFO= 22.12.76 ODESS FOOD IND INST D16 *SU -654-678
Microbiological culture growing unit - 90752B/50
- *ODPO= 22.12.76 ODESS POLY D16 *SU -654-678
Microbiological culture growing unit - 90752B/50
- OREA 27.09.74 L'OREAL SA A96 D21 E21 = CH -614-120
Hair dyeing compsn contg. azo dyes from 3 aminopyridine cpds - 28294X/16
- OREA 02.05.75 L'OREAL SA D22 E14 = CH -614-230
Cold extruded para-dichloro-benzene toilet cleansing bars - 84964X/46
- OREA 28.05.75 L'OREAL SA A96 D21 E16 (A14 A25) = CH -614-121
Hair dye compsn. contg. an N-vinyl pyrrolidone graft copolymer - 92404X/50
- OREA 16.07.76 L'OREAL SA A25 B04 D21 (A97 B07) = GB 1551-902
Polyether poly:ol surfactants with sequenced structure - 06350A/04
- OREA 06.04.78 L'OREAL SA D21 E14 (E13 E24) = J5 4142-387
2,4-Di:hydroxy-4'-amino-di:phenylamine cpds. - 73614B/41
- *ORON- 02.06.78 ORONZIO DE NORA IMP D15 E13 J03 (E36) *EP ---5-859
Extraction of metal ions from alkaline aq. soln. - 89755B/50
- *OTSU- 24.04.78 OTSUKA KAGU KOGYO KK D15 F09 *J5 4141-055
Treating waste water resulting from boiling of lumber - 90105B/50
- OTTC 18.01.77 OTTO DR C & CO GMBH D15 E14 = US 4177-139
Treating aq. effluent esp. to remove phenol cpds. - 32162A/18
- *PACE- 28.10.75 PACEMAKER CORP A96 B06 D21 *GB 1551-388
Thixotropic topical fluoride-phosphate gel compsn. - 89886B/50
- *PACI/ 23.04.75 PACINIA D16 *IT 1033-792
Fermentation vessel for processing solids contg. liquids - B/50
- *PACI/ 07.07.75 PACINIA D16 *IT 1033-813
Vinsasse removal system from fermentation vat - B/50
- *PENN 21.08.71 PENNWALT CORP C02 D22 E13 *US 4177-351
Fluorinated heterocyclic sulphide(s) - 91127B/50
- *PERC 26.04.78 PERMACHEM ASIA LTD C03 D22 E14 F09 *J5 4141-738
Antimicrobial aromatic bromo:nitro:alcohol derivs. - 90214B/50
- PERS 28.04.78 PERSONAL PRODUCTS CO D22 = DK 7901-758
Catamenial tampon with increased absorptive capacity - 79123B/44
- PERS 28.04.78 PERSONAL PRODUCTS CO D22 = SW 7903-681
Catamenial tampon with increased absorptive capacity - 79123B/44
- PFAU 14.05.76 PFAUDLER-WERKE AG D22 = CH -614-372
Surgical prosthetic fixing with selfcutting screw threads - 63088Y/36
- PFIZ 24.12.74 PFIZER INC D21 L02 M26 = CH -614-236
Dental alloy for bonding to porcelain - 54416X/29
- PFIZ 28.08.75 PFIZER INC B03 C02 D13 E13 (D23) = DK 7901-463
(3)-Hydroxy gamma:pyrones prepn. - 11094Y/07
- PHIG 21.07.75 PHILIPS ROXANE INC B04 C03 D16 = GB 1551-437
Antirabies vaccine prepn. - 07501Y/05
- PHIM 15.02.78 PHILIP MORRIS INC A97 D18 (A23) = US 4177-339
Polymerised ethylenically unsaturated di:ester carbonate - 35222A/20
- PHIM 29.03.78 PHILIP MORRIS INC D18 = J5 4140-799
Expanding tobacco to increase its filling capacity - 56315B/31
- *PHYL- 16.09.77 PHYLAXIA OLTOANYAG- C03 D13 *HU T017-281
Animal, esp. pig, fodder prepn. - B/50
- PIEC 22.04.78 PIERCE CHEMICAL CO B04 D16 #J5 4141-704
Peptide synthesis - 71082B/39
- PLAC 18.05.76 MAX PLANCK GES WISSENSCH A96 B04 D16 = US 4177-
Carriers for covalently bonding biological materials, esp. enzymes - 84966Y 48
- *PLAN= 25.10.77 PLANT CHEM PROTECT D15 *SU -655-401
Crops pesticide spraying unit water filter for intake pipeline - 90824B/50
- *POKK 16.03.78 POLA KASEI KOGYO KK D21 *J5 4140-736
Face cosmetic contg. fine spherical silica gel - 90067B/50
- POLA 20.04.76 POLAK'S FRUTAL WORKS INC D23 E14 = CA 1067-098
Hexamethyl-indane-(6)-nitrile perfume additive - 30724Y/17
- POLA 01.02.77 POLAK'S FRUTAL WORKS INC D13 E13 = GB 1557-382
2-Isopropyl-4-methyl-thiazole used in foods - 57187A/32
- *POLI= 25.10.76 POLIMIR PROD. COMBINE A91 D15 E36 J01 (A14) *SU -654-623
Ion-exchanger contg. copper, e.g. for dissolved oxygen removal 90705B/50
- *POWE/ 10.04.78 POWER D P D11 *US 4176-591
Cooking pan for baking pizza pies etc. - 90940B/50
- PPCA 26.06.74 PULP & PAPER RES CA INST A11 D22 F06 = SU -654-176
Modified cellulosic textiles - 05852X/04
- *PROC 22.09.75 PROCTER & GAMBLE CO A97 D25 E34 (A18) *GB 1551-239
Detergent contg. orthophosphate and pyrophosphate builders 89881B/50
- PROC 16.10.75 PROCTER & GAMBLE CO D11 E34 = CA 1066-943
Angel food cake mix contg. alkali metal bisulphite - 54142X/28
- PROC 16.10.75 PROCTER & GAMBLE CO D13 = CA 1066-947
Improved dried egg white compsns. - 75592X/40
- PROC 20.09.76 PROCTER & GAMBLE CO D25 E19 = GB 1557-568
Detergent contg. granular bleach - 23635A/13
- PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 (A25) = NL 7815-024
Low phosphate or phosphate-free laundry detergent compsn. - 10316B/06
- PROC 21.09.77 PROCTER & GAMBLE CO D13 E19 = NL 7815-032
Meat aroma precursor compsn. - 26453B/14
- PROC 26.09.77 PROCTER & GAMBLE CO A97 D25 E19 = NL 7815-037
Low phosphate built detergent compsn. - 26454B/14
- *PROT- 31.03.78 PROTIM INT LTD C03 D22 F09 *GB 2021-952
Timber treatment by immersion in pressurised liquid - 89916B/50
- *PUNT= 21.04.76 PUNTUKAS PLAN DES D16 F01 *SU -653-311
Biological maceration of bast fibre-contg. plant tissue - 90593B/50
- PYNN/ 27.04.78 PYNNONEN P D15 = SW 7903-697
Water purification filter - 82823B/46
- RALS 03.05.68 RALSTON PURINA CO C03 D13 = J7 9038-186
Protein product - 08549H/00
- *REIL 27.07.78 REILLY TAR & CHEM CORP C02 D22 E13 *US 4177-349
Alkyl-substd.-2,2'-bi:pyridyl(s) prepn. - 91126B/50
- RESE 26.04.78 RESEARCH CORP B04 D16 K08 = DK 7802-339
Protease free coenzyme/a -synthesising protein complex - 00008B/01
- RESE 26.04.78 RESEARCH CORP B04 D16 K08 = SW 7806-030
Protease free coenzyme/a -synthesising protein complex - 00008B/01
- RETO 20.10.76 REYNOLDS TOBACCO CO D16 (D17) = GB 1551-897
Glucose isomerase prepn. from Flavobacterium arborescens - 89794Y/50
- REXA 05.08.75 DART INDUSTRIES INC D15 M11 = CA 1067-222
Fluoride removal from fluoroborate-contg. soln. - 14459Y/08
- REZN/ 03.08.77 REZNIK S D15 E36 J03 = DS 2735-055
Thermoelectric breakdown of water - 12211B/07
- RHEI- 28.02.75 RHEINTECH WEILAND & D15 = HU H002-481
Biological converter for faecal matter in water - 56085X/30
- RHON 02.03.78 RHONE-POULENC INDUSTRIES D25 E33 = FR 2418-771
Synthetic alkali silico-aluminate prodn. - 68504B/38
- RIED 20.08.70 RIEDEL DE HAEN AG B05 C03 D21 E14 = IT 1033-502
4-acetylphenyl n-methyl-n-3-tolylmonothiocarbamate - 14437T/09
- RIES/ 01.06.78 RIESS G A96 D21 = DT 2824-118
Dental surgical implant for securing crowns, bridges etc. - 24021B/13
- *RIES/ 02.06.78 RIESS G A96 D21 (A28) *DT 2824-214
Plastics moulding for connecting dental crown with tooth root - 89546B/50
- RITP 28.03.75 SYBRON CORP D21 M26 = CA 1066-924
Dental alloy compsn - 66514X/35
- *ROBE- 20.03.78 ROBERTS FILTER MFG D15 *US 4177-147
Aerobic biological treating system for waste water - 91041B/50
- ROQF 15.09.76 ROQUETTE FRERES SA D13 E24 = DS 2703-374
Natural yellow dye for foods - 21793A/12
- ROTH- 13.05.78 APP ROTHEMUHLE BRAN D15 K07 = BR 7902-922
Decontaminating radioactive liq. effluent - 86069B/48
- *RYOI/ 24.12.70 RYOI D21 *J7 9038-180
Prodn of dentifrice which prevents tooth-decay - 90505B/50
- SAGA- 13.11.75 SAGAPHA AG A97 D25 (A82) = CA 1066-959
Conditioning deformable gelatin microcapsules contg. stain remover - 18218Y/11
- SAKA/ 02.03.77 SAKAKIDA K B04 D16 = GB 1557-556
Antitumour emitanin prodn. - 65669A/37
- SAKA/ 02.03.77 SAKAKIDA K B04 D16 = US 4177-108
Antitumour emitanin prodn. - 65669A/37
- *SALI- 22.05.78 SALINON LTD D15 *NL 7805-535
Prepn. of drinking water from sea water by evaporation - 90534B 50

- *SALO/ 29.04.75 SALOVA R A A60 D25 E23 F06 (A11 A14) *SU -654-616
Sulphamoyl-phenyl chlorophenyl pyrazoline prepn. - 90699B/50
- *SANE 28.04.78 SAN EICHEM IND KK D13 E24 *J5 4142-236
High purity paprika pigment prodn. - 90385B/50
- SANN 22.12.76 SANYO CHEM IND LTD A91 D15 F09 (A14 A97) = J7 9037-986
Quat. ammonium monomer-based water-in-oil polymer emulsions - 48129A/27
- SANO 18.07.75 SANDOZ LTD C03 D16 = GB 1557-668
Particle form viral insecticide - 09705Y/06
- *SANY 20.04.78 SANKYO KK B04 D16 *J5 4141-702
Antibiotic malloxamycin - 90187B/50
- SANY 24.05.78 SANKYO KK B04 D16 = NL 7904-094
Anti-mycobacterial peptide antibiotic mycoplanecin - 87986B/49
- *SANY- 26.04.78 SANYO KAKO KK D15 J02 *J5 4141-376
Injecting liq. chemical at desired rate into soiled water - 90155B/50
- SAOC 19.07.75 SANRAKU OCEAN B02 D16 = J7 9038-113
Macrolide antibiotic derivs. - 17488Y/10
- SATE- 13.10.75 SATEM SOC APP TECHN D12 = HU T017-279
Machine for tying ends of filled sausage casings - 27117Y/16
- *SAVI/ 07.03.75 SAVIL D15 *IT 1033-987
Mechanical separator for solids-contg. aq. effluents - B/50
- SCHA/ 21.04.78 SCHATNER R D22 E19 #J5 4140-721
Ambient sterilising compsn. contg. glutaraldehyde and phenol - 72737A/41
- SCHC 04.11.75 SCHERICO LTD B03 C02 D22 = GB 1557-687
Antibacterial di-(N)-subst. diaminoglycosyl diamino-cyclitols - 32731Y/19
- *SCHM/ 05.06.78 SCHMITZ H D16 (D13) *DT 2824-553
Softening tough parts of mushrooms - 89577B/50
- *SCHW/ 25.05.70 SCHWEIGER R G A11 D22 F01 (A96) *US 4177-345
Sulphation of PVA or a polysaccharide - 91123B/50
- *SCMZ 05.06.78 SCM CORP D13 *EP ---6-034
Compsn. contg. confectionery hard butter - 89838B/50
- *SCOP 02.08.78 SCOTT PAPER CO D22 F04 *US 4176-426
Web formation employing intermediate foraminous spreading section - 90923B/50
- *SCOP 02.08.78 SCOTT PAPER CO D22 F04 *US 4176-427
Web formation employing intermediate spaced discs spreading section - 90924B/50
- *SEAF 17.02.77 SEA FISHERY OCEANOGRAPHY D12 *SU -654-235
Continuous fish smoking process - 90605B/50
- SEIU 13.08.75 SEIBU CHEM IND KK D15 = SU -655-303
Aerobic compost fermentation from organic sludge - 14994Y/09
- *SEIW- 24.04.78 SEIWA KAGAKU KK D13 *J5 4140-746
Freezing process for fish, meat, vegetables etc. - 90073B/50
- *SHAW/ 25.07.77 SHAW R A D13 *US 4176-595
Coring cauliflower held in spiked cup - 90942B/50
- SHEL 14.11.73 SHELL INT RES MIJ BV D23 E15 = CH -614-425
Cyclic ketones prepn from cyclic olefins - 34661W/21
- SHEL 07.01.74 SHELL INT RES MIJ BV C03 D14 H04 (D13) = CH -614-234
Growing methane-utilising microorganisms in mixed culture - 46037W/28
- SHEL 12.05.78 SHELL INT RES MIJ BV D23 E15 = BR 7902-860
Ester(s) of (1,5)-di:methyl-bi:cyclo-(3,2,1)octanol-8 - 82556B/46
- *SHIS 25.04.78 SHISEIDO KK A97 D21 E19 *J5 4140-738
Hair treating compsn. - 90068B/50
- *SHIS 25.04.78 SHISEIDO KK D21 E17 *J5 4140-739
Pretreating compsn. for hair dyeing - 90069B/50
- *SHOF 26.04.78 SHOFU TOSHI SEIZO KK D21 M26 *J5 4141-316
Easily castable, nickel-chromium dental alloy - 90136B/50
- *SIEI 28.02.66 SIEMENS AG D17 *DS 1567-316
Regulating the supersaturation of boiling sugar solutions - 89461B/50
- SILC 23.08.75 STILL C D15 E35 H09 = GB 1557-478
Treatment of aq. condensates and effluents from coking plants - 14893Y/09
- SIMP- 21.04.78 SIMPSON & CO ALNWIC D16 = GB 1557-549
Mechanised germination plant for malting cereal grain esp. barley - 42444B/23
- *SKOG/ 03.02.78 SKOGLUND H C E A92 D16 *SW 7801-316
Plastics fermentation vessel with water seal for gas release - 90902B/50
- SMHL 31.10.75 SIMON HARTLEY LTD D15 J01 = CA 1067-016
Sand filter for water purifiifcn. - 16508Y/10
- SMHL 25.05.78 SIMON HARTLEY LTD D15 = NL 7900-125
Thickening activated sludge - 40664B/22
- SMIK 16.01.78 SMITH KLINE INSTR B04 D16 J04 = SW 7900-335
Determination of creatine kinase isoenzyme(s) - 52549B/29
- SMIN 26.04.78 SMITH & NEPHEW LTD A96 D22 = SW 7903-657
Water soluble terpolymers contg. piperidinium methyl units - 66366B/37
- *SMIN 19.05.78 SMITH & NEPHEW COSM A96 D21 *EP ---5-922
Lip cosmetic giving uniform layer - 89788B/50
- SNAM 09.04.75 SNAMPROGETTI SPA B04 D16 J04 = HU T017-357
Modifying proteins by reaction with quinones - 79729X/43
- SNAM 23.05.78 SNAMPROGETTI SPA B05 D16 E19 = NL 7904-097
Prepn. of D-aminoacids - 85938B/48
- SNAM 24.05.78 SNAMPROGETTI SPA D14 J01 (D23) = NL 7904-135
Continuous solid-liq. extn., esp. of vegetable material - 85965B/48
- *SNAM 02.06.78 SNAMPROGETTI SPA D13 *DT 2922-561
Prodn. of protein isolate esp. from sunflower seeds - 89690B/50
- SNKM 11.04.78 SANKIN KOGYO KK D21 = J5 4142-895
Tooth crown mfr. using photocurable resin compsn. - 77771B/43
- SNOW 09.06.76 SNOW BRAND MILK PRODUCTS D13 (D16) = J7 9038-187
Fermented milk prepn. - 09342A/05
- SOLB 23.12.77 SOLCO BASEL AG B04 D16 = J5 4140-716
Hetero-vaccine for treatment of trichomonas syndrome - 47144B/26
- SOLV 25.04.77 SOLVAY & CIE A97 D25 = GB 1557-760
Reducing the molecular weight of hydroxy-carboxy polymers - 76317A/43
- SOLV 25.04.77 SOLVAY & CIE A97 D25 = GB 1557-771
Poly-alpha-hydroxyacrylic acid salts prepn. - 76318A/43
- SOLV 24.04.78 SOLVAY & CIE A97 D25 E34 (E35) = J5 4141-839
Particles contg. polylactone and bi:carbonate - 79421B/44
- *SOMA- 24.04.78 SOMAL KOGYO KK C02 D22 E16 F09 (C03 E13) *J5 4140-726
Synergistic slime-controlling agent for paper pulp industry - 90059B/50
- *SPEY- 30.05.78 SPEYWOOD LABS LTD A96 B04 D11 (A97) *EP ---5-977
Oral admin. of large doses of anticholesterolaemi carbohydrate gums - 89808B/50
- *SPEY- 30.05.78 SPEYWOOD LAB LTD A97 B05 D13 *GB 2021-948
Water miscible carbohydrate gum particles coated with starch - 89915B/50
- STAD 29.01.75 STANDARD OIL CO (IND) D13 (D12) = CA 1066-940
Meat, poultry and fish analogues prodn. - 16794X/09
- STAU 31.05.77 STAUFFER CHEMICAL CO D17 E13 = GB 1551-809
High purity lactose prodn. - 66818A/37
- *STEL- 30.05.78 FA STELZER E D15 *DT 2823-515
Gasifier or aerator for liquid tank - 89492B/50
- *STEN/ 31.05.78 STENGELIN V D15 *DT 2823-763
Sewage denitrification - 89517B/50
- STER 05.06.78 STERLING DRUG INC B05 C01 D22 = DT 2922-054
Aralkyl and aryloxy-alkyl di:alkyl phosphonate(s) - 87592B/49
- STRK 14.06.74 STORK WERKSPOOR SUG D17 = IT 1033-900
Sugar crystal production - 00059X/01
- *STRK 30.11.77 STORK APPARATENBOUW D14 (D23) *GB 1557-501
Extracting kernels from nuts esp. oil palm nuts - 89900B/50
- SULZ 03.04.78 GEBRUDER SULZER AG D16 = J5 4142-868
Activated sludge preservation - 73792B/41
- SUMO 10.07.76 SUMITOMO CHEMICAL KK A97 D16 G02 = J5 3008-222
Solid granular ink prepn. - 90528B/50
- *SUMO 10.07.76 SUMITOMO CHEMICAL KK A97 D16 G02 *J7 9038-535
Solid granular ink prepn. - 90528B/50
- SUMO 25.05.78 SUMITOMO CHEMICAL KK D16 (D17) = NL 7904-085
Glucose isomerase extraction from cells - 87995B/49
- *SUNG 19.07.78 SUNBEAM CORP D14 *US 4176-971
Multipurpose kitchen appliance with high and low speed spindles - 90982B/50
- *SUNO 14.11.73 SUNTECH INC A23 D15 J01 (A88) *US 4177-222
Semipermeable membrane comprising block copolymer of poly:di:oxa:amide - 91068B/50
- SUPR- 03.07.75 SUPRATON F-J ZUCKER B04 D16 J01 (D15) = GB 1557-674
Rotary filter for membrane filtration of colloidal soln. etc. - 05880Y/04
- *SVAT= 13.04.77 SVATOVO OIL FAT IND D23 *SU -655-718
Deodorisation unit for fats and oils - 90895B/50
- *SYNT 30.05.78 SYNTAX (USA) INC B03 C02 D22 (D13) *EP ---5-980
2-Phenoxy and 2-phenylthio-4-phenyl-N-butyl imidazole(s) - 89810B/50
- *SZOT- 01.06.76 SZOT MUNKAVEDELMI D22 J01 *HU T017-291
Ionising appts. for air purification - B/50
- TAIS 14.03.72 TAISHO PHARMACEUT KK A96 D22 = J7 9038-169
Polyethylene oxides in therapeutic wet dressings - 33475V/18
- *TAIY- 29.05.78 TAIYO SEISAKUSHO MF D12 *DT 2855-127
Removing internal organs esp. kidneys of fish - 89598B/50
- *TAKE 26.12.77 TAKEDA CHEMICAL IND KK B03 D16 *J5 4090-112
1-Deoxy-d-erythro-heptulose and its 2,7-anhydro deriv. - 89997B/50
- *TAKE 25.04.78 TAKEDA CHEMICAL IND KK D13 E12 *J5 4141-717
Powdery anhydrous sodium succinate prepn. - 90199B/50
- *TAMA/ 06.07.77 TAMARCHENKO M E C03 D13 *SU -654-237
Compound feed for farm animals, e.g. pigs - 90606B/50
- TANA 09.04.77 TANABE SEIYAKU KK A97 B04 D16 (A11) = GB 1557-545
Crude urokinase purification by adsorption chromatography - 76723A/43
- *TANA 21.04.78 TANABE SEIYAKU KK D12 *J5 4140-768
Salted fish egg prepn. - 90079B/50
- TAPR- 11.11.76 TAPROGGE L REINIGUN A97 D15 = GB 1551-894
Water additives preventing deposit-formation of heating surfaces - 36751A/21
- *TATA= 06.08.76 TATARSK FUR COMBINE D18 *SU -654-685
Fur skins treatment unit - 90757B/50
- *TECH= 31.05.78 TECH RYBPROM PROD D12 *DT 2823-878
Fish filleting machine - 89526B/50
- *TEIJ 26.01.78 TEIJIN KK A88 D15 J01 *J5 4100-984
Selectively permeable membrane resistant to chemicals - 90017B/50
- TEIJ 22.05.78 TEIJIN LTD A88 D15 J01 = NL 7903-992
Semipermeable water-desalination membrane - 87961B/49
- TENC 24.03.77 TENNECO CHEMICALS A25 D25 E12 (A97) = GB 1557-756
Prepn. of expanded polyurethane contg. detergent and filler - 51670A/29

- TENC 30.06.78 TENNECO CHEMICALS A97 D25 F07 (A25) =US 4177-151
Conditioning article for textile fabrics during tumble drying - 79162B/44
- TEXC 11.04.75 TEXACO BELGIUM NV D25 E17 =CA 1066-983
Water-sol., biodegradable detergent compsn - 79398X/43
- THAL 18.02.70 VEB SCHWERMASCH THALMANN D13 =DS 2056-896
Fats and proteins recovery from vegetablesol - 56199S/35
- *TIIC- 08.08.78 TII CORP D15 *BE -878-136
Treating water to remove cyanide(s) and cyanate(s) - 89434B/50
- *TIJE/ 24.04.78 TIJEYRO J M D13 *J5 4140-765
Lobster or shrimp food prodn. - 90077B/50
- TILB/ 14.11.77 TILBY S E D17 #CA 1066-995
Diffuser appts. for extracting juice from e.g. sugar cane pith - 72112A/40
- *TINI= 26.07.77 TIN IND RES INST D15 J01 (J03) *SU -655-404
Electrolytic froth flotation chamber for purifying aq. effluents - 90827B/50
- TOKA- 16.12.74 TOKAI REGIONAL FISH D12 =CA 1066-941
Concentrated protein mfr. from fish - 11755Y/07
- *TOKA- 24.04.78 TOHO KAKO KENSETSU D15 F09 *J5 4141-055
Treating waste water resulting from boiling of lumber - 90105B/50
- *TORN 28.04.78 TORAY ENG KK D15 E19 L02 M11 (E37) *J5 4142-861
Solidification of sludge contg. heavy metals and other harmful matter - 90459B/50
- TOSU- 04.11.75 TOYO SUGAR REFINING B03 D13 E13 =J7 9038-120
Purificn. of crude extract of *Stevia rebaudiano bartoni* - 44323Y/25
- *TOXF 22.03.78 TOHO BESLON KK A35 D15 E36 J01 (A14) *J5 4124-892
Cation-exchange activated carbon prodn. - 90039B/50
- TOXN 28.04.78 TOYO JOZO KK A96 B04 D16 E13 =SW 7903-673
Carrier-bound di:sulphide cpds. of benzothiazole and pyridine N/oxide - 82813B/46
- TOXN 25.05.78 TOYO JOZO KK B02 C02 D16 =NL 7903-318
Neplanocin purine nucleoside antibiotics from *Ampullariella* spp. - 87915B/49
- TOYJ 23.05.72 TOYO SODA MFG KK D15 =J7 9038-597
Heavy metals removal from waste waters - 74835V/43
- TOYJ 20.04.78 TOYO SODA MFG KK D17 (D13 D15 D16) =J5 4140-792
Allose-contg. polysaccharide produced by *Pseudomonas viscogena* - 81095B/45
- TRAN- 08.12.75 TRANSFRESH CORP D14 =GB 1551-432
Fresh farm products - 52778Y/30
- *TRIB- 02.03.78 TRIBALLAT LAITERIES D13 *FR 2418-627
Casein prepn. from skimmed milk - 89863B/50
- *TSPO= 09.11.77 TASHK POLY A97 D15 (A14) *SU -654-546
Removing suspended matter and faeces from waste water - 90634B/50
- TSUC/ 00.00.78 TSUCHIDA H A97 D15 =J5 4093-850
Organic material sepn. from waste water - 06289Y/04
- TURE/ 25.04.78 TUREAUD K E A96 D21 (A14) #SW 7804-706
Plastic jaw impression spoon - 48082A/27
- *UFAP 28.09.76 UFA PETROLEUM INST C03 D22 E14 *SU -654-600
Di:chlorobenzene pesticide, e.g. insecticide, prepn. - 90685B/50
- *UFOO= 27.05.77 UKR FOOD MECH ENG D11 *SU -655-418
Blender for homogenised pasty food mixes etc. - 90835B/50
- UGIN 22.08.75 UGINE KUHLMANN D15 =CA 1067-223
Purifying water with singlet state excited oxygen - 05638Y/04
- UGIN 04.06.76 UGINE KUHLMANN D21 E11 F06 M14 (D22) =CH -614-336
Tris-acetoxymethyl phosphine oxide as per cpd. activator - 86526Y/49
- *UGLI= 19.04.77 UGLICH BUTTER CHEES D13 *SU -655-367
Cheese press having base plate with moulds - 90818B/50
- UHLI/ 30.12.77 UHLIN B E N B04 D16 =GB 1557-774
Bacterial culture process - 52679B/29
- *UMET= 15.07.76 UKR METAL RES INST D23 E17 H07 M21 *SU -654-674
Prodn. of metal-working lubricant - 90748B/50
- UNIC 23.09.75 UNION CARBIDE CORP D23 E14 =CH -614-424
(2)-Phenyl ethanol prepn. from styrene oxide - 23879Y/14
- *UNIC 28.02.78 UNION CARBIDE CORP A92 D12 *J5 4123-390
Casing used as foodstuff container - 90032B/50
- UNIC 24.04.78 UNION CARBIDE CORP B02 D16 E17 #BR 7802-506
Glutaraldehyde sterilisation of fermentation media - 76297A/43
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 =BR 7902-766
Conc. aq. smoke flavour compsn. for coating tubular food wrapping - 82544B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 =BR 7902-767
Wrapping for food products esp. sausages - 82545B/46
- *UNIC- 22.02.78 UNI CHARM KK A96 D22 *J5 4141-857
Mfg. powder-contg. laminated sheets - 90279B/50
- UNIL 10.07.73 UNILEVER NV D25 =DS 2432-942
Liquid foaming cleaning agents - 08504W/05
- UNIL 01.03.78 UNILEVER NV A96 D21 E17 (A25 E14) =FR 2418-814
Toilet soap bar based on acyl isethionate - 66591B/37
- UNIL 02.03.78 UNILEVER NV D25 E33 =FR 2418-815
Sodium aluminosilicate aq. suspension for detergent mfr. - 63167B/35
- UNIL 24.04.78 UNILEVER NV D13 =SW 7903-559
Hardened stabilised ice cream similar to soft serve type - 79529B/44
- UNIL 10.05.78 UNILEVER NV A97 D25 E19 (E34) =BR 7902-829
High sudsing fabric washing powder - 84695B/47
- UNIL 11.05.78 UNILEVER NV D25 (D24) =BR 7902-830
Prepn. of spray dried soap contg. washing powders - 82563B/46
- UNIL 16.05.78 UNILEVER NV A97 D25 =BR 7902-971
Deodorant compsn. contg. abrasive, bleach, wax or polymer carrier - 86309B/48
- UNIL 31.05.78 UNILEVER NV A97 C03 D13 =DT 2922-050
Stable liquid animal feed, e.g. milk substitute for calves - 87598B/49
- UNIL 30.05.79 UNILEVER NV A97 C03 D13 =GB 2021-921
Stable liquid animal feed, e.g. milk substitute for calves - 87598B/49
- UNIX 27.02.76 UNISEARCH LTD D15 =CA 1067-218
Aerobic biological purification of fluid wastes - 63354Y/36
- *UNTC 04.04.74 ECODYNE CORP D15 J01 *US 4177-142
Filter bed of oppositely charged filter aid material - 91037B/50
- *UNTC 30.05.78 ECODYNE CORP A97 D17 *GB 2022-135
Colour purificn. of polyhydric alcohol liquids esp. sugar syrup - 89940B/50
- UNVO 24.09.75 UOP INC D16 E17 H04 J01 =GB 1551-285
Normal-paraffins sepn. from mixts. contg. iso paraffins and aromatics - 23857Y/14
- UPJO 28.02.77 UPJOHN CO A91 B04 D16 (A97) =GB 1551-910
Antibiotic acanthomycin active against *Staphylococcus aureus* - 63755A/36
- UPJO 21.02.78 UPJOHN CO B02 D16 (B01) =US 4177-106
4-Hydroxypropyl-hexa:hydro-1,5-indane-di:one - 60739A/34
- UYLA- 31.07.74 UNIVERSITE LAVAL A32 D12 F01 (A97) =CH -614-243
Structured, particularly fibrous, protein products - 15228X/09
- *UYLA= 22.12.75 LATV UNIV D16 *SU -654-680
Bacterial and fungal culture growth medium - 90754B/50
- UYPR- 07.02.77 UNIV OF PRETORIA B04 C03 D16 =GB 1557-658
Veterinary vaccine for sheep - 23303A/12
- *VBRO- 25.05.78 VAN DEN BROEK ENG B D15 *NL 7805-709
Sludge drier using recycled prod. as fuel - 90539B/50
- VICT 06.09.73 GEWERKSCHAFT VICTOR B05 C03 D13 =DS 2344-884
Trace element depot tablets - 20361W/12
- VIOL/ 12.03.71 VIOLA A D13 =IT 1033-501
Sweetened coffee infusion - 61340T/39
- *VOIJ 03.06.78 VOITH J M GMBH D15 *DT 2824-435
Biological oxygen demand recorder - 89567B/50
- *WAFI- 22.09.78 WAFILIN BV D15 *NL 7809-661
Drinking water prepn. from sea water by membrane filtration - 90543B/50
- *WAFI- 29.12.78 WAFILIN BV A88 D15 J01 (A11) *NL 7812-664
Filtration membranes esp. of cellulose acetate - 90544B/50
- WARD/ 24.06.74 WARDWELL C R D22 =CA 1066-963
Package for sterile articles - 16591X/09
- WATK- 28.08.74 WATKIN ELLIOTT SYST D11 =IT 1033-972
Automatic electric control system for multi-stage mfg. process - 05604X/04
- WELA 06.04.76 WELLA AG D21 E13 =US 4177-260
Aq. keratin softening compsns., e.g. depilatories - 76024Y/43
- WELL 26.05.78 WELLCOME FOUNDATION LTD B05 C03 D13 =NL 7904-144
Compsns. contg. eicosa:penta:enoic acid - 85978B/48
- WITC 14.08.74 WITCO CHEMICAL CORP D25 E19 =CA 1067-092
New sulphosuccinic ester surfactants - 00117X/01
- *WITC 14.07.77 WITCO CHEMICAL CORP D21 E19 *US 4177-259
Waterproof make/up compsn. - 91085B/50
- WITT- 26.04.78 WITTENBORGS AUTOMA D13 =DK 7801-820
Prepn. of beverages in vending machines - 81185B/45
- WOLR 29.10.76 WOLVERINE WORLD WID D12 =GB 1557-385
Animal carcass skinning machine - 33717A/19
- WOLR 29.10.76 WOLVERINE WORLD WID D12 =GB 1557-386
Animal carcass skinning machine - 33717A/19
- *WOOD- 02.06.78 WOODSTONE FOODS LTD B05 D13 F09 (D17) *DT 2922-247
Recovering protein and starch prods. from vegetable seeds - 89676B/50
- WYSS 01.03.78 ESCHER WYSS SA A32 D14 J02 =FR 2418-708
Calender with stack of flexible sleeve cylinders - 66516B/37
- XOMO 27.08.75 XOMED INC B07 D22 =CA 1066-977
Tampon for body cavity e.g. ear, medication - 16705Y/10
- *YAGI/ 21.04.78 YAGI H A32 D18 *J5 4140-701
Surface-finishing of natural leather - 90049B/50
- ZAID 14.01.76 MICROBIAL CHEM RES B03 C02 D16 =J7 9038-099
Carcinostatic aclacinomycin A and -B - 62171Y/35

ZAID 07.04.76 ZH BISEIBUTSU KAGAKU KEN B03 D16 = J7 9038-100
Anthracyclin glycoside antibiotics MA 144-M1 and -M2 - 55824Y/32
ZAID 11.05.76 ZH BISEIBUTSU KAGAKU KEN B03 D16 = J7 9038-101
Anthracycline glycoside having anti-neoplastic and antibacterial actiop -
07366A/04
ZAID 16.08.76 ZH BISEIBUTSU KAGAKU KEN B03 D16 (B04) = J7 9038-
103
Antitumour rhodirubins A and B - 14004A/08
ZINE/06.11.74 ZINELLIE D13 *IT 1033-585
Tomato puree prodn. vessel - B/50
ZINI 11.11.76 GRILLO WERKE AG A97 D15 = GB 1551-894
Water additives preventing deposit-formation of heating surfaces -
36751A/21

549-H CD T 1920-475 Q00 B 1202-678 R33 S 3649-293 T15 A -907-398 Q01 7 9038-186 B50	US 3886-205 W23 CA -975-380 W42 CH -567-042 W43 DS 2061-838 X19 J7 8012-913 A22 J7 9038-086 B50	GB 1472-961 Y19+ US 4056-359 Y45+ CA 1024-869 A07+ DS 2417-184 B13+ CH -614-465 B50+	28444-W BDJ NL 7413-057 W17+ BE -820-736 W18+ SW 7412-391 W22+ SF 7402-876 W28+ DL -113-813 W32+ J5 0084-298 W36+ FR 2257-905 W44+ DS 2440-011 W44 US 3977-944 X37+ GB 1486-474 Y38+ CA 1031-676 A23+ HU T015-076 A27+ IT 1030-641 B27+ CH -614-534 B50+	IT 1028-353 B16 DS 2501-262 B25 CA 1067-221 B50	55845-W AD DT 2405-578 W34 SW 7500-725 W37+ DS 2405-578 X03 FR 2272-638 X12+ OE 7500-391 Y01+ US 4029-632 Y25 GB 1488-403 Y41+ SW 7802-777 A33+ OE 7606-548 A44+ CH -614-374 B50	SF 7501-618 X10+ DK 7502-684 X12+ FR 2274-221 X14+ DS 2428-699 X15 J5 1038-447 X20+ DT 2514-163 X41 DT 2428-699 X02 PT --63-900 Y10+ ZA 7503-793 Y13 DT 2559-819 Y50 DS 2514-163 A12 GB 1510-996 A20+ OE 7504-486 A40+ IL --47-476 A47+ CH -614-106 B50+	09437-X DF DT 2433-751 X06 DS 2433-751 X21 BE -837-474 X24+ ZA 7508-046 Y04+ US 4036-037 Y30 NL 7600-392 Y31+ FR 2338-000 Y48+ CA 1036-379 A35+ IT 1033-818 B50	30126-X DJ BE -834-110 X17 NL 7511-360 X17 SW 7511-094 X21 DT 2447-021 X21 FR 2286-794 X29 J5 1084-790 X36 DS 2447-021 X44 OE 7507-500 A18 GB 1517-323 A28 CA 1057-272 B28 CH -614-423 B50																														
668-R D B 1190-624 R18 7 4027-341 V32 A -905-745 T32 S 1692-581 B50	61340-T D DT 2157-790 T39 IT 1033-501 B50	77829-V ACD DT 2416-675 V45+ J4 9126-787 W10 FR 2230-658 W11+ J5 0029-686 W26 J5 0035-286 W29 J5 0062-291 W43 US 3912-693 W43+ GB 1447-911 X36+ J7 7013-546 Y19 J7 7013-549 Y19 J7 7013-547 Y19 J7 7013-548 Y19 CH -601-363 A33+ DS 2416-675 B50+	72325-T ADE BE -782-726 T45 NL 7205-921 T47 DT 2218-604 T48 FR 2134-470 U09 ZA 7202-246 U52 GB 1347-650 V08 CH -562-611 W30 CA 1004-982 Y08 DS 2218-604 B50	79767-T CD BE -783-838 T50 NL 7207-173 T51 FR 2139-934 U13 DT 2224-790 U15 ZA 7203-347 U17 DL -104-425 V24 GB 1377-438 V51 IL --39-465 W37 DS 2224-790 W45 CA 1004-530 Y07 NL -153-762 Y31 HU T015-096 A32 SU -654-149 B50	02457-W AD GB 1379-734 W02 J4 7039-306 B50 J7 9038-122 B50	08504-W D NL 7408-904 W05 DT 2432-942 W06 FR 2236-927 W17 GB 1465-911 Y09 CA 1026-187 A09 US 4087-387 A25 DS 2432-942 B50	39265-W DE BE -824-591 W24 DT 2501-696 W31 NL 7500-667 W32 SW 7500-348 W37 NO 7500-155 W38 DK 7500-162 W42 FR 2258-445 W45 PT --63-249 X19 ZA 7500-262 X37 GB 1493-012 Y47 CA 1041-397 A46 GB 1493-012 A47 IT 1026-391 A49 CH -614-232 B50	56031-W DJ DT 2505-572 W34 FR 2260-375 W48 US 3927-152 W52+ US 4022-854 Y20+ US 4024-618 Y22+ GB 1503-163 A10 CA 1048-173 B08 CA 1067-220 B50	58763-W CD BE -827-848 W36 NL 7504-373 W44 DT 2515-762 W44 SW 7504-195 W49 NO 7501-235 W50 J5 0142-755 X02 DK 7501-589 X05 FR 2279-341 X20 OE 7502-776 A06 GB 1500-261 A06 US 4143-171 B11 CH -614-353 B50	63680-W ADF US 3903-882 W38 BE -828-133 W45+ NL 7504-655 W45+ DT 2515-865 W45+ AR -202-169 X01+ FR 2267-748 X06+ BR 7502-272 X13+ SW 7504-547 X15+ HU T011-137 X16+ ZA 7501-541 X17 DL -119-713 X28+ GB 1476-894 Y24+ CS 7502-728 Y25+ OE 7502-939 Y31+ IL --46-797 Y51+ CA 1066-579 B49 CH -614-123 B50+	70581-W CD US 3911-117 W42 CA -993-261 X32 SU -654-151 B50+	74394-W ADF DT 2515-970 W45 BE -828-135 W45 NL 7504-645 W45 DK 7501-681 X05 FR 2267-794 X06 US 3937-223 X08 BR 7502-011 X13 SW 7504-548 X15 ZA 7501-805 X17 DL -118-527 X22 GB 1453-265 X43 OE 7502-940 Y44 HU T014-039 Y45 IL --46-934 A14 US 4128-612 A50+ CA 1062-573 B40 CH -614-118 B50	75807-W DE BE -830-098 W46+ DT 2524-695 X01+ SW 7506-476 X07+ FR 2274-276 X14+ GB 1476-117 Y23+ CA 1042-802 A49 CA 1046-416 B05 CH -614-375 B50+	00058-X D BE -830-230 X01+ NL 7507-065 X01+ NO 7502-100 X07+ SW 7506-825 X08+	00059-X D BE -830-231 X01 NL 7408-016 X01 SW 7506-808 X07 DT 2526-297 X11 J5 1015-642 X12 FR 2274-688 X14 DK 7502-650 X20 ZA 7503-761 X26 BR 7503-749 X30 US 4016-001 Y15 NL -153-602 Y28 GB 1487-500 Y39 OE 7504-534 A11 CH -596-317 A15 DS 2526-297 A37 IT 1033-900 B50	00117-X DE BE -832-200 X01+ NL 7509-704 X10+ DT 2535-800 X11+ J5 1043-717 X22+ GB 1523-644 A36+ CA 1067-092 B50	00435-X DJ DT 2449-623 X01 FR 2274-567 X14 CH -572-759 X15 OE 7409-111 X15 DS 2449-623 Y12 US 4021-349 Y19 IT 1033-802 B50	03864-X AD BE -830-731 X03 NL 7506-565 X03 DT 2431-529 X05 J5 1024-607 X15 FR 2277-147 X17 ZA 7504-164 X26 BR 7504-116 X29 OE 7504-997 Y35 US 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2280-324 X21 J5 1067-418 X30 GB 1512-415 A22 US 4094-235 A32 CH -614-243 B50	16591-X D US 3938-659 X09 CA 1066-963 B50	16794-X D US 3939-284 X09 BE -838-043 X33 DT 2603-406 X33 NO 7600-274 X38 SW 7600-909 X42 J5 1104-060 X44 SF 7600-201 X44 FR 2298-959 X49 GB 1526-991 A40 IL --48-890 B29 CA 1066-940 B50	19125-X DE DT 2536-416 X11+ NL 7509-668 X11+ J5 1043-707 X22+ FR 2282-418 X23+ US 3963-788 X26+ BR 7505-206 X34+ GB 1496-927 A01+ GB 1496-926 A01+ CA 1054-160 B22+ CH -614-185 B50+	21023-X ADF DT 2441-781 X12 BE -832-958 X12 NL 7510-062 X12 DK 7503-903 X22 FR 2283-255 X24 J5 1049-990 X24 GB 1526-264 A39 US 4136-218 B05 CH -614-338 B50	28294-X ADE BE -833-864 X16 DT 2543-100 X17 FR 2285-851 X28 US 4025-301 Y22 GB 1497-095 A01 CA 1051-876 B17 CH -614-120 B50	30216-X ADE BE -835-803 X17 NL 7513-646 X24 SW 7414-792 X28 NO 7503-929 X29 J5 1076-306 X33 DK 7505-248 X34 DT 2552-353 X34 SF 7503-281 X35 FR 2292-037 X39 ZA 7507-318 Y01 DS 2552-353 Y16 US 4018-696 Y17 OE 7508-888 Y44 J7 8035-812 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5 2148-063 A04	DS 2703-374 B50	US 4092-988 A31	US 4177-106 B50+	DK 7801-572 B48+	FR 2410-673 B37	DT 2814-117 B41+	GB 2022-096 B50
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819-B D U -655-375 B50	91073-B ADF US 4177-236 B50+	
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32 82654B D15 + Q3	= 181 47480B D22P3	* 540 89576B C02D22E13G03	= 432 52778Y D14 + Q3
45 84282B A60D25E13F06	DS 1567	* 553 89577B D16	= 437 07501Y B04C03D16 + R1
60 82556B D23E15 + P3	* 316 89461B D17	* 636 89585B C03D22E16G03P3	= 444 88287Y D17E13
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43 54142X D11E34	= 388 32038V D23E15	DT 2919	= 902 06350A A25B04D21
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45 06877Y D13	= 675 77829V A12C03D15	= 659 71817B D13	GB 1552
47 75592X D13	DS 2420	DT 2920	= 049 59726Y B05C03D21 + P3
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53 16591X D22Q3 + P3P4	DS 2432	= 453 68037B D25E19F06	# 092 55773Y D13
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27 19791Y D18 + P1	DS 2624	DT 2922	# 409 86308Y D22
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98 30724Y D23E14	= 863 06160Y D11	* 247 89676B B05D13F09	= 460 64965A A96D22P3
8 63354Y D15	DS 2638	* 561 89690B D13	* 473 89898B D15
9 82885Y D15	= 307 05693Y D13P1	EP ---5	= 478 14893Y D15E35H09
20 56031W D15J02 + P5	DS 2639	* 703 89704B C03D13H09	* 501 89900B D14
21 49760W A97D15	= 505 18522Y B06D21E37	* 748 89713B D13E24	= 545 76723A A97B04D16
22 14459Y D15M11	DS 2642	* 749 89714B D13E24	= 549 42444B D16
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8 74394W A96D22F04P3	= 374 21793A D13E24	= 806 89507B C03D22E16G03P3	* 600 89901B D12P6
9 24166W B05D21	DS 2706	= 807 89531B D21E13	= 636 27188A A97D22J04P3 + R1
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21 92404X A96D21E16	DS 2712	* 827 89742B C03D15E14J01	= 645 12290A B04D16
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3 44050X D23 + P7		* 956 89800B B04D16	= 752 25276A D13
4 46037W C03D14H04		* 958 89801B D13	= 755 67001A B07D16F06H01
6 54416X D21L02M26		* 977 89808B A96B04D11	= 756 51670A A25D25E12
3 15228X A32D12F01		* 980 89810B B03C02D22	= 760 76317A A97D25
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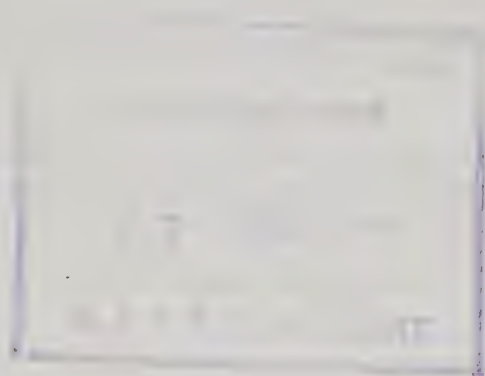
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ABSTRACTS

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Section D:

FOOD DETERGENTS

COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Non Delayed	3 DEC 79	878,138 - 878,264
BRAZIL	4 DEC 79	7,702,058 - 7,906,122
CANADA	4 DEC 79	1,067,251 - 1,067,650
DENMARK	26 NOV 79	7,705,227 - 7,901,869
W. GERMANY		
-DAS	13 DEC 79	1,482,403 - 2,919,451
-OLS	13 DEC 79	2,745,016 - 2,923,828
FRANCE*	5 OCT 79 (BOPI 9 NOV 79)	2,418,997 - 2,419,659
UNITED KINGDOM	19 DEC 79	1,557,911 - 1,558,340 2,022,381 - 2,022,980
ITALY	10 SEP 79	1,034,001 - 1,034,500
JAPAN		
-Unexamined	— 8 NOV - 14 NOV 79	47,034,659 - 53,024,432 54,143,101 - 54,146,100
-Examined	22 NOV - 28 NOV 79	79,038,601 - 79,039,600
NETHERLANDS	3 DEC - 9 DEC 79	7,805,799 - 7,904,426
NORWAY	26 NOV 79	7,401,437 - 7,903,352
RES. DISCLOSURE	DECEMBER 79	188,001 - 188,059
RUMANIA	APRIL 79	63,065 - 70,901
FINLAND	30 NOV 79	7,800,210 - 7,902,240
SOVIET UNION	—	652,127 - 657,256
SWEDEN**	3 DEC 79	7,802,483 - 7,908,469
UNITED STATES		
-Reissues	11 DEC 79	Re30,162 - Re30,166
-Patents	11 DEC 79	4,177,522 - 4,178,636
PCT	13 DEC 79	7,901,051 - 7,901,115
SOUTH AFRICA	NOVEMBER 79	7,704,385 - 7,807,280

*Printed patents actually published late November - early December, 1979

**Includes numbered Basics from Week B34

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

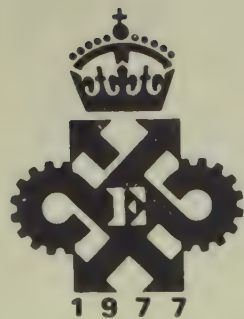
A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Other Classes	Publication Date	Main CPI Class for Section	Latest Priority	Earliest Disclosure Basic Patent	Accession No	Earliest Priority	Patent No	IPC
MEDA-				A89			69369W/42	=US 3964-992		
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)										
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)										
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26										

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JAPAN	4 days	per patent £1.10 or \$2.55	—	Photocopies
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SOUTH AFRICA	3 weeks	per page £0.27, \$0.60 or Y170	Minimum charge equivalent to 5 pages	Photocopies
UNITED STATES	4 days	per patent £1.45, \$2.75 or Y880	13p, 25c or 80Y per page if more than 15 pages	Photocopies
WEST GERMANY	2 weeks	per patent £1.70, \$4.00 or Y1,040	1p, 2c or 8Y per page if more than 20 pages	Printed copies. Delay reduced to 4 days for double the normal cost.
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EUROPE (EPO)	50	250	585	125	Jan 79		
FRANCE — new law	100	820	1,885	394	Dec 69		
EAST GERMANY	15	215	495	103	Oct 70		
WEST GERMANY OLS — new law	180	1,600	3,680	768	Mar 70		
DAS	30	240	550	115	Mar 70		
PS	27	210	485	100	Mar 70		
NETHERLANDS — new law	40	390	895	187	Mar 70		
PCT	25(100')	80	175	38	Jan 79		
SOVIET UNION	35	230	530	110	Jan 70		
SWITZERLAND	14	145	335	69	Mar 70		
UNITED KINGDOM New Law	30	250	575	125	Jan 79		
Old Law	30	340	780	163	Jul 69		

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Total value of order is

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Invoice to be sent to delivery address unless stated
otherwise.

D1: FOOD; FERMENTATION

D11: BAKING

HAYA/ **D11** **63001T/40 =DS 2201-490**
Dough conveyor - in transporting unit of plate with tapered end and
padding band to prevent sticking

HAYASHIT (HAY /) 14.01.71-JA-001172
+Q35 (13.12.79) *DT2201-490 A21c-09/08

A support plate arrangement forming part of a conveyor
for transferring portions of dough, e.g. dough for bread
or dough for fritters, to a processing station such as a
bath of hot fat or a continuous baking oven, consists of a
rectangular, flat, inner plate, over the upper and under
surfaces, and the front and rear edges of which, a flexible
band extends.

Independently of the support arrangement there is a dr-
iving mechanism by which the band on the support plate
arrangement can be moved around the inner plate, when in
the position for delivery, so that portions of dough can be
easily and without complications, removed from their supp-
ort and be transferred to the next work station. 13.1.72
as 201490 (7pp1045)

GIDE- **D11** **53133U/37 =DS 2309-068**
pancake-making machine - with automatic regulation of liq dough
thickness

FA GIDECO (GID -) 24.02.72-FR-006262
+P28 (13.12.79) *NL7302-354 A21b-05/02

The rotary body for transferring the batter on the baking
cylinder in a machine for automatically making scotch pa-
cakes, etc., is a transfer cylinder. The forming and tr-
ansferring unit includes a second cylinder which is free to
rotate and is driven. This constitutes the forming cylinder
and has on its circumference a machined cavity. The tran-
fer cylinder contacts the baking cylinder in the zone in whi-
ch it lays on the portion of batter from the forming cylind-
er.

The machine is thus provided with a means of forming
and transferring a thin film of batter, of the simplest poss-
ible design, and which ensures uniformity of dia. and thi-
ckness in the prod. 23.2.73 as 309068 (7pp1045)

KYOW ★ **D11** **91646B/51 ★J5 4143-539**
Bread prodn. - using flour contg. carotene and/or vitamin/A and oil
and fat

KYOWA HAKKO KOGYO KK 26.04.78-JA-049597
(08.11.79) A21d-02/10

The method comprises combining either carotin vitamin A
or natural substances contg. or compsn. contg. them and
oil and fat in flour so that the additive contains effective
ingredient in amt of >5 ppm as β -carotin on flour.

Dough for bread can be improved with natural substan-
ce and the stickiness of the dough can be prevented. The
obtd. bread is excellent in volume, appearance, texture,
colour, touch, etc. 26.4.78 as 049597(8pp5)

IKK ★ **D11** **92181B/51 ★J7 9039-456**
Prepn. of bread contg. rice powder - with addn. of potassium
bromide, L-ascorbic acid and L-cysteine hydrochloride before or
during blending

KIKKOMAN SHOYU KK 28.02.72-JA-019665
(28.11.79) A21d-02/02

In the prepn. of bread contg. rice powder, potassium brom-
ide, L-ascorbic acid and L-cystein hydrochloride are
added just before or during the blending process, followed

by baking in a conventional manner. Properties of the
bread are improved. 28.2.72 as 019665, A21d-2/02
(28.11.79) KIKKOMAN SHOYU KK (6pp22) (J4 8088241)

KAOS ★ **D11** **92183B/51 ★J7 9039-460**
Liq. shortening compsn. mfr. - by mixing liq. oil, solid oil and
emulsifier contg. fatty acid glycol ester, lecithin, sucrose ester, etc.
KAO SOAP KK 05.10.65-JA-060905
(28.11.79) A21d-10 A23d-05

Method comprises mixing 80-90 wt % liquid oil (I), 0.5-4
wt % solid oil (II) and emulsifier (III) by (i) dispersing (II)
in a part of (I) with a part of (III), (ii) dissolving the rest
of (III) in the rest of (I), and (iii) mixing throughly the dis-
persion obtd. in (i) with the soln. obtd. in (ii) at $\leq 35^{\circ}\text{C}$.
(III) comprises 0-3 wt % fatty acid mono(di)ester of glycer-
-in, 6-16 wt % fatty acid mono(di)ester of propyleneglycol
0.1-2 wt % lecithin 0-5 wt % fatty acid ester of polyoxyethy-
-lene sorbitan, and 0-5 wt % fatty acid ester of sucrose.

Used for making cakes, pastries, etc. The shortening
shows good flowability at low temp. (to 5°C), and gives
excellent baking characteristics. 5.10.65 as 060905 A21d-
10/00, A23d-5/00 (28.11.79) KAO SOAP KK (3pp83)

HAYA/ **D11** **54417Y/31 =US 4178-147**
Continuous dough roller for pastry and bread - has conveyor rollers
beneath faster moving endless rolling out unit
HAYASHIT (RHEO-) 27.01.76-JA-007648
(11.12.79) *DT2703-331 A21c-03/02

Appts. for continuously stretching cake or bread dough in-
cludes rotatable stretching rollers movable about an end-
less path; a conveyor belt below the lower straight part of
the path for transporting dough to engage the rollers; ≥ 1
rotatable transport roller downstream of the conveyor; the
conveyor and transport rollers being driven at progres-
sively faster speed in the downstream direction; and a
drive to move the stretching rollers along the lower part
of the path in the same direction as the transpory roller
but at a higher linear speed than the peripheral speed of
the transport roller.

The stretching efficiency is improved. 25.1.77 as
762319 (10pp1376)

GRIN **D11** **63105Y/36 =US 4178-393**
Monoglyceride phosphatide powder additive for bread etc. - prepd.
by spray cooling moltn mixt.

GRINDSTED VAERKET A/S 03.05.76-GB-018022
(11.12.79) *BE-854-243 A21d-02/16

Prepn. of a pulverulent, free flowing monoglyceride ad-
ditive for use in the prepn. of farinaceous and starch-
contg. edible prods. is described. The individual particles
contain in constant proportion (a) a monoglyceride and (b)
a lecithin. Process comprises melting distilled monogly-
ceride of satd. 12-12C fatty acid, and adding a dry leci-
thin in an amt. of 0.1-40 wt.% of the resulting mixt. The
mixt. is then converted to particles by spray cooling with-
out addn. of water.

Pref. the lecithin is nonhydrolylated soybean lecithin
and comprises 0.2-30 (0.5-10) wt.% of the mixt. The prod.
is used in prodn. of bread, macaroni, spaghetti etc. and
gives as good a baking (or cooking performance as a mono-
glyceride hydrate. 2.5.77 as 792612 (9pp945)

See Also

D16 J5 4143585

D17 DS 2108748

D12: MEAT; FISH PROCESSING

IME/ ★ **D12** **B/51 ★BR 7802-677**
Moulding and cooking meat products without intestines
PIMENTEL A P 27.04.78-BR-002677
P71 (04.12.79) A22c-11/02 B30b-11

TENN/ ★ **D12** **91272B/51 ★DT 2825-084**
Meat roll press - with pneumatic cylinder reciprocating upper of two
semi-cylindrical shells
TENNINGER A 08.06.78-DT-825084
(13.12.79) A22c-07

Irregular pieces of meat are prepd. by deforming them to the regular cylindrical shape needed for rolls of smoked ham. A pneumatic press actuates the upper of two semi-cylindrical shells while the piece of meat is moved axially and turned by hand. The normally conical piece of raw meat is held at both ends by two hands, as the pneumatic press cylinder is reciprocated at a rate which is adjustable by a throttle valve.

This does not change the structure of the first-class meat and causes no scrap. Rolls of uniformly high quality are turned out in a continuous process. 8.6.78 as 825084 (15pp39)

SHIM- ★ D12 91320B/51 ★DT 2841-121
Fish meal prodn. with recovery of all usable constituents - using high pressure boiler, dewaterer and vacuum dryer without pollution
SHIMOSE SHOKUHIN CO 12.06.78-JA-070616
(13.12.79) A231-01/32

In a batch process for the prodn. of fish meal with the complete recovery of solid, gaseous and fluid constituents, which are ejected from a horizontal, cylindrical, high pressure vessel operating in a closed system.

All gas and fluid conduits consist of closed pipe sections. The solid constituents are processed in a prod. cooler, a grinder and a storage silo. The gaseous constituents are handled in two condensers of the cyclone type, arranged in series, which are able to separate the malodorous vapours, a plate condenser for steam, and a cooler for gas which can be condensed.

Following these there are, one water jet ejector, three water jet ejectors through which solns. of 5% H_2SO_4 , 10% NaOH or 4% NaClO are circulated, a gas absorber working with active carbon and a blower. The fluid cpds. are fed through a pressurised water tank, a self-cleaning filter and a self-cleaning oil-sepg. unit, to a vacuum vaporiser. This latter produces a conc. fluid which is delivered to a dryer for redn. to a soluble dried fish. This is converted to the required prods. by a cooler and a grinder. 21.9.78 as 841121 (32pp1045)

TRIO- ★ D12 91364B/51 ★DT 2921-847
Gutting and cleaning tool for fish - has cutter piercing throat and belly with clamp for intestine
TRIO ENG LTD A/S 30.05.78-NO-001875
(13.12.79) A22c-25/14

A tool fitting on to a machine, has at its free end a projecting lance together with a clamping arrangement by which the lower intestine of a fish can be removed at the anus. The leading edge of the lance is inserted through an incision in the throat of the fish and is run along the inside of the belly. The cutter is designed so that it can be lifted or tilted to cause it to penetrate the belly wall. The tool is hollow and is connected to a supply of a fluid or a gas.

The removal of the lower extremity of the alimentary tract is effected without damage to it and consequent infection of the flesh during the cleaning process. 29.5.79 as 921847 (10pp1045)

NMHB D12 35308B/19 #GB 1557-952
Fish skinning machine - has retractable catch face above cutting blade ZA 30.1.79)
NORDISCH MASCH R BAADER 20.03.78-ZA-001596 (16.02.78-GB-006159)
(19.12.79) *DL-134-042 A22c-25/17

Fish are skinned in a machine which has a driven skinning roller; a skinning knife having a cutting edge formed by two faces including an acute angle, one of the faces pressing the skin against the roller; and an intercepting device resiliently mounted above the other face of the knife near the cutting edge. The device has a surface facing upstream which is pref. 2-6 mm thick.

The intercepting device is pref. supported on an element which pivots about an axis lying above the knife. Pref. the included angle of the knife is 60-120°.

Skinning of plaice, and other soft fish fillets can be carried out. 16.2.78 as 006159 (5pp1376)

CHIY- ★ D12 91649B/51 ★J5 4143-546
Removing excess sulphite from frozen crustacea - by immersing in two solns. of highly acid or highly alkaline pH, the second contg. an oxidising agent

CHIYODA KAGAKU KOGY 28.04.78-JA-051235
(08.11.79) A23b-04/06 A231-01/32

Method comprises (a) defrosting the frozen Crustacea, (b) immersing it in an aq. soln. of which pH is previously adjusted to <3.5 or >8.5 with acid or alkali and (c) immersing it in an aq. soln. which contains oxidising agent and is adjusted to pH <3.5 or >8.5 with acid or alkali.

The sulphite content of frozen Crustacea can be decreased to the level admitted by the Food Sanitation Act effectively in a short time without heating process.

The pH of the solution used in the process (b) and (c) is adjusted to <3.5 (pref. 1.8-3.0) or >8.5 (pref. 9.5-12.0) and the pH-adjustment is practiced with edible acid pref. with phosphoric acid or with edible alkali pref. with sodium hydroxide, trisodium phosphate, etc., It is not necessary to use aq. soln. of the same pH for the pretreatment (b) and the main treatment (c). 28.4.78 as 051235 (5pp5)

ASAH D12 21473U/16 = J7 9039-458
Edible protein fibre prodn - by spinning aq soln of animal proteins contg unsatd fatty acid(s) or salt(s) thereof
ASAHI KASEI KOGYO 15.11.71-JA-090599
F01 (28.11.79) *DT2244-930 A23j-03

Fibre-forming props. of animal proteins are improved by adding to an aq. protein soln. myristoleic, palmitoleic, oleic, linoleic, linolenic, sarachidonic or clupadonic acid, or NH_4 , Na, K, Ca, Mg, Ba or Al salt thereof, in an amt. of 2-80 wt % w.r.t. the animal proteins (pref. 5-20 wt %). Very fine fibres can be produced. 15.11.71 as 090599, A23j-3/00 (28.11.79) ASAHI KASEI KOGYO KK (3pp)(J48056850)

UNIL ★ D12 92198B/51 ★NL 7806-080
Coherent solid meat prods. - made by coating pieces of meat with an emulsifier, compressing together and heating
UNILEVER NV 05.06.78-NL-006080
(07.12.79) A23b-04 A231-01/31

Coherent meat products are made by bonding smaller pieces of meat together. Pieces of raw meat are worked mechanically until an adherent deposit has formed on the meat. An effective amt. of an emulsifier (I) is then added and the mixt. is worked again until the (I) is distributed uniformly over the surface of the meat. The coated meat is then loaded into a container, compressed, and heated to a core temp. of $\geq 60^\circ C$.

The process gives large coherent pieces of meat made up from smaller pieces. The meat does not fall apart when heated, as is the case e.g. with pieces of meat bound together with a gelatin binder. 5.6.78 as 006080 (9pp513)

BMEA= ★ D12 92432B/51 ★SU -656-609
Gripping device for meat carcasses on suspension track - has plates with locking means, which enables carcasses to be lifted off and carried for weighing
BELO MEAT IND RES 08.07.77-SU-505344
(18.04.79) A22b-07

Gripping device for fitting meat carcasses on suspension track and withdrawing them, comprises body and drive-gripping mechanism. Productivity is increased, damage to the carcasses prevented, and construction improved, by providing the body with support plates, having slots and hollows for fitting the hoops of the trolleys with the carcasses. The gripping mechanism is made as strips with locking elements, the number of which equals the number of hollows, which are capable of being moved along the body and so fix the hoops in the hollows.

Ligostaev V. K., Anisimov V. M., Ivanov K. A., Bul. 14/15.4.79 8.7.77 as 505344 (2pp29)

ALEX/ ★ D12 92522B/51 ★SW 7800-013
Cooling animal carcass - by fresh water shower after initial rapid cooling
ALEXANDERSON S 02.01.78-SW-000013
(06.08.79) A22b-07

AK ★ D12 92696B/51 ★US 4178-394
 on. of simulated sausage products - with textured vegetable
 reins, but with good sausage-like mouth feel
QUAKER OATS CO 12.09.77-US-832535
11.12.79) A23j-03
 sausage analogue is prepd. as follows (all by wt.): (a)
 aq. mixt. of flavours, spices, and colouring agents is
 epd.; (b) a 1st. phase is formed by continuously mixing
 al wheat gluten, H₂O, and salt into a dough which is then
 ruded to give strands of hydrated gluten; (c) a 2nd.
 ase is prepd. by mixing 1 pt. of textured protein concen-
 te (I) with 1-4 pts. of the aq. mixt. in (a), then cutting
 o the required size; (d) a 3rd. phase is formed from an
 ble protein fibre (II); (e) a 4th phase is prepd. by blend-
 12-25 pts. egg white, 7-10 pts. non-fat dry milk, 3-4

pts. Na caseinate, and 2-4 pts. dextrose with 20-35 pts.
 fat heated to 180-220°F., then forming a gelatinous mass
 by adding 30-40 pts. of the aq. mixt. (a) heated to 170-
 212°F.; (f) a 5th phase is prepd. by blending 1 pt. of fat
 at 180-220°F. with 1-3 pts. of the aq. mixt. (a); (g) each
 phase is adjusted to 40-60°F.; and (h) all the phases are
 mixed and formed into patties and links which contain 10-
 25% of the 1st phase dough.

The above sausage prepd. from (I) and a variety of
 separate phases contributing various characteristics has a
 high protein/low fat content, but has sausage-like chewi-
 ness, biting props., juiciness, mouth lubrication cohesion
 and frying properties. 12.9.77 as 832535 (6pp478)

D13: OTHER FOODSTUFFS

SC/ ★ D13 B/51 ★BR 7802-829
 real dryer
WESCHOLLER O K W 05.05.78-BR-002829
Q76 (04.12.79) A23n-09 F26b-21/02

RI- ★ D13 91173B/51 ★CA 1067-334
 ed additive to increase milk yield of dairy cows - contg.
 methionine hydroxy analogue, enzyme of genus *Aspergillus* and a
 ffer

AGRIMEL LTD 22.12.76-CA-268580
C03 (D16) (04.12.79) A23k-01/18
 feed additive for dairy cows comprises essential nutri-
 ts, methionine hydroxy analogue, a fungal enzyme of
 e genus *Aspergillus*, and a buffer.

The additive is in the form of dry premix as a top dress-
 ing for a regular feed as it may be part of the dairy feed.
 pref. strain of *Aspergillus* is *A. oryzae* and is a well
 known enzyme extract, it increases the utilisation of the
 analogue and helps in maintaining proper intraruminal and
 extra-ahomalar enzyme concn. Suitable buffers are e.g.
 HCO₃, CaHCO₃ or pref. NaHCO₃.

The feed improves milk yield, the effectiveness of the
 methionine hydroxy analogue is greatly increased by com-
 bining proper adjuncts, and it is more palatable to dairy
 cows than previous analogue compns. 22.12.76 as 268580
 (6pp957)

OLD/ ★ D13 91174B/51 ★CA 1067-335
 reserving freshly harvested high-moisture hay - by applying a
 ute culture of *Lactobacillus acidophilus*

NOLD MC 23.06.75-US-589711
C03 (D16) (04.12.79) A23k-03
 method of treating freshly harvested high-mositure hay to
 reserve during open storage without drying, and maintain
 nutritive value, comprises applying a dilute culture of
acidophilus to the hay in open air, in concn. of 45-90
 million organisms / ton.

L. acidophilus may be applied to the hay from an aq.
 carrier as it is collected from swaths or windrows or as
 leaves the swather or windrower before drying. The hay
 may be gathered within 24-36 hrs after treatment or within
 72 hrs. under adverse conditions. As a result of the
 treatment there is a redn. in heating in the newly formed
 lled or stacked mass of hay and redn. in mould formation.

The method maintains the nutritive values, of the hay
 which is more easily ground and has higher palatability.
 6.76 as 253815 (8pp957)

GS D13 70688W/43 = DS 2508-228
 re racemic- and meso-tartaric acids prepd from alkali maleate -
 d hydrogen peroxide with alkali metal tungstate catalyst

DEUTSCHE GOLD & SILBER 26.02.75-DT-508228
E17 (13.12.79) *BE-827-604 C07c-59/14

re racemic acid and meso-tartaric acid are prepd. by
 acting H₂O₂ and alkali maleinate in a molar ratio 1.01-
 1 at 70-90°C and pH 3-5.5. in the presence of an alkali
 tungstate. The formed alkali salt of cis-epoxysuccinic ac-
 and the alkali tungstate (opt. after reacting the excess
 O₂) are converted to the free cis-epoxysuccinic and tung-
 stic acids by treatment with strongly acid cation exchang

-er. The free cis-epoxysuccinic acid is then hydrolysed
 to racemic acid, opt. after removing the tungstic acid us-
 ing an anion exchanger. The racemic acid and meso-tart-
 aric acid are then recovered conventionally from a tungstic
 acid-free hydrolysis mixt.

Pref. the initial molar ratio of H₂O₂:maleic acid is 1.1-
 1.3:1. The acid prods. are of sufficient purity for use in
 the food industry. 26.2.75 as 508228 (9pp913)

USRU D13 09550X/06 = DS 2529-086
 Alkylene glycol alginate prepn - from acid-treated phaeophyceae
 algae by reaction with alkylene oxide without alginic acid
 separation

UNIROYAL INC 16.07.74-CA-204887

A11 (13.12.79) *DT2529-086 C08b-37/04

Alkylene glycol alginates are prepd. from algae of the cl-
 ass Phaeophycene. The algae are treated with an aq. soln.
 of a strong acid, e.g. HCl or H₂SO₄, then sepd. from the
 soln., washed with water and the water content of the alg-
 ae reduced to 13-40%. The algae are treated with 1-3 mo-
 les of an alkylene oxide, pref. 1,2-epoxypropane. (based
 on the alginic acid).

Reaction mixt. is mixed with water, non-reacted carb-
 oxyl gps. in the resulting suspension at least partly neutr-
 alised and insoluble algae residue removed. A strong acid
 is added to the extract soln. to obt. the desired level of
 free carboxyl gps. and the alkylene glycol alginate is rec-
 overed. The alginate is obtd. in good yield. 30.6.75 as
 529086 (12pp068)

NEST D13 77828X/42 = DS 2529-140
 Milk chocolate prodn from milk, sugar and cocoa - with
 compression under high press to accelerate crystallisation of sugar

SOC PROD NESTLE SA 02.04.75-CH-004151

(13.12.79) *DT2529-140 A23g-01

Crumbly prod. used to mfr. milk chocolate is prepd.
 from a mixt. based on milk and sugar and opt. cocoa fluid
 (i.e. material of m.pt. ca. 35°C obtd. by fine comminut-
 ion of cocoa beans. The mixt. is formed into a crumbly
 pre-prod. by drying under reduced pressure; it is then
 crushed and with a moisture content of 1-5)pref. 2-3) wt.
 % compressed into the final crumbly prod. at 70-95° under
 a pressure of 100-900 (pref. 600-900)°C.

The compression accelerates crystallisation of the am-
 orphous sugar in the fresh mixt., compared with long sto-
 rage periods (e.g. 2 months) previously required before
 the prod. could be used to mfr. high quality milk chocolate
 30.6.75 as 529140(4pp913)

SORG/ ★ D13 91259B/51 ★DT 2824-911
 Whipped food products mfr. - by pressurising dispersions and
 applying shearing forces during pressure release

SORGE 07.06.78-DT-824911

(13.12.79) A23k-01 A23l-01

Foam prods. for use in the food and fodder ind. esp.
 whipped albumin and polysaccharide prods. are produced
 by pressurising the solns. or dispersions of froth form-
 ing materials to a pressure of 5-750 bar (40-400 bar).
 Intense shearing forces are then applied by sharp deflect-
 ions while the pressure is being released. The foam prod-

used can be processed wet or can be dried.

This produces whipped prods. which are extremely stable. They can be converted to dry powder which is readily turned into foam. 7.6.78 as 824911 (15pp39)

BIOC- ★ D13 91263B/51 ★DT 2824-977
Fat contg. milk protein tablets prodn. - from skim milk powder, non-milk fat and sucrose
BIOCHEM GMBH 07.06.78-DT-824977
(13.12.79) C23c-09

Prodn. of fat-contg. milk protein tablets comprises first processing skim milk powder (A) and non-milkfat in about equal amts. to a fat concentrate. This is then blended with more (A) in about 1:4 ratio, then this mixt. combined with sucrose in about 7:3 ratio and the final mixt. tabletted.

Sucrose is pref. used in granulated, crystalline form and the mixt. may include a flavouring. Opt. the non-milk fat is mixed with skim milk to give a fat-in-water emulsion which is dried to give the fat concentrate directly.

Only skim milk is needed as protein source, tableting is easy and tablets have long storage times. Non-milk fats are much more stable (and generally cheaper) than milk fat and also serve as lubricants during tableting. The sugar minimises caking of (A) during processing. 7.6.78 as 824977 (7pp1251)

SOLL- ★ D13 91317B/51 ★DT 2827-404
Sweetmeats in rod-or bar-form from bands - formed by pouring calibrated mass over cylinder to conveyor
SOLLICH SPEZIALM KG 22.06.78-DT-827404
(13.12.79) A23g-03/08

Mass of material such as caramel, toffee, fudge, fondant, jelly, etc., whilst still in the hot and fluid condition, is ejected from the machine producing it, in the pressureless condition, on to a rotating cooling cylinder. On this, it is spread out into a band, cooled, consolidated and then stripped off on to a conveyor. The belt transports it to a further processing station in which the mass forming the band is divided into bars or similar for thermal treatment.

Arrangement dispenses with extrusion processes which prejudice the structure of the mass, and allows continuous prodn. without complicated equipment, of sweets in the form of rods or bars, laminated or otherwise. 22.6.78 as 827404 (12pp1045)

CARL- ★ D13 91331B/51 ★DT 2918-583
Automatic synchronisation of dispenser with mould boxes - esp. for chocolate creams, by planet gears actuating servo motor
CARLE & MONTANARI S 07.06.78-IT-024299
(13.12.79) A23g-01/22

Means of determining the actual speeds of the mould plates, an operating mechanism including a motor and a reduction gear for the displacing of the dispenser by means of a cam operating levers, and means of adjusting the relative speeds of the moulding plates and of the dispenser, are incorporated in a plant for the prodn. of chocolate creams, liqueurs, etc. There are means of correcting the speed of the motor and the reduction gear, which are energised as a result of the differences detected.

Errors in alignment which arise between the moulds and the dispenser injecting the filling into the chocolates, are overcome as a result of the tolerances in the chains and the driving mechanism. The machine works at high speed without the continuous presence of an operator and without highly expensive electronic equipment. 5.9.79 as 918583 (20pp1045)

CARL- ★ D13 91373B/51 ★DT 2922-167
Machine for caramel mfr. - has ribs forming airtight chambers for press mould drum housing
CARLE & MONTANARI S 07.06.78-IT-024928
(13.12.79) A23g-03/12

A machine for the mfr. of caramel sweets has the housing for the drum-shaped press mould split into an upper hinged and a lower fixed half. Both halves have internal ribs which cooperate with rings on the press mould drum to form almost airtight chambers. The two outer chamber accept the movable plungers of the press mould. The central chamber (press chamber) is connected to a vacuum system. The housing end shields are detachable by power

actuators for easy drum exchange.

This saves time when repairs are needed. The fine sugar dust is reliably removed and requires no manual attention for its removal. 31.5.79 as 922167 (24pp39)

NEXU- ★ D13 91376B/51 ★DT 2922-31
Whippable and whipped cream prods. - contg. partial glyceride or polyglyceride ester of unsatd. fatty acid as emulsifier (NL 4.12.79)
NEXUS APS 31.05.78-GB-025668
(13.12.79) A23c-13/12 B01f-17/34

Foam-like whippable or whipped creams (or cream-like prods.) contain as emulsifier (I) a (poly)glyceride partial ester with 4-26C fatty acids of formula $(A\% + 3K)B\% \geq 500$ (≥ 515). (A = wt. % 4-10C satd. carboxylic acids residues in the partial ester; B = wt. % unsatd. carboxylic acid content, both A and B being expressed on total wt. of acid residues. K is a constant = 3 when (I) is a polyglyceride or $3^{2/3}$ when it is a glyceride).

Esp. (I) is 0.2-2 (0.4-0.8) wt. % on total prod. and the compsn. may also include 0.5-5 (1-2) wt. % stabiliser. The material used is esp. cream subjected to ultra-high temp. or ultra-rapid pasteurising treatment.

(I) improves whipping properties (esp. at low milk fat content); water retention and resistance to 'buttering' when whipped for a long time. It also protects against spoilage provides an acceptable prod. when homogenisation is carried out under pressure. 31.5.79 as 922317 (46pp1251)

GENO ★ D13 91393B/51 ★DT 2922-787
Fruit juice powder easily soluble in cold water - has starch hydrolysate of low dextrose equivalent as carrier
GENERAL FOODS CORP 07.06.78-JA-068461
(13.12.79) A231-02

Fruit juice powder which is easily soluble in cold water contains as carrier a starch hydrolysate (A) of DE value 2-5 and amylopectin content ≥ 95 wt. %, and 5-95% (on final wt. of the powder) of a solid, dewatered fruit juice supported on (A). The powder is made by homogenising (A) and the juice, then drying. Pref. (A) is made by partial hydrolysis of a starch (esp. glutinous rice or barley) of $\geq 95\%$ amylopectin content with α -amylase until the required DE is reached.

Powders have low hygroscopicity, good storage stability and good cold water solubility. 5.6.79 as 922787 (9pp1251)

BELF- ★ D13 91433B/51 ★FR 2419-030
Textured food products based on milk proteins - in which casein is enzyme hydrolysed during prepn.
BEL FROMAGERIES 10.03.78-FR-007085
(09.11.79) A23j-03/02

The process for the prepn. of stable infusible food products from a hydrated paste based on milk proteins followed by texturing, comprises forming a homogenous mixture (suspension) consisting of an aq. soln. of milk proteins with a proportion of seraproteins in amt. up to 50% of the total protein, apt. with a supplementary ingredient from glucides, lipids and other proteins.

In the paste the casein content is 15-30%, the water content is 35-80% and the dry solid content is at least 18%. In at least the prepn. of the suspension or the texturing, the casein is submitted to the action of an enzyme of animal or microbial origin used in cheese mfr. to hydrolyse the casein apt. in the presence of bivalent ions and added phosphates.

The products may be used as meat or fish substitutes or as a protein supplement. The process enables the use of milk proteins which have previously been unsatisfactory for use because of instability partic. to heat. 10.3.78 as 007085 (16pp597)

APVC ★ D13 91461B/51 ★FR 2419-489
Recuperative heat exchange system for milk powder spray dryer - increases prod. yield while reducing loss of heat and fines to atmos.
APV CO LTD 06.03.78-FR-006365
Q76 Q78 (09.11.79) A23c-01/04 A23c-09/16 F26b-03/12 F28f-09/02

The system comprises a shell and tube heat exchanger in which the exhaust air is passed through the tubes to transfer heat to fresh air on its way to the air heater of the spray dryer. The tubes are set in an inlet tube plate so

at each tube axis passes through a corner of an equilateral triangle having its other corners similarly occupied by adjacent tube axes. The entry coaxially with the tube.

The major dia. of each countersink lies on a circle, real or imaginary, having a radius equal to between 0.500 and 0.577 times the length of a side of the equilateral. The conical countersink pref. has an apex angle of 90° (pref. 60°). Air exhausted from the gaseous heat exchanger is pref. further cooled by passage through a liq. spray heat exchanger which washes out fine into a liq. which is warmed prior to evapn. in the spray dryer.

The entries of the tubes in the shell and tube heat exchanger are no longer subject to blocking by damp powder. The liq. spray heat exchanger reduced loss of heat and fines to atmos., improving prod. yield and saving energy. 23.78 as 006365(15pp448)

CONK- ★ D13 91469B/51 ★GB 1557-982
Casting cheese - by pouring molten cheese into cool liquid e.g. brine for rapid cooling

VONKS KAASMIJ 03.09.76-GB-036638
(19.12.79) A23c-19

Cheese is heated and melted, and the molten cheese at 80-85°C is poured into a liq., and the cheese and liq. are packed in containers.

The cheese is cooled rapidly, so colour changes do not occur. Cold storage of the prod. is not necessary. The mass of cheese formed will not disintegrate.

The liq. is pref. brine, to which flavourings, may be added. Its temp. is 10-20°C. The cheese may be sterilised by heating to about 125°C, then cooling to 80-85°C before pouring into the liq. 3.9.76 as 036638 (2pp955)

PALM- D13 42084Y/24 =GB 1557-983
Extn. of cacao beans from pods - by cutting holes at each end and introducing piston with liq.

SOC DEV EXPLOI PALM (BERT-) 10.09.75-FR-027735
(19.12.79) *FR2323-331 A23n-15

Grains are extracted from a pod, e.g. a cacao pod, by truncating the envelope, and exerting on the grains mechanical, hydraulic or pneumatic force by inserting a device into one of the ends of the pod.

Pref. the device is a deformable piston which may also deliver pressurised fluid. During the extn., the pods are pref. held in an inflatable sleeve.

Extn. is achieved with increased efficiency and improvement in quality. 3.9.76 as 036679 (5pp1376)

URS D13 36844A/21 =GB 1558-291
Protein-contg. fibrous foodstuff prepn. - from milk protein-derived fibrous compsn., pre stabilised in acid bath and end-stabilised in salt bath (NL 17.5.78)

KURARAY KK (MNKN) 12.11.76-JA-136713
(19.12.79) *DT2701-657 +D01f-04/04

Fibrous high-protein prod. is prepd. by converting a soln. of a mixt. contg. a milk protein into a fibrous compsn. re-establishing the resulting compsn. in an acidic bath of pH <2.5 after or during conversion; then actually for 10 mins-3hrs.

The acidic bath contains acetic acid, citric acid, succinic acid, fumaric acid, glutamic acid, sulphuric acid, phosphoric acid, phytic acid, a condensed phosphoric acid contg. ≥ 2 moieties of formula (I), an acidic esters (contg. ≥ 2 moieties of formula (I)) of a phosphoric acid, a salt of these acids, or a mixt. of ≥ 2 of these acids and/or salts. The saline bath contains ≥ 1 of a potassium salt, a sodium salt and a calcium salt, to a total cation concn. of 0.3-6g. equiv ≥ 1 .

The prod. has excellent properties of texture and stability to hot water cooking. 11.11.77 as 047059 (15pp931)

BEDR- D13 28703A/15 #GB 1558-324
Controlled atmosphere tomato package - contg. desiccant packet and carbon dioxide absorbent and comprising gas-permeable packaging film pref. low density polyethylene

BEDROSIAN & ASSOC (BEDR/) 09.12.76-US-749063 (18.02.78-GB-006541)

A92 Q31 + Q34 (A11 A17) (19.12.79) *US4079-152 +A23b-07
Tomato package is prepd. comprising a sealed enclosure contg. an amt. of tomatoes in any state of maturity con-

tained in an initial atmos. established by sealing the enclosure from the outside ambient atmos. without modification of the ambient temp. within the enclosure.

The enclosure is formed from a gas permeable film of an O₂-permeability of 75-3,000 cc/100 in²/day and CO₂-permeability of 500-15,000 cc/100 in²/day. The enclosure contains a sealed packet contg. an amt. of desiccant material sufficient to retard mould formation on the tomatoes for 14-21 days. The packet is formed from a film which is permeable to water vapour, but which will retain any soln. formed in the packet.

The enclosure further includes an amt. of CO₂-absorbent to maintain the CO₂ content of the environment <2.5 vol.%. The initial atmos. within the enclosure is converted to an atmos. which results solely from the equilibrium achieved by the respiration of the tomatoes, the gas permeability of the film, the desiccant and the CO₂ absorbent. 18.2.78 as 006541 (5pp931)

HOFF D13 71147A/40 =GB 1558-338
Microcrystalline vitamin/A prodn. - by cooling an aq. emulsion produced from molten or wet ground vitamin/A acetate (BE 25.9.78)

HOFFMANN-LA ROCHE AG 25.03.77-CH-003811
B05 C03 E15 (19.12.79) *DT2812-582 C07c-175

Microcrystalline vitamin A acetate or dry free-flowing prepn. in which vitamin A acetate is present is mfd. by homogenising molten or wet-milled vitamin A acetate in water or in a 0.1-5 wt.% aq. soln. of a hydrocolloid or an emulsifier, cooling the emulsion formed to 15°C while maintaining the homogenisation, and opt. converting the microcrystals formed into beadlets.

Pref. the molten vitamin A acetate is homogenised in a 0.5-2 wt.% aq. soln. Homogenisation takes place to achieve a particle size of molten vitamin A acetate of 1-25 microns.

The prod. formed is used in multivitamin prepn. and esp. as additives to foodstuffs. The dry powders are free from antioxidants and have good stability. 23.3.78 as 011706 (3pp931)

NATT ★ D13 91488B/51 ★GB 2022-390
Dispersible chocolate liquor in powder or flake form - prepd. by drum drying mixt. of liquor, water and starch

NAT STARCH & CHEM CORP 22.05.78-US-907652
(19.12.79) A23g-01 A23l-01/22

A dispersible chocolate liquor in powder or flake form is made by mixing molten chocolate liquor, water and 20-60 (25-50) wt.% (on dry wt. of total mixt.) of starch. The mixt. is then drum-dried at 143-177°C to ≤ 12 (<5%) moisture and the dried material powdered or flaked. Pref. water is 20-98 wt.% of the total mixt. and the starch is esp. tapioca starch or a dextrinised or derivatised waxy maize starch.

For use in puddings, drink mixes, pie fillings, dry biscuit and cake mixes etc. The prod. is easily dispersible in water, free-flowing and storage stable at room temp. 3.5.79 as 915382 (5pp1251)

MEGG ★ D13 91489B/51 ★GB 2022-392
Casein-contg. milk substitute of reduced lactose content - is not subject to coarse coagulation under acid conditions, esp. useful for breeding calves

MEGGLE MILCHIND GMB 06.06.78-DT-824792
(19.12.79) A23c-11

Milk substitute for mammals consists of a casein-contg. milk prod. (A) of reduced lactose content; total ash content ≤ 15 wt.% total protein ≥ 1.7 wt.% total fat ≥ 9 wt.%; water ≤ 70 wt.%; pH 4.5-3.9 (in 10% aq. soln). and Ca:P 1.2-2:1. It also contains an organic acid as preservative.

Esp. water is ≤ 5 wt.% and ash ≤ 13 (best 7-12) wt.%. Up to 50% of the lactose can be replaced by another carbohydrate and pref. up to 50 wt.% of the protein is milk protein. The preservative is esp. Ca formate used at 2.7 wt.% (dry basis) and an organic acid (e.g. citric, fumaric or adipic acids and/or glucono- δ -lactone) may be added to adjust pH. 29.5.79 as 018542 (8pp1251)

GENF ★ D13 91490B/51 ★ GB 2022-394
Soluble coffee prodn. from chilled extract - with colloidal coffee made by grinding roasted beans frozen with liq. nitrogen
GENERAL FOAM PROD LTD 12.06.78-CA-305276
(19.12.79) A23f-01/12

A soluble coffee prod. is made by (a) air-cooling freshly-roasted beans; (b) quenching the beans by freezing with liq. N₂; (c) grinding the frozen beans (pref. in presence of liq. N₂) to a colloidal prod. of particle size <45μ; (d) adding this to chilled coffee extract and (e) drying the mixt.

Pref. stage (d) involves blending and homogenising and the colloidal prod. is added at 1-15 wt. % on solids in the extract.

When reconstituted the prod. has better cup appearance (more turbidity without flocculation) and the aroma and flavour characteristics of regular coffee. 8.6.79 as 020071 (5pp1251)

FERR/ ★ D13 B/51 ★ IT 1034-077
Hyper-proteinaceous food paste
FERRARI A 17.12.74-IT-030630
(10.09.79) A23/

YOSH- ★ D13 91647B/51 ★ J5 4143-541
Coagulation of bean milk to give soft curd - where basic amino acid or its salt, is added to slow the rate of coagulation
YOSHIKAWA SHOJI KK 27.04.78-JA-050454
(08.11.79) A23/01/20

Method comprises coagulating bean milk with the coagulating compsn. contg. rapid acting coagulating agent. The coagulation is carried out in the presence of basic amino acid or its salt. As basic amino acid lysine, ornithine, arginine, etc. can be used and they are used in an amt. of 0.1-30 wt. % on bean milk.

Basic amino acid or its salt shows the action of the coagulating agent such as MgCl₂. The basic amino acid or its salt is easily dispersed uniformly in bean milk. 27.4.78 as 050454(2pp5)

KYUS- ★ D13 91648B/51 ★ J5 4143-542
Prepn. of canned fruit - by coating with film-forming and film-reinforcing glutinous substance, adding seasoning soln. and canning
KYUSHU SHOKURYOHIN 27.04.78-JA-051936
(08.11.79) A23b-07

The method comprises (a) immersing fruits as they are or the flesh obtd. by peeling off their epidermis and endodermis, in a viscous solution contg. film-forming glutinous substance and film-reinforcing glutinous substance, (b) immersing the fruits or the flesh coated with the glutinous substance in seasoning solution and (c) canning them.

Fruits hardly stick together during the processing and the canned fruits can be preserved for long time with freshness.

As the film-forming glutinous substance sodium alginate and/or agar can be used and as the film-forming glutinous substance carrageenan, locust bean gum, arabinogalactan gum, pectin, guar gum, gelatin, starch deriv. amylose deriv. and alginic acid deriv. can be used singly or together. Flavouring, colouring and seasoning may also be added. 27.4.78 as 051936(3pp5)

KURS ★ D13 91650B/51 ★ J5 4143-550
Fibrous high protein food prepn. - by two-stage fixing of fibrous milk protein in acidic bath then in salt bath
KURARAY KK (MNKN) 25.04.78-JA-050465
(08.11.79) A23j-03

The method comprises (a) pre-fixing milk protein which is previously or simultaneously formed in fibrous form, in an acidic bath and then (b) fixing it in a salt bath which contains potassium, sodium and/or calcium salt so that the total cation concn. is >1g-equiv./l pref. 3g equivl/l. and has pH 2.5-6.5 pref. 3.4-5.6 at T°C for time (t.hr), selected to be in the area surrounded by the two curves defined by functions F1 and F2 or pref. F1 and F2'. F1: (T-120)(t-1)=20; F2: (T-100)(t-0.1)=2; and F2': (T-105)(t-0.1)=8.

Acidic bath is pref. prepd. with sulphuric acid, phosphoric acid, acetic acid, citric acid, fumaric acid, succinic acid, glutaric acid, or their salt and the pre-fixation is effected for 10-300 secs. in the acidic bath of pH0-5.

having acid concn. 0.5-25 w/w%. Pref. the acidic bath is prepd. using the condensed phosphate or the phosphoric acid ester having >2 phosphoric acid gps. intramolecularly together with sulphuric acid and emulsifier. 25.4.78 as 050465(10pp5)

QPPP ★ D13 91651B/51 ★ J5 4143-551
Dried yolk compsn. prepn. - by treating liq. yolk with protease, adding non volatile alkali and sugar, and drying
Q.P. CORP 28.04.78-JA-051511
(08.11.79) A23b-05/02

Process comprises (a) treating liq. yolk with 0.01-0.1 (0.04-0.08)w/w% on yolk of protease for >4 hrs.; (b) adding non-volatile alkaline agent to pH 7.5-10 and 5-40 (15-30)pts.wt. sugar to 100 pts.wt. of the treated yolk; and (c) drying.

Dry yolk compsn. has high solubility in liq. having a higher specific gravity than water e.g. milk and can provide a stable dispersion. Specifically protease obtd. from microbes, vegetables and animals can be used, e.g. trypsin, pepsin, papain, etc. Pref. alkaline agent includes tri-sodium phosphate, Na₂CO₃, NaOH, etc. Sugar is e.g. sucrose, lactose, glucose, dextrin, dextrin-alcohol, etc. 28.4.78 as 051511(4pp5)

MOMI ★ D13 91652B/51 ★ J5 4143-561
Enzymic browning of cacao and coffee beans - involves contact with polyphenol oxidase obtd. from Alternaria or Cladosporium microbe
MORINAGA & CO LTD 27.04.78-JA-050586
(D16) (08.11.79) A23f-01/04 A23g-01

The method is characterised by contacting the polyphenol oxidase (I) produced by the polyphenoloxidase-producing microbes belonging to Alternaria or Cladosporium with unfermented cacao beans, roasted coffee beans or their extract.

(I) promotes the browning reaction of cacao beans and coffee beans, decreases their astringency and promotes the formation of aromatic substances. Thus, the method can be used in the prod. of cocoa, chocolate and coffee having improved quality.

Typically Alternaria tenuis A-2(FERM-P 332) and Cladosporium cladosporioides A-1 can be used and they are cultured at 30°C at pH 4.7 aerobically. After the culture, crude enzyme can be sepd., by acetone fractionation or ammonium sulphate fractionation and the crude enzyme is further refined and powdered. Practically, the powdery enzyme is sprinkled on crushed cacao powder or coffee powder or is added to the liq. extract of cacao beans or coffee beans. 27.4.78 as 050586(4pp5)

KIKK ★ D13 91661B/51 ★ J5 4143-597
Prodn. of sweetener-seasoning contg. alcohol - comprises adding steamed non-glutinous rice to alcohol soln. contg. malted rice in presence of alpha-amylase, saccharifying and ageing
KIKKOMAN SHOYU KK 27.04.78-JA-049302
(08.11.79) C12g-03/08

Prodn. of sweetener-seasoning (I) contg. alcohol, comprises (1) adding steam nonglutinous rice, which is prepd. by being soaked in water at 45-75°C and then steamed, into alcohol soln. with malted rice in the presence of α-amylase (2) saccharifying and (3) ageing the mixt. Mirin-like (I) can be produced from nonglutinous rice.

Specifically nonglutinous rice is soaked in water contg. heat-resistant α-amylase of 0.1-2% based on starch in the nonglutinous rice at 50-70°C for 6-24 hrs., and then steamed. The malted rice is prepared by soaking rice in water, steaming, and incubating it after cooling and innoculating Aspergillus oryzae. The steamed nonglutinous rice and the malted rice are soaked in aq. soln. of 25-45% alcohol. After ageing the mixt. is pressed and filtered, to obtain (I). 27.4.78 as 049302(5pp42)

KKAZ = ★ D13 91713B/51 ★ J5 4143-795
Pure orthophosphoric acid prodn. from low quality phosphoric acid - by treating with hydrogen peroxide in presence of palladium system catalyst
KAZA KAZNIIGIPROFOS 28.04.78-JA-052229
C04 E36 (09.11.79) B01j-23 44 C01b-25 18

Process comprises treating low quality phosphoric acid contg. ortho-phosphoric acid and impurities with H₂O₂ as an oxidising agent at 30-80°C in the presence of Pd

alyst system, prepd. by impregnating 0.1-2.0 wt. % in active C.

Purified ortho-phosphoric acid is used in foodstuffs for producing a reactive phosphorous salt and a fertilizer. 28.4.78 as 052229(3pp15)

SS ★ D13 91905B/51 ★ J5 4145-204
Coccidium agent, pref. administered with feedstuff - contains trypsin inhibiting cpd. as active component
NISSHIN FLOUR MILL KK 01.05.78-JA-050730
B04 C03 (13.11.79) A61k-37/64

Coccidium agent contains as active component a trypsin-inhibiting substance. This is based on the fact that an animal infected with coccidium disease has abnormally low protein-decomposing enzymatic activity in intestine. The active substance can be any cpd. which can lower trypsin activity or inactivate trypsin, and examples are citric acid, cinnamon, raw soy bean, egg protein potato, trypsin-inhibiting substance derived from said natural substances, microorganism which is capable of producing trypsin-inhibiting substance, and trypsin-inhibiting substance derived from said microorganism. The active substance can be administered orally or by injection, but is pref. given with feedstuff. The dosage is dependant on the race of animal. When mixing with feed-stuff, the object is the trypsin-inhibiting activity is pref. 5-20 x 10⁴ TU/g. The agent also has preventative effect and can be used where there is a resistance to conventional anticoccidium agents. 1.5.78 as 050730(3pp108)

MIN ★ D13 91919B/51 ★ J5 4145-246
Protein food prodn. from soy bean milk - involving addn. of ascorbic, erythorbic, sulphurous or alginic acid or CMC, cystine or homocystine (salts)

AJINOMOTO KK 04.05.78-JA-053322
A97 (A11) (13.11.79) A231-01/20

Prodn. of protein-food (I), comprises (1) dissolving ≥ 1 g ascorbic acid, erythorbic acid, CMC, sulphurous acid, cystine, homocystine, alginic acid, and their salts into soy bean milk, (2) preparing soy bean milk-curd and (3) cooling it.

Soy bean curd-(tofu) has been used as protein-food in Japan. However, it contains much water and therefore cannot be stored for a long time, and when it is dried, it cannot return to the initial texture. The dried (I) regains its initial curd-texture, when (I) is soaked in (hot) water.

The quantity of the above additives used is 0.1-0.0001 parts per a part of protein in soy bean milk. The cooling temp. in the step (3) is -80 or -10°C, e.g. (-60 or -40°C). 5.78 as 053322(3pp42)

KA- ★ D13 91920B/51 ★ J5 4145-255
Preserving meat in miso - with addn. of neutral and/or alkaline protease and a relatively small quantity of salt
TAKADA SHOTEN KK 02.05.78-JA-052922
(13.11.79) A23b-04

the prodn. of meat preserved in miso(misozuke) (I), 1.5 wt. % of neutral and/or alkaline protease is/are first added and a relatively small quantity of salt is then added for elevation of the protease-activity.

Method can be carried out without complicated procedures such as the spraying of salt and protease onto the surface of meat. The prod. does not harden during storage and maintains a fresh appearance for a long time. In an example 10 pts.wt. malted rice, 35 pts.wt. soy bean, 4 pts.wt. of salt, 0.12 pts.wt. sorbic acid, a trace of vitamin B₂ and 1 pts.wt. protease were mixed and fermented for ~15 days. 5.78 as 052922(2pp42)

ALL- ★ D13 64919V/37 = J7 9038-747
Cellulose acetate fibres resembling asbestos - for filtration of juices, wines, etc.

E & J GALLO WINERY 15.02.73-US-332640
A11 F01 J01 (A88 A97 D16) (22.11.79) *DT2405-901 B01d-39/04 D01f-02/28

The fibrous cellulose acetate has a structure resembling asbestos, consisting of a mixt. of rod-like and fluffy fibres with dia. 0.5-50 μ and surface area 35-55 m²/g and is moistened with ≥ 70 wt % non-solvent for cellulose acetate. It is made by dissolving cellulose acetate with viscosity 15-45 sec. in an organic solvent of medium polarity to give

a 2-4 wt % soln. precipitating with a non-solvent in vol. ratio to soln. of 3-10:1 and storing in the moist condition. 15.2.74 as 018387 (clg. 15.2.73-US-332640) B01d-39/04, D01f-2/28 (22.11.79) E & J GALLO WINERY (5pp) (J5 0041165)

ASAE D13 02964Y/02 = J7 9039-005
Prodn. of hard butter - by sepg. high m. pt. components from fat and oil compsn. and crystallising medium range m. pt. components
ASAHI DENKA KOGYO 19.05.75-JA-059281
(26.11.79) *J51136-858 A23d-05 C11b-07

A hard-butter having superior qualities and properties is produced by solvent-fractionating methods.

To 1 pt.wt. of fat and oil, 0.05-0.7 pts.wt. of a solvent are added, and the mixt. is cooled at 0.03-0.09°C/min. and the obtd. pptes. are removed from the mixt. Thus 80-95% of components having high m. pt. are removed. To 1 pt.wt. of the remaining mixt. 0.25-2.8 pts.wt. of solvent are added, and the mixt. is cooled rapidly, and the obtd. pptes. are removed from the mixt. Thus the remaining components having high m. pt. are removed completely. To 1 pt.wt. of remaining mixt. 1.5-4 pts.wt. are added and the mixt. is cooled. The components having medium range m. pt. are obtd. are crystals.

The crystals are used as hard-butter. 19.5.75 as 059281, C11b-7/00, A23d-5/00 (26.11.79) ASAHI DENKA KOGYO (7pp) (J5 1136858)

MITK ★ D13 92164B/51 ★ J7 9039-307
Accelerating growth of domestic animals and fowls - by feeding extract prepd. by alkali treatment of yeast
MITSUI TOATSU CHEM INC 22.01.70-JA-005381
C03 (D16) (27.11.79) A23k-01

Method comprises by feeding feed-stuff contg. extract, prepared by alkali treatment of yeast to the domestic animals and fowls. Efficiency of feed-stuff is elevated.

In an example, 10l of fermentation broth, contg. 2.78% wt. based on dry weight, of yeast, was subjected to centrifugal sepn. to give 1.308g of concentrate, which was then suspended in 5l of water. The suspension was subjected to centrifugal sepn. and the same suspending and centrifugal separation were repeated to give 1.227g of creay yeast mycelium. 2.83 l of water and 1.89 g of NaOH were added to the yeast mycelium and after suspending, the suspension was boiling for 10 min. pH of the suspension was brought to 7.0 by addn. of aq. HCl and then the suspension was further boiled for 60 min. After cooling, the suspension was subjected to centrifugal sepn. to give 2.87 l of extract. pH of the extract was brought to 1.46 by addn. of 6 N aq. HCl, and the extract was allowed to stand at cold condition for 30 min. to settle the deposit. Supernatant was removed by decantation, and residue was further subjected to centrifugal sepn. and then dried below 60°C, to recover 25.56g of white powder of alkali extract of yeast. Usually 0.1g of the yeast extract was added to feed-stuff. 22.1.70 as 005381, A23k-1/00 (27.11.79) MITSUI TOATSU CHEM. INC. (3pp68)

OOYA/ D13 19395X/11 = J7 9039-311
Prepn. and storage of silkworm feed - by boiling mulberry leaves, freezing them and adding nutrient when they are required for se
OOYAMA N 10.07.74-JA-078153
C03 P14 (27.11.79) *J51010-088 + A23k-01/18

The raw leaves of a mulberry are boiled for a short time (15-30 secs) to deactivate an enzyme contained in the leaves. Then the leaves are quickly frozen and stored. The leaves can be preserved for six months at -2 to 10°C. A minor nutrient component such as citral, β -citrosterol or vitamin C is added when the leaves are to be used as food. By the method mulberry leaves can be maintained fresh for a long time. 10.7.74 as 078153, A23k-1/18 (27.11.79) OOYAMA, N (3pp) (J5 1010088)

ASAH ★ D13 92169B/51 ★ J7 9039-345
Improvement of flow property of pasty cpd. for extrusion. - by adding cellulose crystallite to powdery material, and mixing with water or aq. soln. of binder
ASAHI CHEMICAL IND KK 17.11.65-JA-070240
A31 B05 J04 (27.11.79) B01j-02/20 B29b-03 C09k-03
Method comprises adding 2 pbw cellulose crystallite (I) to powdery material (II), and mixing with water or aq. soln.

of binder in such an amt. as to give pasty cpd. of capillary or funicular state.

(I) is prepd. by acid hydrolysis of cellulose, and is typically Abicell.(RTM) produced by FMC Co. USA. (II) is e. g. CaCO_3 , lactose, corn starch, aspirin, powdered coffee, salt, sugar, bentonite, kaolin, CaF_2 , gypsum, iron powder, pigments, carbon, phenolic resin, etc.

Used for moulding powdery material by extrusion in the mfr. of pharmaceuticals, ceramics, foods, etc. (I) provides excellent flow property and water retention in wide range of water content, particle size, bulk density and porosity. 17.11.65 as 070240, B01j-2/20, B29b-3/00, C09k 3/00 (27.11.79) ASAHI CHEM.IND. LTD. (8pp83)

QPPP D13 19277Y/11 = J7 9039-457
Stabilising clear liq. foods, e.g. vinegar, fruit juice, beer - by the addn. of dextrin or dextrin alcohol

Q.P. CORP (QPCO-) 28.07.75-JA-091667
(28.11.79) *J52015-838 C12j-01/04 + A231-02/30

The method comprises adding prescribed amts. of dextrin or dextrin alcohol having DE 10-40, to the liqs. in amt. ca 5% on vinegar and 10-15% on fruit juice. For foods which suffer from browning such as beer, etc. the addn. of dextrinalcohol is pref.

The dextrin or dextrin alcohol is obtd. from starch therefore natural foods such as fruit juice, etc. are not devalued. 28.7.75 as 091667, A231-2/30, C12j-1/04 (28.11.79) Q.P. CORP. (3pp) (J5 2015838)

FUKO ★ D13 92182B/51 ★ J7 9039-459
High foaming, low fat content cream prepn. - by admixing fat with phospholipid, fatty acid mono:glyceride and sorbitan fatty acid ester, and mixing with (defatted) milk contg. ester

FUJI OIL KK 15.02.73-JA-019022
(28.11.79) A231-01/19

Process comprises (a) admixing fat with phospholipid, fatty acid monoglyceride, and sorbitan fatty acid ester, and (b) mixing the fat mixt. with (defatted) milk contg. sugar ester of fatty acid, followed by agitation.

Oil-in-water type emulsion obtd. contains low fat component. 15.2.73 as 019022, A231-1/19 (28.11.79) FUJI OIL KK (7pp22) (J4 8019022)

NODA D13 49088X/26 = J7 9039-462
Protein hydrolysate treatment - with yeast enzyme to remove bitter taste

NODA SANGYO KAGAKU 28.10.74-JA-123448
(28.11.79) *J51054-958 A231-01/22

Protein-contg. material is treated with enzyme of yellow yeast (e.g. *Aspergillus orizae*, *Aspergillus soya*, etc.) under non-salt condition to give hydrolysate of protein, and the hydrolysate is treated with 2-5 pts. of table salt (based on wt. of water-soluble nitrogen of the hydrolysate). 28.10.74 as 123448, A231-1/227, 1/238 (28.11.79) NODA SANGYO KAGAKU (6pp) (J5 1054958)

GENO D13 28517T/18 = J7 9039-463
Food flavouring - using 2-nonenol, 2-nonenal, or their acetals or esters

GENERAL FOODS CORP 30.03.71-US-129609
E17 (28.11.79) *US3655-397 A231-01/23

Foodstuff flavouring selected from 2-nonenal, 2-nonenol, lower alkyl acetals of 2-nonenal, esters of 2-nonenol in which the carbonyl is not conjugated with a double bond or aromatic ring, and their mixtures. Used partic. for enhancing coffee flavoured foodstuffs. 22.11.71 as 094048 (clg. 30.3.71-US-129609) A231-1/234 (28.11.79) (8pp) (J4 7035173)

MLEC- D13 72604Y/41 #SU -655-282
Biologically nisin-enriched milk-powder prepn. - by fermentation of skim milk with *Streptococcus lactis*, for animal feedstuffs

INST PRZEM MLECZNEG 14.04.76-DT-616390 (15.04.76-SU-345706)
C03 (D16) (30.03.79) *DS2616-390 A23c-09

Biologically-processed dried milk for consumption by animals is prepd. by introducing into skimmed milk a *Streptococcus lactis* culture (2.5% w.r.t. the milk); fermenting for 18 h at 28.33°C with periodic neutralisation to pH 6.0-6.8 using 15-20 % NaOH soln., then cooling and drying. This process is improved by cooling the

prod. to 10-14°C with stirring; then concentrating to 14-25%; spray-drying (the exit temp. of the air is 87-97°C) and cooling the resulting powder to 18-20°C.

By this method, coagulation during the processing is prevented, and sticking of the final powder is eliminated. The antibiotic nisin activity is higher than 20,000 unit/g i.e. 4 times higher than in the known process. Lipinska-Leder E., Jakubenzyn E., Kosikowska M. et al. Bul.12/30.3.79 15.4.76 as 345706 (2pp70)

ELEC- D13 16149T/10 = SU -655-34
Cooking potatoes - by passing an electric current through an electrolyte surrounding the potatoes

ELECTRO-FOOD AB (ELE-) 24.08.70-SW-011461
+R59 (30.03.79) *BE-771-718 H05b-03/60

Organic materials, esp. food stuffs, e.g. potatoes are treated by the direct passage of electric current through an electrolyte surrounding the materials. The characteristics of the electric current are varied during the treatment. This may be achieved by passing the prod. through different stages, each stage associated with a different power dissipation.

Wigerstrom K.B., Bul.12/30.3.79 24.8.71 as 692580 (3pp)

SIDA= ★ D13 92273B/51 ★ SU -655-37
Sterilised condensed milk prodn. - includes addition of dried whey to improve storage stability

SIBE DAIRY IND RES 26.09.77-SU-526939
(09.04.79) A23c-09/08 A23c-21

Sterilised condensed milk is prepd. by normalising milk with respect to fats and nonfatty solids, pasteurising, condensing, introducing a salt as a stabiliser, homogenising, sterilising and cooling. This method is improved by introducing into the condensed milk, before homogenisation, 4-5 wt.% (w.r.t. the solids contained in the concentrated milk) of dried whey contg. 50-55% of the milk sugar. By this method the stability of the protein-fat phase in the prod. is improved and hence, the storage can be prolonged for 6 months. The quality of the prod. is improved.

Martynova K.G., Belyaeva V.V., Bul.13/5.4.79 26.9.77 as 526939 (2pp70)

UMEA= ★ D13 92274B/51 ★ SU -655-378
High quality cheese prepn. - using cultures of *Streptococcus cremoris* and *Streptococcus diacetylactis* with addition of *Lactobacterium casei* strains

UKR MEAT DAIRY RES 12.09.77-SU-527238
(08.04.79) A23c-19/02

Cheese is prepd. by pasteurising and normalising milk, souring it with *Streptococcus cremoris* and *Streptococcus diacetylactis*, and processing the resulting curd by the known methods. This process is improved by additionally introducing a prepn. contg. *Lactobacterium casei* strains, 2₂₂₋₃ and 2₂₂₋₂ in an amt. of 0.03-0.1% w.r.t. the cultures of *Streptococcus cremoris* and *Streptococcus diacetylactis*. The temp. of the second heating is 33-35°C. The curd is pressed to a residual moisture content of 47-52%. The maturing of the cheese is effected at 11-14°C in an atmos. having 86-90 vol.% humidity for 20-30 days.

The milk is pref. normalised to 40% of fat w.r.t. the dry wt. of the final prod. The introduction of *Streptobacterium* improves the quality of the prod., intensifies the process and reduces the cost. *Lactobacterium casei* is gram-positive; the cells are rod-like; the strains are cultivated in yeast extracts or in milk pref. at 30°C. Shalygina A.M., Popova T.V., Kozak Z.G. et al. Bul. 13/5.4.79 12.9.77 as 527238 (2pp70)

ODFO= ★ D13 92275B/51 ★ SU -655-379
Supplementary feed for ruminants - prepd. by subjecting peat to hydrolysis with conc. sulphuric acid, adding phosphoric acid and urea, and heating to produce glycosyl-urea

ODESS FOOD IND TECH (ALWO=) 20.11.75-SU-192541
C03 (08.04.79) A23k-01/22

Supplementary feed for ruminants is prepd. by subjecting to acid hydrolysis a source of polysaccharides, adding urea, and heating the mixt. at 60-65°C to form glycosyl-urea. The quality of the prod. is improved and its price is reduced by using peat as a source of polysaccharides.

The hydrolysis of peat is pref. carried out with H_2SO_4 (concn. 93%) in a screw hydrolyser over 30-40 sec. The consumption of the 93% H_2SO_4 is 0.15-0.20 kg per kg of peat. The mass is then diluted with a three-fold quantity of hot water, the inversion of di-, tri- and oligo-saccharides is carried out at 120-130 °C for 20-30 mins. The hydrolysate contg. 7-8% of reducible substances and 3% of H_2SO_4 is neutralised with milk of lime to a residual acid content of 0.5-0.7%. The hydrolysate is concentrated under vacuum to 20-30% of sugars and 2-2.5% H_2SO_4 . Then 75% H_3PO_4 is added to a total acidity of 9-10%. The mass is reacted with urea in an amt. of 1.5 mole per 1 mole of reducible substances, at 60-65 °C for 3.5-4 h. The yield of glycosylurea is 50-60%.

The final prod. ('Oti-tort') contains (in wt.%) glycosylurea 11-13, total nitrogen 5, phosphones 1.70, dry substances 45-58. The proteinaceous nitrogen of peat is advantageously combined with non-proteinaceous nitrogen of glycosylurea.

Dudkin M.S., Grinshpun S.I., Korchevnaya S.P. et al. Bul.13/5.4.79 20.11.75 as 192541 (2pp70)

COMB= ★ D13 92426B/51 ★SU -655-966
Animal feed urea content determination - by extn. with aq. buffer contg. sodium chloride and carbonate, magnesium sulphate and hydrochloric acid and colorimetry

COMBINE FODDER IND 21.02.77-SU-454783
C03 R16 (08.04.79) G01n-33

Animal feed, contg. urea as N-source nutrient is analysed for its urea content by extn. of feed with buffer soln. at pH 7.2-7.6 with subsequent colorimetric determ. of urea in soln. and calculating amt. of urea in the feed sample from the calibration curve.

The buffer soln. contains (in g/l): sodium chloride 0.5; magnesium sulphate 0.15; sodium carbonate 17.6; and conc. HCl.

The feed is extd. for 60 min. with above buffer soln. at pH 7.2-7.6 prior to colorimetric analysis. The method is fast and cheap. It can be used in animal feed quality control.

Dyakov I.P., Pelevin A.D., Bul.13/5.4.79 21.2.77 as 454783 (5pp938)

FRRR D13 17375V/10 =SU -656-468
Chocolate liqueur centres prodn - using sugar soln supersatd by chilling in scraped surface heat exchanger

FERRERO P & CIA SPA (FERR-) 27.12.72-IT-071089 (26.10.72-IT-070375)
+Q78 (05.03.79) *BE-806-463 A23g-03

The chocolate liquers have a flavoured, liquid sugar soln. encased in a crystalline crust inside a chocolate case. To obtain a highly supersatd. aqs. soln. of sugar, at a very low temp. pref. between +5 °C and -10 °C, a hot soln. is cooled rapidly and efficiently by passing it through scraped surface heat exchangers which precludes the possibility of premature crystallisation.

Dilov D., Bul.13/5.3.79 25.10.73 as 966871 (5pp)

NONB= ★ D13 92433B/51 ★SU -656-610
Highly nutritional animal fodder prodn. - by using chopped straw and grass cuttings milled together so that grass juices act as pelletising binder

NON-BLACK SOIL AGRI 03.12.76-SU-428481
C03 (15.04.79) A23k-01/14

Method involves mixing milled straw and grass cuttings and assimilation of the straw is improved and the edibility of the fodder increased by rubbing the milled straw through with the grass cuttings. Using a drier, grass cuttings are prepared with a moisture content of 30-35%. This is fed into a mixer/grinder together with the chopped straw. The straw is broken up along the line of the fibres, and the combined impact and friction rubs in the grass cuttings, forming a homogeneous fodder mixt. The juice given out by the grass acts as the binder for the two materials.

Fedoseev B.V., Khalanskii V.M., Borodulin E.N. et al. Bul.14/15.4.79 3.12.76 as 428481 (2pp29)

TETR ★ D13 92524B/51 ★SW 7800-137
Sterilisation of lactase enzyme - by radiation or the use of a chemical agent, prior to mixing with lactose-contg. food such as milk

TETRA PAK INT AB 05.01.78-SW-000137
(06.08.79) A23c-09/10

KANE- D13 80729A/45 =US 4177-574
Granulating moist foodstuffs under vacuum - without denaturation due to over compression

KANESA MISO KK (KYOW-) 12.03.77-JA-027496
+Q76 (11.12.79) *J53112-287 +F26b-07

Hydrated materials such as foodstuffs are granulated by making a paste from the material with a moisture content between 12-40% which is higher than the plastic limit, extruding the paste into strips, feeding the strips into a vacuum chamber at pressure of 4 Torr to 0.1 Torr to harden the strips by reducing the moisture content, and granulating the strip by shearing.

Appts. for granulating includes a vacuum chamber having a wall through which the material is extruded into the chamber. Pref. the strips are granulated by rotating cutting blades.

Degeneration of the materials is reduced. 13.3.78 as 885796 (6pp1376)

WESS D13 17994B/09 #US 4177-722
Appts. for sepg. fruit pulp from seed kernel and skin - comprises a rotor surrounded by a screen and having radial members with hammer heads

WESTFALIA SEPARATOR AG 22.11.77-ZA-006952 (05.01.78-US-867211)

P62 + P41 (11.12.79) *ZA7706-952 A23n-04/10 + A23n-07
Appts. for continuously sepg. fruit flesh from pips and skins, includes a rotatable conical screen disposed concentrically about a conical rotor, the rotor having radial hammers which force flesh through the screen, and the rotor and screen being driven at rotation speeds differing by 10%. The striking surfaces of the hammers being inclined to the rotation axis.

The striking surfaces are pref. inclined at an angle of 20° to the left or right w.r.t. the rotation axis. The skin and pips are left with a low moisture content. 5.1.78 as 867211 (7pp1376)

SOLL- D13 91516A/51 =US 4178-105
Chocolate paste structure control - by cooling in tank with eccentric rotor carrying scraper blades

SOLLICH SPEZIALM KG 03.06.77-DT-725183
(11.12.79) *DS2725-183 +A23c-03/04 B01f-07/16

Chocolate is treated in appts. which has a cylindrical container for axially conveying the chocolate; a cylindrical rotor eccentrically mounted in the container parallel to the container axis; oblique slots along the entire length of the periphery of the rotor; and bar wipers in the slots having sharpened outer edges which are forced against the container inner wall.

The container has at one end an inlet for chocolate located where the distance between the rotor and container is a max, and an outlet at the other end where the distance is a min. Chocolate build-up in the container is prevented. 30.5.78 as 910852 (5pp1376)

FOOD- ★ D13 92681B/51 ★US 4178-369
Improving feed efficiency in turkeys - by using mixed feed contg. sodium diacetate and dehydrated whey

FOOD TECH PROD 17.04.78-US-897113 (11.04.77-US-786419)
C03 (11.12.79) A23k-01

Feed efficiency in the raising of turkeys is improved by using a mixed feed contg. 0.1-0.3% Na diacetate (I) and dehydrated whey (II). The ratio of (I):(II) is 25:1-1:4. Pref. the feed contains a mixt. comprising 20-75% (I) and 3% (II) together with edible inert material, esp. with 50% (I) and 35% (II). The feed pref. contains 0.1-0.15% (I).

The mixt. of (I):(II) enhances feed efficiency and also mortality in flocks is reduced and turkey quality is improved. A mixt. of (I)+(II) is described in U.S. 4015018 as being useful in enhancing silage prodn. 17.4.78 as 897113 (5pp1248)

FOOD-★ D13 92682B/51 ★US 4178-370
Improving feed efficiency in pigs - by using mixed feed contg. sodium diacetate and dehydrated whey
FOOD TECHN PROD 17.04.78-US-897112 (18.07.77-US-817001)
C03 (11.12.79) A23k-01
Feed efficiency in the raising of pigs is improved by using a mixed feed contg. 0.1-0.4% Na diacetate (I) and dehydrated whey (II). The ratio of (I):(II) is 25:1-1:4. Pref. the feed contains a mixt. comprising 20-75% (I) and 3% (II) together with edible inert material, esp. with 50% (I).
The mixt. of (I)+ (II) enhances feed efficiency. A mixt. of (I)+(II) is described in U.S. 4015018 as being useful in enhancing silage prodn. 17.4.78 as 897112 (4pp1248)

MERI★ D13 92694B/51 ★US 4178-390
Stabilisation of soft serve and hard frozen yogurt - using compsn. contg. propylene glycol alginate, sodium alginate, guar and carrageenan
MERCK & CO INC 14.12.77-US-860342
A97 (11.12.79) A23c-09/12 A23g-09/04
Stabiliser (I) consists of (by wt.) 45-60% propylene glycol alginate; 15-35% Na alginate; 10-20% guar; and 2-10% carrageenan.

Pref. (I) contain ca. 53% propylene glycol alginate, ca. 25% Na alginate, ca. 16% guar, and ca. 6% carrageenan. Amt. of (I) in the yoghurt is 0.1-0.4% pref. ca. 0.2% by wt. Opt. (I) may be used with an emulsifier (II) with the blend contg. 55-75% pref. ca. 67% (I), and 25-45% pref. ca. 33% (II). Amt. of the (I)-(II) blend used in the yoghurt is 0.15-0.6% pref. ca. 0.3% by wt. Typical (II) include mono- or di-glycerides, lecithin, or 'Polysorbate 80' (RTM) etc.

(I) gives a stable, attractive prod. which is smooth and free from graininess. 14.12.77 as 860342 (3pp478)

STAD★ D13 92695B/51 ★US 4178-391
Protein-contg. materials treated at specified temp. and pH conditions - gives prods. used in place of egg solids and non-fat dry milk
STANDARD OIL CO (IND) 16.12.77-US-861458 (01.06.76-US-691770)
(D16) (11.12.79) A23j-03
The functional properties of protein-contg. materials (I)

are improved by (a) heating an aq. slurry of (I) to 75-100° (b) adjusting the pH to 6.6-8.0 with a base; (c) heating the slurry at 75-100° for 1-10 min.; and (d) drying the prepd. material. (I) is a single-cell protein (as a cream), opt. mixed with plant protein and/or whey solids (mixts. contain 1-99 wt.% single-cell protein). Step (b) base is NH_4OH , NH_3 , MOH (M = Na or K), $\text{Ca}(\text{OH})_2$, MHCO_3 , CaSO_4 , M_2CO_3 , CaCO_3 and/or $\text{Mg}(\text{OH})_2$.

Process treats a variety of (I) (esp. yeasts such as *Candida utilis*) to give bland prods. which do not have off flavours and which are highly suitable for replacing egg solids and nonfat dry milk in a variety of foods (bread, cakes, etc.). 16.12.77 as 861458 (7pp478)

KELL D13 02457B/02 =US 4178-392
Ready-to-eat breakfast cereal - die moulded, and contg. particulate vegetable components, binders, but no flour
KELLOGG CO 01.07.77-US-812341
(11.12.79) *GB2000-426 A23l-01/16

A ready-to-eat breakfast cereal prod. is mfd. by preparing a mouldable mixt. of 20-65% coarse particulate cereals, sugar components, and 10-35% moisture content, loosely compacting the mixt. in cavities in a bearing roll, and drying the pieces to a moisture content of 7% to give a crisp prod.

The cereal is pref. precooked bran, or cereal flakes. The prod. is pref. produced in a continuous string which are heated in a drying oven. The moisture is pref. provided by vegetable oil in an amt. to allow binding of the mixt. 1.7.77 as 812341 (7pp1376)

UNSY★ D13 B/51 ★ZA 7806-962
Organic waste or cellulosic material treatment - using steam under pressure in the presence of a dilute inorganic acid
UNIV OF SYDNEY 12.12.78-ZA-006962
(15.10.79) C05f

A process for treating organic waste material or cellulosic material, comprises subjecting the material to steam under pressure in the presence of a dilute inorganic acid for a predetermined period of time. 12.12.78 as 006962 (21pp)

See Also

D15 SU 656473	D16 DT 2823320	D16 DT 2823491
D16 DT 2921148	D16 J5 4143586	D16 J5 4143587
D16 J5 4145280	D16 SU 655372	D16 US 4178214
D22 J5 4145234	D22 WP 7901074	

D14: FOODSTUFF MACHINERY

KIBL/★ D14 B/51 ★BR 7903-042
Continuous thermal treatment of food products
KIBLEUR P P M 17.05.78-FR-014549
(04.12.79) A23b-04 A23b-07 16.5.79 as 003042

LICN D14 36115W/22 =DS 2357-041
Automatically controlled roasting oven for meat joints - programming buttons select operational temperature, starting time and duration

LICENTIA PATENT GMBH 15.11.73-DT-357041
+P28 Q74 R43 R59 (13.12.79) *DT2357-041 A23l-01/31
The starting roasting time and a finishing roasting time are maintained constantly with a ratio between starting and finishing times of 2:1, in a process for automatically roasting different sizes and kinds of pieces of meat, in the roasting chamber of an oven. The starting temp. is 200°C whilst that for the making ready of the roast is $\leq$ 200°C.

The period of time during which the roast is made ready, is made up from a variable continuation-of-roasting time and the constant finishing roasting time. The continuation-of-roasting time is dependent upon the actual wt., and the continuation-of-roasting temp. is determined by the kind of meat, whilst during the finishing roasting time, the roasting chamber heating is turned off.

The process makes it possible, not only to determine a total roasting time ensuring automatic careful treatment, having regard to the size and/or wt. of the meat and its kind, but also, the time at which the roasting will be finished is definitely fixed beforehand. 15.11.73 as 357041 (6pp1045)

MILK=★ D14 91385B/51 ★DT 2922-531
Centrifugal liquid homogeniser - with liquid speed reducing means facing reaction nozzles on rotor
MILK IND RES INST 01.06.78-SU-622368
J02 P13 (13.12.79) A01j-11/16 A23c-07 B01f-03/08

A centrifugal homogeniser for liquids such as milk or milk prods. uses a hollow rotor with two reaction nozzles through which the liq. is discharged at a high velocity. This velocity is reduced immediately by letting the jets impinge on a corrugated surface on a stationary ring or on vanes attached to the rotor.

In addn. to a 5-10% improvement in the efficiency of homogenisation, some versions have a power consumption which is reduced by a factor of 1.5-2. 1.6.79 as 922531 (13pp39)

INDA- D14 18148A/10 =GB 1558-013
Food sterilisation and preservation - by steam injection, cooling and closure under maintained aseptic conditions (BE 28.2.78)
IN DA TE AG 31.08.76-GB-035988
(19.12.79) *DT2738-953 A23l-03/10

A food prod. is preserved by feeding a hot liq. or steam into a contained body of the prod. at a sterilising temp., cooling the prod., and sealing the prod. in a container, aseptic conditions being maintained throughout.

Pref. the steam is fed into the bottom of the prod. The sterilisation is pref. carried out in the container in which it is ultimately sealed. A cover is pref. placed on the container and the steam injected through a tube penetrating the cover into the prod.

Method is partic. applicable to preservation, in large

containers, of foods prods. in pieces or as liq. or conc.
p. 26.8.77 (13pp1376)

EST/ D14 84349A/47 =GB 1558-287
used-circuit smoke generator for smoking food - with collection
chamber above screw conveyor tube for destructive distn. of
wood

WEST C W 13.05.77-US-796629
(19.12.79) *DT2744-081 A23b-04/04

closed smoke generator for the destructive distillation
of organic particulates includes a pair of parallel, adja-
cent, elongate housing located one above each other; a
duct linking the housings; a feeder for the continuous
supply of the particulates into one end of the lower hous-
ing without leaking air; a heater surrounding part of the
lower housing downstream of the supply end for generating
smoke by the distillation of the particulates; and a dis-
charge device at the other end of the lower housing to
remove residue. The upper housing is a smoke collection
chamber through which a carrier gas can be passed.

The generator can be used to smoke food without the
production of outside air. 26.9.77 as 040040 (5pp1376)

FE= ★ D14 92434B/51 ★SU -656-611
animal fodder concentrate prodn. scalding unit - has drum with
loading hatch at one end and two segmented doors at the other
through which product is unloaded

LIPETSK TSENTROLIT 05.05.74-SU-021055
(15.04.79) A23n-17

animal-fodder scalding unit, for use in stock-breeding
farms, comprises cylindrical drum with loading hatch and
end cover. To make the unloading of the prod. possible
without dismantling the cover, the latter is made in two
segments hinged to the middle part of the drum and fixed
in the open position along the axis of the drum.

The initial components are milled and loaded through
the hatch into the drum. The two halves of the end cover
are fastened against the end of the drum. By reversing
the rotation of the drum the whole of its vol. is filled.

The additives are also loaded through the hatch, which
is then closed. The liquid components and steam are
admitted, and the powerful rotation guarantees complete
mixing, so that the concentrate is formed quickly. The
segmented doors are opened and fastened to the projecting
bracket so that the concentrate is discharged.

Murikov D.R., Voronchikhin V.G., Kolpakov N.V. et al
Bul.14/15.4.79 5.5.74 as 021055 (2pp29)

AN/ ★ D14 92435B/51 ★SU -656-612
animal feed extruder - has body with screw inside and
proportionator, linked together by pipe contg. single turn screw, to
prevent clogging

IVANCHENKO A I 10.08.76-SU-396115
(15.04.79) A23n-17 B29b-01

extruder for making mixed animal feed from free-flowing
material, comprises a body with the screw unit housed
inside it and a proportionator connected to the body by
means of a pipe in which another screw is housed. Clogg-
ing of the pipe is eliminated by fitting the screw so that it
can be moved relative to the housing and has a single-turn
wind-on.

From the proportionator, the free-flowing materials
pass along the pipe on the screw, so that it is forced to
break up. This broken material moves along, because
of the geometrical parameters of the screw, in conjunction
with its partial rotation, guarantees increased productiv-
ity when compared with the proportionator.

By making the screw with a single-turn wind-on, the
masses in the material are squeezed out freely, preventing
forced cramming of the material and eliminates blocking
of the pipe. To reload the screw, it is moved back along
the pipe and acts on a terminal switch which controls the
motor on the proportionator.

IVACHENKO A.I., Lopatin G.I., Pilinskii V.N., Bul.14/
15.4.79 10.8.76 as 396115 (2pp29)

LIFO= ★ D14 92457B/51 ★SU -656-651
Vibrating mixer for viscous materials - has two connected truncated
cones inside sleeve with turbulising vibration generator fed by
compressed air

LITH FOOD IND DES 05.01.77-SU-470308
J02 (16.04.79) B01f-11

Vibrational mixer for liquid and viscous media, used in
the chemical, food, etc. inds. comprises a core with
axial and radial channels connected to a source of com-
pressed air, and made as two truncated cones connected
together by their smaller dias., outside which is freely
attached a working unit in the form of a sleeve. The mix-
ing, e.g. of a mashed-potato mass is intensified while
reducing the consumption of compressed air, by fitting
the sleeve with turbines mounted on its end surfaces,
and blades, distributed over its side surfaces. The sleeve
itself also has holes.

Dzhyugis S.-K.S., Andryushkevichene, R.U., Stasitis A.I
et al. Bul.14/15.4.79 5.1.77 as 470308 (3pp29)

GPOL= ★ D14 92458B/51 ★SU -656-652
Emulsifier for margarine prodn. - comprises aq. extract of tea, used
as 3 per cent on each ton of margarine made

GEOR POLY 03.06.77-SU-498955
(16.04.79) B01f-17

Emulsifier, for the food industry e.g. for the prodn. of
margarine, or other liquid emulsions, comprises an 8-12%
aq. extract of tea or the waste materials from its prodn.
i.e. fine and coarse chips, tea dust, etc. Best results
have been obtd. by using a 10% extract soln. and taking
3% for each ton of margarine. The quality of margarine
is improved and its storage life is prolonged. The prodn.
technology, i.e. the making of the aq. soln., is improved
and more easily worked, and the price is reduced.

Tsulukidze L.A., Peradze A.Sh., Tavshavadze T.N. et
al. Bul.14/15.4.79 3.6.77 as 498955 (2pp29)

UUKR= ★ D14 92459B/51 ★SU -656-654
Die for pelleting animal feedstuffs - has epoxy resin body and metal
band with holes and sleeves for transmitting pressing force

UKR UKRORGSTANKINPR 15.06.71-SU-684164
A88 J04 P71 (18.04.79) B01j-02/20 B29f-03/04 B30b-11/20

Circular die, for the prodn. of pellets from free-flowing
material, e.g. in the mfr. of animal feedstuffs, as well
as in the chemical, food, etc. industries, comprising a
body with holes, on the outside of which is a band with
holes, having sleeves fitted into the holes in the body so
that they have projections. These projections are at a
distance from their ends so that they are distributed in the
holes in the band, and this increases productivity.

Dolgov A.M., Kuzubenko V.V., Perstnev A.N. et al.
Bul.14/15.4.79 15.6.71 as 684164 (2pp29)

LEWI- D14 31961B/17 =US 4177-647
Freezer for food prods. in trays - having a conveyor over which the
trays move supported by freezing air

LEWIS REFRIGERATION 06.10.77-US-840011
Q31 Q35 + Q75 (11.12.79) *EP---1-507 F25d-13/06

Prepacked foods is frozen in appts. which includes a flat
conveyor deck extending from an input for the food in con-
tainers to an exit and having air discharge apertures throu-
ghout its length; an air freezer including a heat ex-
changer, and a blower, the cold air being recirculated aft-
er discharge through the apertures to the suction side of
the blower.

A film of freezing is maintained over the containers,
and the pressure of the air is sufficient to lift the contain-
ers slightly above the conveyor deck to permit frictionless
motion of the container along the stationary deck and effi-
cient heat transfer.

The freezing rate is easily controlled. 6.10.77 as
840011 (14pp1376)

BOUR/ ★ D14 92543B/51 ★US 4177-753
Appts. for coating food articles e.g. onion rings - including wetting
station, rotating coating drum and inclined self-cleaning conveyor

BOURGEOIS RD 25.07.77-US-818318
P42 (11.12.79) A23g-03/20 B05c-03/10 B05c-19

A conveyor system includes a wetting station with a con-
tainer holding a wetting soln. through which a slack convey-
or extends being pushed down into the soln. by a ballast

roller. The roller is movable vertically to accommodate objects on the conveyor of varying thickness.

A rotating hollow drum is open only at its upper end and is mounted for rotation about an inclined axis. The drum holds a coating agent and receives objects from the wetting station. Pins extend into the drum for picking up the coated objects and carrying them onto an inclined self-cleaning conveyor. This runs through a support structure in the form of a channel where it is supported on rollers. The conveyor is perforate and is jarred to shake loose particles from the belt and conveyed objects.

The appts. is used for wetting and coating objects such as coating onion rings with bread crumbs. The objects are uniformly coated in an appts. which is easily cleaned. 25.7.77 as 818318 (6pp295)

FARM/ ★ D14 B/51 ★ZA 7806-98
Machine for end cutting and sizing pineapples - has rotary cutting between sizing knife and centering device, for cutting off end portion

FARMER RES 22.12.77-US-863218
(03.10.79) A23n

The machine comprises a rotary sizing knife, means spaced forwardly of the sizing knife for centering pineapples, conveying means for feeding pineapples endwise through the centering means and into the sizing knife with an end portion protruding from the knife, and a rotary cutter acting between the sizing knife and centering means for cutting off an end of the protruding portion. 13.12.78 as 00698 (38pp)

D15: WATER TREATMENT

TEXC ★ D15 B/51 ★BR 7802-656
Application of acid ion exchangers - with differing hydrogen ion activities

DEUTSCHE TEXACO AG 28.04.78-BR-002656
J01 (04.12.79) C07c-11/16 C07c-43/04

NOVA- ★ D15 91182B/51 ★CA 1067-627
Removal of arsenic from drinking water - by passing over ferric hydroxide on porous support

NOVA SCOTIA RES FOU 20.08.76-CA-259608
E32 (04.12.79) C02b-01/23

Arsenic is removed by adjusting the pH to 4-8.3, (pref 4.4-4.7) and treatment with ferric ions to ppt ferric arsenate and reduce the As content below 0.05ppm.

This is pref. accomplished by contacting the water with ferric hydroxide, pref. on a porous support, circular sieve, scheelite, kieselguhr, vermiculite, alumina, diatomite etc. The support is impregnated with a soln. of an iron salt eg FeCl_3 , $\text{Fe}(\text{NO})_3$, FeSO_4 , and a base, pref. ammonium or alkali (ne earth) metal hydroxide is added.

The method can be applied to large scale systems. However pref. the cartridge contg the purifying agent can be fitted to a domestic tap. The life of the device is estimated at $1\frac{1}{2}$ - $2\frac{1}{2}$ years. Regeneration by the user is not contemplated. 20.8.76 as 259608 (10pp955)

DRES D15 41900T/26 #DS 2220-328
Reverse osmosis appts - for eg, desalination, using centrifugal system to provide pressure head to allow membrane function

DRESSER INDUSTRIES INC 15.12.69-US-885099 (21.04.72-DT-220328)
J01 (13.12.79) *US3669-879 B01d-13

A series of semipermeable membranes is arranged in layers inside the cylindrical basket which rotates at high speed, within the fixed housing of a centrifugal, reverse osmosis appts. This is used for the sepn. of part of a constituent from a multiconstituent mixt., esp. for prodg. drinking water from saltwater, and the kinetic energy imparted to the water forced through may be exploited by means of reverse thrust nozzles, as centrifugal force.

With this arrangement there is less opportunity for the blockage of membranes by particles and/or impurities, so that higher throughput speeds are possible. 21.4.72 as 220328 (4pp1045)

KEMA D15 74363X/40 =DS 2610-277
Removing colloidal impurities from aq. dispersions - esp. de-inking pulp, by adding surfactants to form mycellar solns. of impurities (NL140976)

KEMANORD AB (YTKE-) 11.03.75-SW-002720

A97 F09 (13.12.79) *DT2610-277 B01d-37 D21c-05/02 D21f-01/66

Printing ink is removed from paper by treating a suspension of the paper pulp with a combination of a fat or resin soap and an amine surface active agent, pref. a 8-20 alkyl or alkenylamine or its ethoxylated deriv. The impurities are removed from the aq. phase by pptn. followed by sedimentation, flotation, centrifugation or filtration.

The waste water is purified under mild conditions. Printing ink may be removed from newspaper. 11.3.76 as 610277(7pp068)

TITG D15 67290A/38 =DS 2710-969
Aq. ferric chloride sulphate soln. prepn. - by ferrous sulphate heptahydrate oxidn. with chlorine in aq. soln.

KRONOS TITAN-GMBH 12.03.77-DT-710969
E31 (E32) (13.12.79) *DT2710-969 C01g-49

Soln. of ferrous sulphate heptahydrate, obtd. in titania produced from ilmenite and contg. small amts. of titanium sulphate, is converted into ferric chloride sulphate soln. The soln. is free of titanium oxide hydrate and can be used for waste water treatment, sludge conditioning and working up cooling water.

The heptahydrate soln. contg. >1 wt. % Fe^{2+} is oxidised with Cl_2 at a pressure 1-4 bar above normal. The Fe^{2+} content is maintained by circulating the soln. through a dissolving vessel to which solid heptahydrate is added. The oxidation temp. is maintained at 40-70°C by controlling the addn. of heptahydrate so that the endothermic heat of soln. is compensated by the exothermic heat of oxidation. The max. residence time in the reactor is 4 hrs. Pref. the reaction soln. is retained in the reactor for >3 hrs. at $>60^\circ\text{C}$. 12.3.77 as 710969(5pp913)

KUST D15 52733B/29 =DS 2800-425
Filter for reverse osmosis or ultrafiltration - having cylindrical filter element inside tube with spiral path for concentrate to keep filter surface clear

KUSTERSE 05.01.78-DT-800425

J01 (13.12.79) *DT2800-425 B01d-29/20

The line of forced flow runs from an inlet to an outlet, in a filter arrangement having ≥ 1 tubular filter body with porous walls. The fluid flows mainly radially inwards and particles above a certain size are held back at the surface of entry.

The line of forced flow is through an outwardly-closed groove in the circumferential surface of entry of the tubular filter body, and the layout makes a higher throughput possible when pressures remain constant. 5.1.78 as 800425 (5pp1045)

RITT- ★ D15 91220B/51 ★DT 2823-409
Siege band press for dewatering slurries - with pressure rollers alternating between pressing and relaxation positions

RITTERSHAUS & BLECH 29.05.78-DT-823409

P71 (13.12.79) B30b-09/24 C02c-03

Siege band press for dewater slurries has a press zone contg. two siege bands (carried on permeable support bands) which enclose the slurry. The bands pass between a gp. of stationary support rollers and a gp. of mobile press rollers, the latter being driven to and fro relative to the support rollers.

The new feature is that the pressure rollers move between (a) a high pressure pressing position in which the siege bands are forced into a wavy path, and (b) a release

one in which the waves in the band are reduced or eliminated. This movement is controlled by a programmable load pattern.

The dwell time (TN) of the rollers in the release zone is smaller than that taken (TD) for the bands to pass through the press zone and smaller than the dwell time (TH) of the rollers in the high pressure position.

Larger amts. of slurry can be processed per unit time and different types of slurry can be accommodated by adjusting the various dwell times. 29.5.78 as 823409 (18pp)

REXO ★ D15 91333B/51 ★DT 2918-842
N-Aminomethyl-1,3-propane di:amine penta:acetic acid - useful as chelating agent in bleaching wood pulp and for supplying trace metals to plants

REXOLIN CHEM AB 31.05.78-GB-024771
C03 E19 F09 (13.12.79) C07c-99/10 C07c-101/20 C07c-120 C07c-121/43 C11d-03/30 D21c-09/16
Polyamine derivs. of formula $(QCH_2)_2N.CH_2CH_2.N(CH_2Q).CH_2CH_2N(CH_2Q)_2$ (I) are new.

In (I) Q is COOM (Ia) or CN (Ib); M is H or alkali metal esp. Na or K. The heavy metal chelates (esp. with Fe, Mn, Ca, Co, Mo and Zn) of (Ia) are also new. (Ib) is made by reacting 2-aminoethyl-1,3-propanediamine with HCN and HCHO in aq. acid medium, and can then be hydrolysed to (Ia).

(Ia) are biodegradable chelating agents esp. for complexing Fe and Mn during the bleaching of papermaking pulp with peroxides, esp. H_2O_2 . The heavy metal chelates of (Ia) are useful as sources of trace elements for plants and (Ib) is an intermediate. 10.5.79 as 918842 (26pp1251)

POWC ★ D15 91403B/51 ★DT 2923-050
Determin. of acid or basic cpds. in aq. soln. of salts - by measuring electric conductivity of soln. before and after ion exchange treatments

DOW CHEMICAL CO 08.06.78-US-913786
E37 J04 M11 R16 (J03) (13.12.79) G01n-27/04 G01n-31/04
The aq. test soln. (I) is fed into an aq. carrier eluant (II) and analysed to obtain a stored signal (S_1) representing the concn. of acid, salt or base. The acids are then converted in a basic ion exchanger into hydroxide ions and/or free amines, whereas the bases are converted in an acid ion exchanger to hydrogen ions, so all the anions and cations are collected.

A calibrated signal (S_2) is then obtd. which is proportional only to the initial salt concn. in soln. (I); and the difference between signals (S_1, S_2) indicates the initial concn. of acid or basic cpds. in soln. (I). Liq. (II) is pref. de-ionised water. The signals (S_1, S_2) are pref. proportional to the electric conductivity of soln. (I).

Analysis of acid or alkaline solns. from washing plants or drain water from the mfr. of Cl and alkali, or from electroplating plants. 7.6.79 as 923050 (28pp1144)

KAEL/ ★ D15 91420B/51 ★DT 2923-375
Centrifugal ring for aerating sewage tank surfaces - has angularly adjustable vanes fixable individually to equally adjustable rings
KAELIN JR 12.06.78-CH-006372
(13.12.79) C02c-01/10

Each vane together with ≥ 1 flow guide wall forms a separate fluid delivery unit in a centrifugal device for circulating and aerating water, esp. sewage in clarifying tanks; the device being supported by a vertical driving shaft.

Whilst it is working, the inlet side of the flow guide is below water level; the outlet side being mainly above water level. Each separate flow guide unit can be detached individually from the supporting arrangement on the driving shaft. The attachment points between the flow guide units and the supporting detail are arranged so that the vane outlet angle α can be varied over a definite range.

Arrangement provides a surface ventilating centrifuge which can be mfd. from standard, mass produced parts, irrespective of the operational characteristics required. 8.6.79 as 923375 (14pp1045)

ANVR ★ D15 91441B/51 ★FR 2419-096
Sepn. of oil and suspended particles from waste water - using fluoro-carbonated filter bed to coalesce oil and trap particles
AGENCE NAT VALORISATION 09.03.78-FR-007720 (18.07.75-FR-022555)

J01 (09.11.79) B01d-17/02 C02c-01/38 C10g-33/06
Waste water from oil refinery installations is purified of its oil by coalescence as the effluent is passed through a fixed bed of varnish-coated, granular material partic. sand. The varnish contains a fluorocarbonated deriv. which offers a stable, chemical liaison with the granular material.

In this addn. the process comprises two stages as follows: (1) a comparatively long filtration stage during which the effluent is passed through the bed to produce coalescence and sepn. of the emulsion while suspended impurities are trapped in the bed. The effluent pref. drains downwards through a fixed bed supported on a grill. The top of the bed is unrestricted. The second stage is (2). A comparatively brief regeneration stage during which a washing fluid is passed through the bed to entrain impurities which are carried away for sepn. The washing fluid pref. rises, counter-current through the bed which is broken up and temporarily expanded during washing. The washing fluid is pref. water or water together with compressed air.

Process makes provision to deal with suspended impurities while retaining the simplicity and economy of the original process. 9.3.78 as 007720 Add to 18.7.75-022555 (12pp448)

ORIO- D15 90092A/50 =GB 1557-956
Regulating pH in a low ion concn. potentiometric measuring system - passing sample over membrane contacting acid or base

ORION RESEARCH INC 13.01.78-US-869316 (07.03.77-US-775210)
A89 J04 R16 R26 (19.12.79) *FR2383-477 G01n-27

Low levels of ion activity are measured in a potentiometric system, and the pH of a sample stream adjusted by the passive addn. of an acid or base reagent comprises passing the stream over one side of an inert, reagent-permeable; ion-impermeable non-wetting membrane, whose other side is in contact with the liq. or vapour of a reagent reservoir.

The pH adjustment is made without dilution of the sample stream and without introducing any interfering, reactive or test ions into the stream.

Low levels of sodium ion activity can be measured without interference from hydrogen ions using piperidine as the base reagent. Chloride ion activity can be measured without interference from hydroxide ions using acetic acid as the acid reagent. 3.3.78 as 008497 (5pp931)

CANT- D15 61001Y/34 =GB 1558-224
Liquid aeration device with concentric tubes - having perforations near top through which water flows

CANTON TEXTILE MILL 02.09.76-US-719996
J02 (19.12.79) *US4042-510 B01f-03/04 B01f-05

A liq. aeration device has a chamber having a vertical aerator wall, an orifice in the wall, a vertical conduit arranged to receive fluid from the orifice, and a vertical riser enveloping the conduit. The riser and conduit are joined at their bases. In use, air is entrained in the water as it flows down the conduit. The water is discharged from the top of the riser.

Pref. the conduit and riser are circular and concentric. The aerator wall is pref. a continuation of the conduit. 27.6.77 as 026794 (7pp1376)

MANS D15 86369A/48 =GB 1558-316
Steelworks cooling water purificn. - comprises removing oil and iron dross by aeration and admitting recycled aerated effluent
MANNESMANN AG 16.05.77-DT-722710
M24 + P41 (19.12.79) *DT2722-710 + B03d-01

Purificn. of cooling water from metallurgical plant uses a scale pit for the removal of coarse impurities followed by a fine treatment plant.

The process is improved by blowing compressed air into the scale pit and by recycling through the pit part of the aerated water. This improves the sepn. of oily impurities and allows the water to be cleaned using a simpler and more compact system. Pref. only gravel type filters are

used after the scale pit treatment.

The energy and maintenance requirements for the water treatment plant are thus reduced. 4.5.78 as 017793 (5pp)

NAZA-★ D15 91495B/51 ★GB 2022-428
Water distn. appts. producing pyrogen-free distillate - with demisting column containing non-corrosive packing pieces (IL 31.10.78)

NAZARETH HOSPITAL 18.12.74-IL-046285 (02.06.78-GB-026266)
(19.12.79) B01d-03/02 C02b-01/04

Steam is delivered to a demisting column formed of a vertical or inclined tube of non-corrosive material. The steam is fed to the bottom of the tube and passes through a packing material consisting of beads, rings or short tubes also formed of non-corrosive material. A liq. outlet is provided at the bottom of the column and this includes a steam trap.

From the top of the column the demisted steam passes to a condenser with a further steam trap for maintaining the pressure and for permitting the outflow of distillate only.

The appts. is used to produce pyrogen-free water to be used in the prepn. of sterile solns. esp. in a hospital pharmacy for infusion or injection purposes. The appts. is simple to operate and is low cost with no moving parts. 2.6.78 as 026266 (5pp295)

ULTD ★ D15 91562B/51 ★GB 2022-979
Water dispenser - using supply bottle inverted in reservoir top with sterilising lamp surrounding bottle neck

ULTRA DYNAMICS CORP 13.03.78-US-885880
(19.12.79) C02b-03/02

The water dispenser has a top opening into which a bottle of water is inverted. A water reservoir is fed by gravity from the inverted bottle of water. An annular collar surrounds the top opening and from this depends a device for irradiating water in the reservoir.

Pref. the device emits UV and ozone-producing radiation at wavelengths of 1840Å and 2537Å. The device may be a circular lamp which encircles the top of a bottle inverted into the top of the dispenser.

The appts. produces purified water. Often purified water is supplied in bottles which are stored under non-hygienic conditions. Thus, when inverted into the top of a reservoir contaminants can pass into the water from the outside of the bottle. The present appts. obviates this difficulty. 12.3.79 as 008687 (4pp295)

SEMP ★ D15 B/51 ★IT 1034-329
Stagnant water tank

SEMPERIT AG 17.03.75-IT-021329
A92 (10.09.79) B29d

NAKA/★ D15 91696B/51 ★J5 4143-772
Treating waste industrial mud or liq. - by slurring with Portland cement and silica alumina-ferric oxide powder, and then solidifying

NAKANOT 28.04.78-JA-051346

L02 (09.11.79) B01j-01 C02c-03 C04b-07/35 C04b-29

Portland cement and a powder (I) are added to the industrial waste to form a slurry which is then solidified. (I) consists of 50-80% SiO₂, 5-20% Al₂O₃ and 2-10% Fe₂O₃, and 80% of the total wt. comprises particles of ≤10 μ. (I) is baked at ≤900°C before being added to the waste.

Harmful industrial waste such as sludge, water, etc. can be solidified economically with easily available man-made silica sand, etc. Less Portland cement is required to obtain a solid of the same hardness as when aluminosilicate is used.

The initial solidification rate is improved. 28.4.78 as 051346(4pp55)

NAGA-★ D15 91697B/51 ★J5 4143-774
Desalination appts. utilising solar energy - includes low height, inclined casing facing sun and closed evaporator chamber with water channels and gutter

NAGATA SUIATSU KOGY 28.04.78-JA-052060
(09.11.79) C02b-01/08

Appts. has a casing of low height disposed inclined on a stand so as to face at the sun. A closed evaporator chamber is formed in the casing. In an upper space of the cham-

-ber, vertical channels are formed, and the upper end of each channel communicates with the evaporator chamber. A gutter is formed at the lower end of the chamber to receive the produced fresh water.

Arrangement prevents dispersion of the latent heat of water vapour. Appts. is used to produce fresh water from sea water. 28.4.75 as 052060(3pp26)

HOSH-★ D15 91698B/51 ★J5 4143-775
Ice and pure water prodn. appts. - with heater in lower part of ice store chamber

HOSHIZAKI DENKI 28.04.78-JA-051707
J07 Q75 (09.11.79) C02b-01/12 F25c-05

Appts. comprises (a) a ice producing structure; (b) an ice store chamber; and (c) a water tank. Improvement is that a heater disposed in a lower space of the ice store chamber has a switch for selectively energising the heater to produce the ice or water. A water pipe is connected to the ice store chamber to melt the ice.

Appts. is suitable for use in hospitals and restaurants. 28.4.78 as 051707(3pp26)

NITL ★ D15 91701B/51 ★J5 4143-778
Microporous permeable membrane of polyurea - useful for (ultra)filtration e.g. in waste water treatment

NITTO ELECTRIC IND KK 01.05.78-JA-053184
A88 J01 (A26) (09.11.79) B01d-13

Membrane is of a polyurea of formula $\{NH-A^1-(X-A^2)_m-HNH-CONH-B^1-(Y-B^2)_n-NH-C(O)-\}$ (I) In (I) A¹, A², B¹ and B² are each aromatic hydrocarbyl, aliphatic hydrocarbyl, alicyclic hydrocarbyl or divalent hydrocarbyl which is a mixt. of the former gps., X and Y are divalent bonding gps. contg. -C(=O)-, -O-, -S-, -SO₂-, -N(R¹)- and/or -Si(R²)(R³)-; R₁₋₃ are each (cyclo)alkyl or phenyl; and m and n are each 0, 1 or 2.

Membrane can be used effectively for precision filtration ultrafiltration etc. in the food, or pharmaceutical fields. Membrane has good heat and chemical resistance. 1.5.78 as 053184(7pp55)

HIEJ ★ D15 91731B/51 ★J5 4144-036
Purificn. of metal-contg. waste water e.g. from semiconductor mfr. - by adding mineral acid, carbonate, ferrous salt and alkali, and opt. polymer coagulant, then sepg. sludge from clarified liquor

HITACHI PLANT ENG CONST 28.04.78-JA-051817
J01 L03 (09.11.79) C02c-05/02

Metal component(s), e.g. Pb, Ge and Zr etc. is (are) effectively removed from waste water, e.g. discharged from semiconductor parts-producing factory and nuclear power industry etc. by (i) adding mineral acid, e.g. H₂SO₄ and HCl etc. or alkali matter, e.g. NaOH, or Ca(OH)₂ etc. to adjust its pH to 7-9, pref. 7.5-8.5, (ii) adding a carbonate e.g. Na₂CO₃, NaHCO₃ and CaCO₃ etc. (iii) further adding a ferrous salt, e.g. FeSO₄ etc. and alkali matter e.g. Ca(OH)₂ etc. to adjust its pH to 9-11, pref. 9.5-10.5 while stirring with O₂-contg. gas, e.g. air etc., followed by if necessary (iv) adding polymer coagulant and allowing to stand; and (v) subsequently separating into sludge and clarified liquor which is then outflowed into rivers. 28.4.78 as 051817(2pp34)

GNZE ★ D15 91732B/51 ★J5 4144-037
Biological denitrification of waste water - using packing which acts as alkali source

GUNZE KK 28.04.78-JA-051945
(09.11.79) C02c-01/04

In the biochemical denitrification of waste water contg. NO₃⁻-N or NO₂⁻-N, the improvement comprising contacting it with a packed material capable of dissolving-out alkali e.g. shell fossil, lime-contg. rock, sintered CaCO₃, shell etc. in the conversion of NO₃⁻-N or NO₂⁻-N into N₂ by the action of bacteria. The denitrification can be effected in a pref. pH range (~8) without any supply of alkali, e.g. Ca(OH)₂, NaOH etc. from an external source or any automatic pH control.

Pref. shell fossil is used since it dissolves-out only alkali component necessary for neutralisation of acid existing in the waste water and also serves as coagulant and adsorber etc. 28.4.78 as 051945(4pp34)

TK ★ D15 91750B/51 ★ J5 4144-310
Highly conc. aq. soln. of hydroxy-acetone prodn. - from waste water by maintaining at acid pH and distilling leaving conc. soln. at bottom of tower

MITSUI TOATSU CHEM INC 02.05.78-JA-052292

E17 (E14) (10.11.79) C07c-27/28 C07c-45/24 C07c-49/17

Highly conc. aq. soln. of hydroxyacetone (I) is obtd. from waste water contg. (I) by keeping the waste water at pH 7, and distilling the waste water while keeping the temp. at the bottom of distn. tower within the range of 90-150°C, leaving at the bottom of the distn. tower a highly conc. aq. soln. of (I)

Process can be applied to waste water from phenol mfr. starting from cumene, and (I) can be recovered without requiring special cost. The recovered (I) is of good quality and useful as industrial material, e.g. the material for preparing pyruvic acid. 2.5.78 as 052292(4pp75)

BA- ★ D15 91867B/51 ★ J5 4144-759
Colourising dyestuff-contg. waste water - by adding anionic or cationic surfactant, stirring and sepg. complex in floc form

TOBATA TEKKO KK 29.04.78-JA-051798

(12.11.79) C02c-05/02

Basic or acidic dyestuff contg. coloured waste water, e.g. discharged from a dyeing factory is made colourless and lowered in COD and BOD content by (a) adding anionic or cationic surfactant; (b) stirring to form a complex between the dyestuff and surfactant; and (c) sepg. the complex in the form of flocs..

In an example, basic dyestuff was reacted with Na alkylbenzenesulphonate. 29.4.78 as 051798(3pp34)

HAH ★ D15 91868B/51 ★ J5 4144-761
Biological treatment of oil-contg. waste water - where adsorbability of oil component on sludge flocs is improved by specified pretreatment

ASAHI CHEMICAL IND KK 01.05.78-JA-052465

(12.11.79) C02c-01/02 C02c-05

Biological treatment of waste water contg. oil as fine oil droplets or in emulsified state and in some cases phosphorus component, the improvement comprises (i) introducing surplus sludge resulting from biological treatment of the waste water into an air-compression system, then introducing it under compression into the oil-contg. waste water to be treated to cause the oil component to be adsorbed on the surplus sludge and also on fine air bubbles rising to the surface of the water, (ii) sepg. the floating matter thus obtd. from the system, and (iii) subsequently subjecting the liquor thus sepd. to the biological treatment, so that adsorbability of the oil component on flocs or sludge including fine air bubbles is further improved and simultaneously flotation separability of the oil-adsorbed sludge becomes further improved.

If necessary of coagulant, e.g. alum. lime, ferrous salt and polymer coagulant etc. may be used together with the surplus sludge to further improve the oil removability. 2.5.78 as 052465(4pp34)

HEJ ★ D15 91869B/51 ★ J5 4144-763
Treating borofluoride-contg. waste water - by adding basic dyestuff and adsorbing the resulting complex on activated charcoal

HITACHI PLANT ENG CONST 02.05.78-JA-053113

E34 (12.11.79) C02b-01/14 C02c-05/02

Borofluoride is effectively removed under ordinary temp. and pressure from waste water, e.g. discharged from electronic components prod. industry, organic synthesis industry and metal surface-treating industry etc. without generation of a large amt. of difficult-dehydrating sludge. Secondary pollution, by adding a basic-dye-stuff, e.g. Methylene blue, Methyl violet etc. to form complex compd. between the basic dyestuff and the borofluoride, e.g. as follows: and subsequently treating with activated charcoal to adsorb the complex compd. followed by sepn..

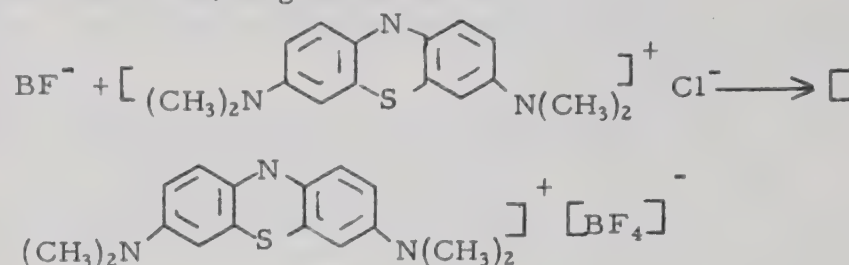
Excess amt. Methylene blue existing in the waste water is simultaneously removed by adsorption from the water together with the complex cpd. in the activated charcoal treatment. 2.5.78 as 053113(5pp34)

HIEJ ★ D15 91870B/51 ★ J5 4144-764
Removal of borofluoride from waste water - by contact with activated charcoal on which is adsorbed a basic dyestuff, e.g. Methylene Blue, which forms a complex with borofluoride

HITACHI PLANT ENG CONST 02.05.78-JA-053114

(12.11.79) C02b-01/14 C02c-05/02

Borofluoride is removed at ordinary temp. and pressure from borofluoride-contg. waste water, e.g. discharged from electronics parts producing industry, organic synthesis industry or metal surface-treating industry, without generating a large amt. of sludge which is difficult to dewater or causing secondary pollution, by contacting it with activated charcoal on which is adsorbed a basic dyestuff, e.g. Methylene Blue or Methyl Violet, so as to form complex cpd. between the borofluoride and the basic dyestuff adsorbed on the charcoal, e.g. as follows:



In an example, aq. soln. of Na borofluoride (110 mg/l as fluorine) was passed through a column packed with granular activated charcoal having a mean particle size of 0.5mm, on which was adsorbed 84 mg/g of Methylene Blue. The Na borofluoride was removed by adsorption and formation of a complex cpd. 2.5.78 as 053114(5pp34)

SHOW- ★ D15 91871B/51 ★ J5 4144-765
Treating fluorine-contg. waste water - e.g. from aluminium smelting, by adding calcium salt, sepg. calcium fluoride, adding polyaluminium chloride and adjusting pH

SHOWA KOJI KK 02.05.78-JA-099459

(12.11.79) C02c-05/02

Removal of F from F-contg. waste water, e.g. from HF-pickling, smelting of Al, prod. of glass, iron and semiconductor etc. is described.

Process comprises (a) adding Ca salt, e.g. Ca(OH)₂, opt. together with CaCl₂ or CaCO₃ to form CaF₂ followed by sepn.; (b) adding polyaluminum chloride; and (c) adjusting pH to 6-8, so that the Al component is converted to gel-like Al(OH)₃ on which the F cpd. is effectively adsorbed and settled rapidly esp. by the use of polymer coagulant.

By the use of the Calsalt and the sepn. of CaF₂, the amt. of polyaluminum chloride to be added is reduced, and the pH adjustment is facilitated, and simultaneously F removability is largely improved. 2.5.78 as 099459(3pp34)

MIYA/ ★ D15 91958B/51 ★ J5 4145-375
Water purificn. appts. - including helical pipes contg. ion exchange resin, connected in parallel between inlet and outlet pipes

MIYAMOTO J 02.05.78-JA-052923

(13.11.79) C02b-01/40

Appts. comprises a water feed pipe (I), pure water supply (II) and ion exchange resin contained in pipes (III) between (I) and (II). The object is to easily replace the resin during operation of the appts. and control degree of purity of the produced water as desired. The pipes (III) contg. the resin are connected in parallel between the pipes (I) and (II) through three-way cocks at both ends. Each pipe (III) is narrow and helical. The raw water fed into the pipe (I) may be at a low temp. e.g. in the form of melting ice, to keep the ion exchange rate of the resin high.

The pure water obtd. is suitable for use in chemical factories, hospitals and semiconductor mfg. plants. 2.5.78 as 052923(4pp26)

NISI- ★ D15 91959B/51 ★ J5 4145-377
Desalting water - using thermally regeneratable ion exchange resin

NIPPON SILOSARM KK (KURO-) 02.05.78-JA-053196

(13.11.79) B01j-01/04 C02c-01/23

Resin is recycled through a solid-liq. countercurrent with a preheating region, a regenerating region and a cooling region to desalt the material water.

Improvement comprises continuously removing the re-

sinfrom one end of the desalting portion, introducing it into the preheating region and the regenerating region, in order, to contact it in countercurrent with regenerating water, introducing it into the cooling region to contact it in countercurrent with one portion of cooling water, recycling and resulting regerated resin to the other end of the desalting portion, heating the other end of the desalting portion, heating the other portion of the cooling water in a heat exchanger and a heater, introducing hot water into the regenerating region, removing one portion of waste water from the regenerating region to introduce it into the heat exchanger, and introducing the other portion thereof as one portion of material water through the preheating region into the desalting portion. 2. 5. 78 as 053196(7pp51).

KURS ★ D15 91961B/51 ★ J5 4145-380
Fluid treating device using hollow yarn membranes - which are held in bundles in holes of pipe plate by bolted retaining plate
KURARAY KK 02.05.78-JA-053512
J01 (13.11.79) B01d-13

A device for treating a fluid using hollow yarn membranes, comprises a pipe plate having holes for receiving bundles of hollow yarns, forming membranes. The object is to easily replace the bundle without reducing the area of membrane per unit volume. The holes are arranged so that any three adjacent holes are located on three edges of a regular triangle in pattern over the pipe plate.

The bundle is inserted into each hole and retained with a retaining plate, which is fixed to the pipe plate through a packing, using a nut engaged over a stud bolt of the plate. The plate has three arched edges for retaining three adjacent bundle fixtures of the bundles. 2. 5. 78 as 053512(3pp)

TOKU ★ D15 91962B/51 ★ J5 4145-382
Purificn. of crude aq. solns. contg. ammonium chloride - by low exchange type electrodialysis with addn. of ammonium (bi)carbonate and heating

TOKUYAMA SODA KK 02.05.78-JA-052344
B05 E19 J03 (13.11.79) B01d-13/02 C02b-01/82

In purificn. of crude soln. by ion exchange membrane type electrodialysis, the improvement comprises adding a ammonium carbonate or ammonium hydrogen carbonate salt which is easily heatdecomposed and heat-gasified to the crude aq. soln., electrodialysing the resulting soln., and heating it to obtain a purified soln.

In an example, 1.5×10^{-2} mol. ammonium carbonate was added to an aq. soln. contg. 1.98 mol. glycin and 3.4×10^{-3} mol. ammonium chloride. The resulting soln. was electrodialysed at 1.5 amp/dm² for 20 minutes to obtain an aq. soln. contg. 1.97 mol. glycin, 2.3×10^{-4} mol. ammonium chloride, and 2×10^{-3} mol. ammonium carbonate. The obtd. soln. was heated crystallised, and dried to produce glycin of above 99% purification.

Method is applied to crude solutions of amino acid, sea water, or a crude glycin soln. contg. ammonium chloride produced by reaction of ammonia with monochloroacetate. 2. 5. 78 as 052344(5pp51)

HOKU- ★ D15 91969B/51 ★ J5 4145-389
Adsorbent for anions present in waste water - is prepd. by reacting mixt. of basic resin monomer and metal-titanic acid in presence of acidic catalyst

HOKUETSU TANSO KOGY (AGEN) 04.05.78-JA-053909
J01 (13.11.79) B01d-15

The adsorbent is produced by mixing meta-tinic acid with a monomer of a basic resin and reacting the mixt. in the presence of an acidic catalyst to produce the adsorbing agent consisting of meta-titanic acid bonded with the basic resin. The monomer is aniline, meta-phenylenediamine, meta-toluidine, toluelenediamine, pyridine, melamine, ethylenediamine, or dicyandiamine. The acidic catalyst is HCl or H₂SO₄.

In an example, 135g of a slurry of 33% of meta-titanic acid, 20ml of aniline, 15ml of conc. hydrochloric acid, 20ml of water, and 40ml of 40% formalin were mixed at 80°C to obtain a solid substance, the formaline being used as cross-linking agent. The substance was divided to 8-30 mesh, and heated at 160°C for 8 hours to produce a particle type adsorbing agent. The agent was packed in a column of 12mm. dia. The sodium phosphate soln. of 50ppm

of PO₄³⁻ was passed through the packed column to remove PO₄³⁻ from the soln. 4. 5. 78 as 053909(5pp51)

UNIC D15 30923Y/18 = J7 9038-8
Removing phosphates from effluent by the activated sludge process - with countercurrent extn. of the phosphate contg. sludge
UNION CARBIDE CORP 28.10.75-US-626459
(24.11.79) *BE-847-702 C02c-01/06

In process the waste water is mixed with the activated sludge and an O₂ contg. gas in an aeration zone for a sufficient time to both lower the biological oxygen demand (BOD) and for the microorganisms in the sludge to absorb the phosphates. The purified water is then sepd. and the sludge contg. the phosphates is passed to an extn. zone where (most of) the sludge is maintained in an aerobic state.

The sludge is extracted countercurrently for 2-10 hrs by introducing into the lower part of the zone an extracting liq. of low phosphate and solids content (not exceeding 200 mg/l). From the top of the zone a liq. enriched in phosphates is withdrawn and from the bottom the extracted sludge is withdrawn and (part of) this is recycled to the aeration zone. The flow rate of extracting liq. is 0.7-2 times the rate of withdrawal of the liq. enriched in phosphates.

A further process comprises using a gas contg. ≥ 50% O₂ in the aeration zone to establish a dissolved O₂ content of ≥ 2 ppm. the aeration zone comprising several sub-zones.

Process provides better extn. of phosphates from both the activated sludge and the waste water c.f. prior art processes. 27. 10. 76 as 128413 (clg. 28. 10. 75-US-626459) C02c-1/06 (24. 11. 79) UNION CARBIDE CORP. (22pp) (J5 2055258)

KYOY D15 77294W/47 = J7 9038-99
Regeneration of active carbon - esp. from waste water purification using electrical resistance heating

KYORITSU YUKI KOGYO 05.09.74-JA-102291

J04 + Q77 R59 (24.11.79) *DT2510-366 B01d-15/06 C01b-31/06 F27d-11/04 H05b-03/60

In the regeneration by heating of active carbon used for cleaning contaminated liqs. the spent carbon particles are introduced into the space between electrodes arranged at a distance from each other and an electric current is passed between the electrodes via the particles. The particles are thereby heated and regenerated, partic. as a result of the heat evolved due to the electrical resistance of the particles themselves and of the contact resistance between particles. No steam or fuel gas is required.

Loss of active carbon by attrition is reduced by the use of a stationary (as opposed to a fluidised) bed. The cost of the installation is relatively low. The temp. profile in the bed can be easily controlled. Direct current, single-phase or three-phase alternating current can be used, and the plant can work continuously or discontinuously. A homogeneous prod. is obtd. 5. 9. 74 as 102291, C01b-31/08, H05b-3/60, B01d-15/06, F27d-11/04 (24. 11. 79) KYORITSU YUKI KOGYO (-pp) (J5 1029737)

KYOY D15 /47 = J7 9038-99
Regeneration of active carbon - esp. from waste water purification using electrical resistance heating

KYORITSU YUKI KOGYO 13.11.74-JA-130002

J04 + Q77 R59 (24.11.79) *DT2510-366 C01b-31/08 F27d-11/04 H05b-03/60

In the regeneration by heating of active carbon used for cleaning contaminated liqs. the spent carbon particles are introduced into the space between electrodes arranged at a distance from each other and an electric current is passed between the electrodes via the particles.

The particles are thereby heated and regenerated partic. as a result of the heat evolved due to the electrical resistance of the particles themselves and of the contact resistance between particles. No steam or fuel gas is required.

Loss of active carbon by attrition is reduced by the use of a stationary (as opposed to a fluidised) bed. The cost of the installation is relatively low. The temp. profile in the bed can be easily controlled. Direct current can be used, and the plant can work continuously or discontinuously. A homogeneous prod. is obtd. 13. 11. 74 as 130002, C01b-31/08, H05b-3/60, F27d-11/04 (24. 11. 79) KYORITSU

YUKI KOGYO (3pp) (J5 1056039)

CIL D15 64017W/39 = J7 9039-066
Oil removal from oil-in-water emulsions - by passage through a fibrous mass contg oleophilic, hydrophobic particles
IMPERIAL CHEM INDS LTD 11.10.74-GB-044078 (11.03.74-GB-010687)
H03 J01 + Q42 (26.11.79) *BE-826-563 B01d-17/04

Oil is removed from O/W emulsions by passing the emulsion through a fibrous mass in which the external surface of the fibres is penetrated by finely divided particles with oleophilic and hydrophobic properties, and recovering the oil droplets formed by coalescence. The process is esp. useful for removing oil from emulsions formed during the cleaning of marine and other oil tankers, oil cooling circuits etc.

The fibres can be (a) homogeneous, with the oleophilic particles adhering to and penetrating into the surface, (b) homogeneous fibres with a coating of a non-fibre-forming polymer or resin to which the oleophilic particles adhere, or (c) conjugate fibres comprising 2 components, the component with the lower m.p. forming a sheath around the other component.

The fibrous mass can be a knitted, woven or non-woven fabric, esp. comprising spot- or zone-bonded short staple fibres or oriented conjugate fibres. The oleophilic particles are esp. of silica surface-treated with silane, they prefer an av. particle size of $\geq 0.1 \mu$. 11.3.75 as 028724 (clg. 11.3.74-GB-010687) B01d-17/04 (26.11.79) IMPERIAL CHEM. INDS. LTD. (5pp) (J5 1004861)

MINA- ★ D15 92163B/51 ★ J7 9039-299
Granulating fowl droppings - by mixing with (dried) pulp waste as binder and sulphuric acid before granulating
MINAMI KYUSHU KAGAK 15.02.74-JA-017529
(27.11.79) C05f-03 C05g-03

Fowl droppings are mixed with (dried) pulp waste material and sulphuric acid, and is then shaped into granules. The pulp waste acts as binder. 15.2.74 as 017529, C05f-3/00, C05g-3/00 (27.11.79) MINAMI KYUSHU KAGAKU KOGYO KK (2pp22) (J5 0110862)

SEKI D15 46902X/25 = J7 9039-301
Fertiliser of slow acting type - comprising plant matter compost-urea formaldehyde condensate and cell bodies of *Aspergillus* or *Penicillium* organisms
SEKISUI CHEMI IND KK 18.10.74-JA-120662
A97 C04 (A21) (27.11.79) *J51051-464 C05c-09/02 C05f-11/08 C05g-01 C12k-01

Slow-acting fertiliser consists of plant matter compost, urea-formaldehyde condensate, and the cell body or the enzyme isolated from the cell body of organisms belonging to *Aspergillus* and/or *Penicillium* which has the ability to decompose-urea-formaldehyde condensate.

The plant matter compost has large capacity for holding moisture, higher base-substitution capacity, and adsorbing power of cations, is effective to prevent deficiency of trace elements because it contains these elements (Bo, Mo, Cu, etc) necessary for growth of plants, is erosion source for soil necessary to hold nutrient sources for plants has excellent buffer action against acidity of soil and toxic components, etc. The compost acts synergistically with ammonium nitrogen produced by decompsn. of the urea-formaldehyde condensate, and thus the fertiliser has excellent effect. 18.10.74 as 120662, C05g-1/00, C12k-1/00, C05c-9/02, C05f-11/08 (27.11.79) SEKISUI CHEMICAL KK (6pp) (J5 1051464)

ELEC- ★ D15 B/51 ★ RU --63-520
Carbon dioxide source for autosiphons - in which intermediate capsule feeder head has threaded applicator
ELECTROMETAL INTR 19.07.71-RU-067714
(15.09.78) C02d-01/08

SANT- ★ D15 B/51 ★ RU --65-070
Separation of hydrocarbons from dyke water - by rapid demulsification in vibrator mounted at bottom of central tube carrying truncated cone blades
SANTIERUL NAVAL 17.12.74-RU-080815
J01 (30.01.79) C02c-01

INGR- ★ D15 B/51 ★ RU --65-071
Purificn. of waste water contg. urea - in which efficiency of heated reactor is increased by introduction of activated carbon to absorb the enzymes
COMB INGRASAMINTE 03.08.76-RU-087198
E16 (17.07.78) C02c-05/02

BABE- ★ D15 B/51 ★ RU --65-220
Ion-selective electrolysis membrane prodn. - by using silver salts, pressing and selective electrolytic treatment
BABES-BOLYAI UNIV 23.04.74-RU-078530
J03 R16 (25.10.78) G01n-27/40

ATAF- ★ D15 B/51 ★ RU --66-777
Industrial water alkalinity reduction - by bubbling carbon dioxide at high pH
INTR ATA SI FILATUR 03.01.75-RU-081031
(30.10.78) C02c-05

WHIT/ ★ D15 92220B/51 ★ RD -188-028
Treating waste water contg. sequestered heavy metal ions - by adding aluminium ions to ppte. the heavy metal
WHITE W W 20.11.79-RD-188028
J01 (10.12.79) C02c-00/*

An aq. soln. contg. a complex of a heavy metal and a sequestering agent is treated with Al (III) ions to free the heavy metal from the complex and form a ppte. which can be removed from the soln.

Industrial waste water contg. sequestering agents can be treated to remove heavy metals, so that it can be recycled or safely discharged to the environment. If desired, the heavy metal can be recovered from the ppte. (558)

AMPO= ★ D15 92242B/51 ★ SU -654-684
Evaluation of water or food decontamination efficiency - by presence or absence of guanidine dependent virus strain in tissue culture inoculated with infected and treated sample
A MED POLIOMYEL VIR 23.02.77-SU-459877
(30.03.79) C12k-01

The efficiency of decontamination of drinking water, food prods. aq. effluents etc. which may be infected with intestinal virus strain is evaluated by infecting test sample with guanidine dependent intestinal virus strain passing the infected sample through the decontamination system under investigation followed by culturing of resulting prod. sample in presence of guanidine hydrochloride using tissue culture medium.

The presence of the selected virus strain in the tissue culture indicates the defective decontamination system. The method is very accurate, e.g. in domestic aq. effluent purification etc.

Kazantseva V.A., Drozdov S.G., Shirman G.A., Bul. 12/30.3.79 23.2.77 as 459877 (3pp938)

CIBA D15 00007Y/01 = SU -655-302
Purificn. of industrial waste water contg. organic impurities - by contacting with adsorbent polymer material in solvated gel state
CIBA GEIGY AG 17.06.75-CH-007846
A88 F06 (28.02.79) *BE-843-000 C02c-05/02

Purificn. of industrial waste-waters, esp. from the textile, paper, leather and dye industries, is effected by contacting the water with an adsorbant polymer material in a solvated gel state.

Effects rapid, efficient purification of a wide range of industrial waste-waters. Practically 100% of the impurities can be eliminated. The treated water can be recycled. A wide range of adsorbant polymers can be used. The treatment also removes anionic, cationic and nonionic surfactants.

Purificn. is effected at 0-100 esp. 10-70°C, using a fixed bed process. The polymer material pref. consists of a hydrated gel of a polymer having a mol. wt. 500 and a specific surface 30 m²/g. The polymer is pref. a synthetic thermoplast in the form of spun fibres having a thickness of 0.2-20 denier. The fibres are combined to form a cable cut into pieces having a length of 1-10mm, or converted into a sheet. The thermoplast is pref. a polyamide, an anionically modified polyamide, a linear-polyester, a linear polyester modified with an acid, or esp. an acrylonitrile (co)polymer.

Schaidegger L.K.H., Haaze Y., Bul. 12/30.3.79 16.6.76 as 371699 (2pp)

DAIR= ★ D15 92278B/51 ★SU-655-399
Cellulose acetate filter material for filtration of liquids - is prepd. by deposition from di:ethylene-glycol mono:ethyl ether soln. contg. acetone

DAIRY IND RES INST (ASPH=) 18.08.76-SU-411651
A88 J01 (A11) (08.04.79) B01d-13/04 C081-01/12

Prepn. of cellulose acetate filter material for hyper-filtration techniques (e.g. ultra filtration and reverse osmosis) is simplified technologically by incorporation of acetone into soln. for film deposition. The cellulose acetate film is cast from soln. contg. wt. ratio diethyleneglycol mono:ethyl ether (carbitol): acetone = 1:9-9:1 at soln. temp. 16-22°C (previously 90°C). This lowers process cost; e.g. 200 g soln. gives film area 1 m² with thickness 0.2 mm. Optimum compsn. is (%): cellulose acetate 10; carbitol 45; acetone 45. The material can be used in the dairy, food and water purificn. industries.

Abaturova N.A., Vlodavets I.N., Paramonova T.I. et al
Bul.13/5.4.79 18.8.76 as 411651 (3pp114)

TROI/ ★ D15 92306B/51 ★SU-655-650
Flocculant for decolourising natural waters - comprises alkylated polymers of methacrylic acid beta-aminoester(s)

TROITSKII 04.11.77-SU-539511

A97 (08.04.79) C02b-01/20

Natural water supplies are decolourised by treating with a flocculant comprising an alkylated (10-100%) methacrylic acid β -aminoester polymer, in a pref. amt. of 10-30 mg/l. A high degree of decolouration is achieved irrespective of colour, temp., turbidity etc.

Typical flocculants are poly-1, 3-dimethylamino- isopropyl-methacrylate alkylated (75%) with benzyl chloride, and poly- β -diethylamino-ethylmethacrylate alkylated (40%) with cetyl bromide.

Troitskii I.I., Korshak V.V., Tevlina A.S. Bul.13/5.4.79 4.11.77 as 539511 (3pp314)

TSPO= ★ D15 92307B/51 ★SU-655-651
Removing suspended impurities from water by flocculation - using water-soluble copolymer of glycerol 1,3 di:chlorohydrin and hexa:methylene-di:amine

TASHK POLY 09.11.77-SU-540864

A97 (08.04.79) C02b-01/20 C02c-05/02

Suspended matter can be removed from drinking and waste water by treating it with a water-soluble flocculating agent. An improved degree of purificn. can be achieved if the previous reagent, polyacrylamide, is replaced by a copolymer of 1,3-dichlorohydrin of glycerol and hexamethylene-diamine used in an amt. of 0.05-2.5 mg/l.

The polyacrylamide was not effective at pH less than 7 or in water contg. less than 1000 mg/l solids, whereas the improved reagent with clean water contg. 50-300,000 mg/l solids. The flocculating agent is added in the form of a 0.1-0.2% aq. soln., using doses of 0.25-0.8, 0.8-1.5 and 1.5-2.5 mg/l. respectively for water contg. solids in the concn. ranges 50-200, 200-1000 and 1000-300,000 mg/l respectively. The mixt. is stirred for 1 min. allowed to stand for 15 min. to settle, and the solids are removed by the usual methods.

Water contg. 450 mg/l solids was purified to a level of 20 mg/l., and that contg. 5800 mg/l to 8-12 mg/l compared to final levels of 50 and 20-30 mg/l respectively obtd. by the previous method.

Abdullaev T., Khakimova M.A., Edgarov N.N. et al.
Bul.13/5.4.79 9.11.77 as 540864 (2pp815)

WASU ★ D15 92308B/51 ★SU-655-652
Hydrogen sulphide removal from drainage or underground water - by oxidation with air in gravel bed in presence of ferric sulphate

WATER SUPPLY HYDROGEOL 28.06.77-SU-521406

J01 (05.04.79) C02b-01/28

Water intended for industrial or domestic drinking purposes can be obtd. from underground water or drainage water by removal of the dissolved hydrogen sulphide, using an oxidn. method with air in presence of divalent iron cpds. The process can be simplified and the cost reduced if the water is treated in a coarse gravel bed with bubbling of air through to increase the turbulence, the water being mixed with a 15 mg/l ferrous sulphate heptahydrate and passed upwards. The simplified method, compared to the prev-

ious method using a pressure of 4 atmos. and a temp. of 95-135°C results in a cost saving.

Ass G, Yu., Bul.13/5.4.79 28.6.77 as 521406 (4pp815)

AUCO= ★ D15 92309B/51 ★SU-655-653
Demineralisation of mine water by electrolysis at reduced cost - in acid medium at ion-exchange membrane without contamination of membrane by polyvalent ions

AS UKR COLLOID CHEM 14.07.77-SU-506586

J01 (J03) (08.04.79) C02b-01/82

Mine water can be demineralised at a reduced cost by electrolysis at 1 amp./dm² in a cathode chamber after acidification to a pH of 0.5-3 instead of carrying out the process at pH 8 as before. The process can continue for a long period without contamination of the ion-exchange membrane with ions, and it does not give a large amt. of highly mineralised waste. The need for preparatory purification of the water using a cationic or sulphonated coal filter is also eliminated. The modifications resulted in costs savings.

Pisaruk V.I., Penkalo I.I., Mukha S.I. et al. Bul.13/5.4.79 14.7.77 as 506586 (3pp815)

UPRI= ★ D15 92310B/51 ★SU-655-656
Treatment of zinc oxalate-contg. printing process effluents - by treatment with a mineral acid and precipitating oxalic acid for recovery and recycling

UKR PRINT IND RES 24.02.77-SU-457843

G05 (08.04.79) C02c-05/02

Aq. effluents from lithographic printing processes contg. Zn oxalate and HNO₃ are treated by filtering the Zn oxalate, heating it with a mineral acid at 70-90°C, cooling to 4-10°C and sepg. the resulting oxalic acid ppt. for recycle. The pref. mineral acids are HCl used in a wt. ratio of 230-290:100 with the Zn oxalate or H₂SO₄ used in a wt. ratio of 180-200:10 with the Zn oxalate.

The remaining Zn sulphate or chloride soln. may be passed for further processing.

Zdravko B.I., Starchenko Yu.V., Bul.13/5.4.79 24.2.77 as 457843 (3pp314)

MUTI/ ★ D15 92311B/51 ★SU-655-657
Removal of emulsified petroleum residues from waste water - by passage through a contact mass of degasified petroleum and coal particles

MUTIN FI 13.07.77-SU-507184

H01 (08.04.79) C02c-05/02

Petroleum emulsions can be sepd. from wastes by passing the waste through degasified petroleum. The degree of purificn. can be increased from a residual petroleum concn. of > 8mg/l to < 4 mg/l if the degasified petroleum is mixed with a solid coalescing agent, such as coal particles. The method increases the path length, passage time and area of contact of the waste, and the petroleum emulsion adheres to the coal particles until a critical layer thickness is reached. The process removes both coarse and fine particles.

Mutin F.I., Krasnovokin V.N., Yastrebov P.I., et al.
Bul.13/5.4.79 13.7.77 as 507184 (2pp815)

VOLG= ★ D15 92312B/51 ★SU-655-658
Purificn. of wastes from prodn. of synthetic fatty acids - by treatment with activated sludge contg. Bacillus, Bacterium, Plano:coccus and Plano:sarcina microorganisms

VOLGODONSK BR SURFA 14.04.77-SU-473137

E17 (08.04.79) C02c-05/10

Aq. waste from prodn. of synthetic fatty acids can be purified by treatment with an activated sludge contg. Bacillus and Bacterium microorganisms. The degree of oxidn. of the fatty acids can be increased and the efficiency of the process improved if Planococcus and Planosarcina microorganisms are also added, at a concn. of 7-15 g/l. The oxidising power of the sludge is raised from 950 g/m³ (suitable for waste having BOD < 650 mg/l and COD mg/l.) to 6526g/m³ which can deal with wastes having BOD 4000-5000 and COD 5000 mg/l.

Grishchenko S.V., Vanifateva M.T., Matsarenko V.A. et al. Bul.13/5.4.79 14.4.77 as 473137 (4pp815)

REZC/★ D15 92425B/51 ★SU-655-965
 Organic carbon determination in water - by subjecting sample to electric discharge to convert it to methane and analysing chromatographically
 REZCHIKOV V G 13.06.76-SU-401372
 J04 R16 (09.04.79) G01n-31
 Method for determining an organic carbon in aq. soln. involves converting samples of the soln. into a methane-contg. mixt. and analysing the methane, according to the amt. of which the content of organic carbon is determined. Now the accuracy of the measurement is increased and the method is simplified, by carrying out the conversion in an inert atmos. by an electrical discharge. A reaction chamber is located on the gas line, and once the chamber has been purged it is cut off by the valves. The water sample is introduced to the 'wine-glass' in the top of one of the metal electrodes. The electrical discharge from the generator is passed through. The prods. of pyrolysis are blown through, using gas in the line, so they enter the chromatograph.
 Rezchikov V.G., Kuznetsova T.S., Bul. 13/5. 4. 79
 B. 9. 76 as 401372 (4pp29)

COKE D15 65377W/39 =SU-656-473
 Combined ultrafiltration-dialysis cell - with oppositely charged-ion-permeable and semi permeable membranes
 COCA-COLA CO (AQAC) 13.09.74-US-505563
 A88 J01 + Q21 (D13) (05.04.79) *US3905-886 B01d-13/02
 Combined ultrafiltration/electrodialysis cell comprises an array of semi-permeable membranes sepd. by ion permeable membranes, alternate ones of these being permeable to ions of opposite polarity, and electrodes at the cell ends. Pref. ultrafiltration membranes are anisotropic microporous polyvinyl formal membranes. Specif. there are (3n+1) membranes (n=1-10), n-1, 4, 7.... being permeable to ions of one charge, n = 2, 5, 8.... being semi-permeable, and n = 3, 6, 9.... being permeable to ions of the opposite charge. Uses include sepn. of cheese whey, for protein concn. and removal of ash, treating waste streams from paper processing plant, demineralising of sea water etc. three separate process streams are obtd. a concd. demineralised feed, a demineralised permeate, and an ionic waste concentrate. The ion permeable membranes are protected from attack by charged materials such as proteins.
 Wang D.G.J., Bul. 13/5. 4. 79 6. 6. 75 as 147447 (3pp)

BRPE D15 67654W/41 =SU-656-552
 Determin. of total carbon in aq. solns. contg. (in org. cpds. - by conversion of carbon to carbon dioxide which is ad-or ab-sorbed and determnd.
 BRITISH PETROLEUM LTD 22.03.74-GB-012792
 A89 J04 R16 (05.04.79) *DT2512-554 C01b-31 + G01n-07/18
 Total C is determined in aq. solns. contg. organic cpds. and/or inorganic carbonates, opt. with other inorganic salts by (a) mixing the soln. at room temp. with a solid reactant which at higher temp. displaces CO₂ from inorganic carbonates, (b) contacting the mixt. with O₂ at increased temp. when CO₂ is formed by oxidn. of organic cpds. and displaced from any inorganic carbonates present (c) drying the CO₂ (d) collecting the CO₂ by passing the gaseous mixt. through a column packed with absorbent or adsorbent which prevents passage of CO₂ (e) displacing O₂ from the ab- or ad-sorbent by passage of an inert gas (f) eluting CO₂ by raising the temp. and passing inert gas in the opposite direction, and (g) quantitatively measuring the CO₂. The method can be applied to aq. media contg. non-volatiles, polymers cpds., of high mol. wt. and high bp. pt., or a high concn. of inorganic matl. The appts. which is claimed, can be operated manually or automatically. Total C in amt. of 10-1000 ug/ml can be determnd.
 Northmore B.R., Saunders K.J., Vay D.C., Bul. 13/5. 4. 79 21. 3. 75 as 120511 (9pp)

HALA/★ D15 92431B/51 ★SU-656-572
 Electrical flotation equipment for purifying animal manure - has two connected chambers, with iron and aluminium electrodes, which coagulate and float impurities
 BALANDIN E M 10.11.75-SU-188056
 P11 (18.04.79) A01c-03

Electrical flotation equipment, primarily for cleaning manure from stock-breeding farms, comprises two interconnected chambers with metal electrodes disposed inside them. The purificn. efficiency is increased, by making the electrodes in the first chamber from iron and in the second chamber from aluminium. In the first chamber the ratio of the area of the electrodes to its vol. is 1.0-1.5 and in the other chamber this ratio is 0.1-0.2.
 Balandin E. M., Smirnov O. P., Bul. 14/15. 4. 79 10. 11. 75 as 188056 (2pp29)

ROEC=★ D15 92447B/51 ★SU-656-641
 Automatic electrical control of sump filters - using time relays and magnetic actuators to regulate filtration rate according to set conditions
 ROST ECONOMICS ACAD 06.10.76-SU-410579
 J01 (16.04.79) B01d-37/04

Device for automatic control of the filtrate speed of sump filters, during the cleaning of water in agricultural water-supply systems, comprises general and individual circuits to supply magnetic starters for the gate valves, located in the off-take pipelines, through which the filtrate leaves and float relays for the levels located in each of the filters.

Construction is simplified and reliability increased by providing the appts. with pulses generator, with the level float relay connected through the individual circuits to the magnetic starters, and through the general circuit to the pulses generator.
 Merzlenko S. V., Bul. 14/15. 4. 79 6. 10. 76 as 410579 (2pp 29)

NHYD=★ D15 92463B/51 ★SU-656-666
 Hydrocyclone for clarifying aq. effluents and sewage - has central vortex-generating inlet to conical working chamber and cylindrical overflow tray with tangential outlet
 N HYDROTECH MELIORA 29.02.72-SU-754259 (29.02.72-SU-017475)
 P41 (18.04.79) B04c-05

The efficiency of sepg. large solid particles from the liq. processed by hydraulic cyclone for clarifying aq. effluents and sewage is improved by redn. of the velocity of the clarified liquid flowing to its discharge in comparison with the velocity of the stream descending to the sand nozzle.

The inlet nozzle through which the initial suspension is fed under overpressure, or without it, is mounted vertically in the axis of the lid of the overflow tray of the working conical chamber. The feeding nozzle contains any type of swirling device, e.g. swirl vanes, tangential outlet, etc. From the revolving stream of liquid, the largest solid particles descend spirally along the conical walls to the discharge nozzle, smaller size particles are pushed downward by the stream of liquid ejected from the feeding nozzle. The clarified liquid flows into the cylindrical overflow tray at the top of the conical chamber and is discharged by its tangential outlet.

Begunov P. P., Bul. 14/15. 4. 79 29. 2. 72 as 754259 (3pp 135)

MOSK ★ D15 92464B/51 ★SU-656-667
 Hydrocyclone for clarification and condensation of suspensions - has cylindrical working chamber with coaxial discharge tube and adjustable outlet openings
 MOSCOW CHEM EQUIP INST 25.04.77-SU-478084
 J01 P41 (18.04.79) B04c-11

The efficiency of clarification and condensation of suspensions or classification of granular materials in the hydraulic cyclone used in chemical, ore dressing, pulp- and paper, and other industries, is improved by smooth and fine adjustment of the streams being discharged.

The cylindrical chamber of the cyclone with tangential inlet tube at its top contains coaxial tube with central openings for the discharge of the clarified fraction, whose size is adjusted by a piston movable in the tube. The size of the slot-openings for the condensed fraction, situated at the bottom of the chamber, is adjusted by bushing movable on the outer wall of the chamber. This arrangement secures the presence of only a single revolving stream in the chamber and adjustment of the vol. of outgoing streams which considerably increases the efficiency of the sepn. process.

Ternovkii I.G., Kutepov A.M., Lagutkin M.G., Bul. 14/
15.4.79 25.4.77 as 478084 (2pp135)

CANN- ★ D15 92531B/51 ★ US 4177-575
Drying and pelletising sewage - by passing it, with hot air, through rotating louvered drum with adjustable length central pelletising section

CANNON LTD 30.10.78-US-956139 (19.09.77-US-834735)

C04 Q76 (11.12.79) F26b-03/04

Sewage is pelletised by feeding it into a rotating louvered drum with spaced longitudinal louvres and a central pelletising section, passing air at 500-800°F. through the inlet section louvres and through the drum at 200-400 ft./min., and passing cooling air through the outlet section louvres.

In the central section the louvres are closed to form a cylindrical rolling surface. The starting material is pref. pre-dried to a moisture content of 15%, the heating air is at 550°F. cooling is with ambient air, and the prod. has a moisture content of <10%. The louvres are pref. closed by rows of hinged baffles or by telescoping cylinders. A similar system is claimed in the parent patent. 30.10.78 as 956139 Div.ex. 4137029 (13pp1358)

ITIL- D15 67326A/38 = US 4177-748
Propulsion unit anchoring plate - with floats and heating anchors for ice floe underside

ITI LIMITED (ITIL-) 08.03.77-FR-006704

Q24 (11.12.79) *DT2809-124 +B63h-23/32

Propulsion units can be attached to the flat bases of icebergs by a device which includes a flat flotation unit having buoyancy chambers, the propulsion unit being attachable to the lower part of the flotation chamber, and the flotation unit also having heated hollow right prisms on its upper part which in use penetrate the base of the iceberg and become embedded.

The prism walls are grooved to allow escape of iceberg water when the prisms are penetrating, and have openings for the escape of sea-water.

In use sea water is pref. expelled from the buoyancy chambers by a pyrotechnic gas generator. 8.3.78 as 884405 (5pp1376)

RHON D15 74153Y/42 = US 4178-221
Water soluble, high mol. wt. acrylic (co)polymers - prepd. by photopolymerisation, used in treatment of water

RHONE-POULENC INDUSTRIES 14.04.76-FR-011634

A14 (A97) (11.12.79) *BE-853-559 C08f-02/46 C08f-04

Water-soluble acrylic polymers are prepd. by (a) continuously depositing on a support a thin layer of a dissolved oxygen-free aq. soln. comprising acrylic monomer and a photopolymerisation initiator; (b) subjecting the thin liquid layer to a first radiation stage comprising exposure to radiation of wavelength 300-450 mμ and of average power 20-300 W/m.² for 1-20 mins. in an O₂-free gaseous atmosphere while cooling the support to remove the heat of reaction; (c) maintaining the cooled support in the atmosphere while subjecting it to a second radiation stage comprising exposure to radiation of wavelengths 300-450 mμ and of average power 300-2000 W/m.² for 1-20 mins., and (d) detaching the resultant partially solidified layer from the support.

The polymers have a high mol. wt. and a high intrinsic viscosity (esp. >14 dl./g.), and are monomer-free. They are useful for flocculating and thickening purposes partic. in water purification and treatment. 11.4.77 as 786659 (6pp990)

UNIC D15 58980X/31 = US 4178-239
Sewage water treatment

UNION CARBIDE CORP (GRAC) 13.11.74-US-523223

(11.12.79) *J51070-965 C02c-01/06 +C02b-01/38

In the secondary treatment of aq. sewage containing (non-)biodegradable materials by contacting the sewage with O₂-contg. gas in the presence of aerobic microorganisms, the improvement comprises contacting the sewage with an ozone-contg. gas to convert the non-biodegradable material to biodegradable material. Pref. a subsequent tertiary treatment is effected with ozone to destroy the microorganisms.

A waste water with low toxicity level and high DO concn.

is produced by the ozone treatment. The ozone produces fully or partially oxidised organics and oxygen. The secondary treatment is made more efficient by the ozone pre-treatment. 13.11.74 as 523223 (6pp924)

AMMI- ★ D15 92622B/51 ★ US 4178-243
Dewatering aq. slurry of fine particles - esp. tailings from coal washing plant, with solids discharge controlled by signal proportional to attenuation of radiation beam

AMERICAN MINECHEM 15.03.78-US-886709 (10.11.75-US-630214)

J01 (11.12.79) B01d-21/*C02b-01/20

A method of dewatering an aq. slurry of fine solid particles comprises adding to the slurry a flocculant lyophobic to water and lyophilic to fine solid particles. The mixt. is charged to a thickener to separate water from the mixture by settling flocculated solids to form a mixt. having solids content ≥35%.

A radiation beam is passed across the flow of flocculated solids and the emergent beam is detected. An electrical signal is produced proportional to the beam intensity and this is used to regulate the discharge of the flocculated solids. The discharged solids are passed through a foraminous conduit while being vibrated to remove water.

The method is used for dewatering the tailings from a coal washing plant. 15.3.78 as 886709 (10pp295)

HITA D15 48130W/29 = US 4178-245
Continuous filtration appts for sewage - with air bubble injection to prevent clogging

HITACHI KK 12.10.73-JA-113950

J01 (11.12.79) *FR2247-270 +B01d-23/24

Sewage is filtered by passing the sewage through a stationary filter and simultaneously passing a gas bubble stream across the upstream side of the filter to vibrate the filter due to the pressure changes to dislodge the filtered solids. A shelter spaced closely from the filter ensures that the gas bubbles remain adjacent the filter.

Pref. gas bubbles are also passed along the other side of the filter. Sewage is continuous, no stoppages being required for cleaning. 11.10.74 as 514129 (6pp1376)

ISHI- D15 47396B/26 = US 4178-251
Sewage sludge dewatering filter press - with endless belts pressed on drum by graduated V/belt sets

ISHIGAKI KIKO 20.12.77-JA-153719

+P71 (11.12.79) *DT2850-771 B01d-33/04

Sludge is dehydrated in appts. which has two endless belts trained around rollers, the sludge being fed to between the endless belts; a drum around which the belts are caused to travel during part of their paths; a pressure belt trained on rollers which presses both the endless belts against the drum, the pressure belt being formed of non-overlapping strips which are perpendicular to the movement of the endless belts.

The drum is pref. of porous plate of punching metal form. 21.8.78 as 935696 (15pp1376)

AGEN D15 75175A/42 = US 4178-265
Oil solidifying agent prepn. - by carboxymethylating a yeast and adding viscosity increasing agent, water soluble metal salt and water, for oil pollution at sea

AGENCY OF IND SCI TECH 24.02.77-JA-019440

H03 (11.12.79) *J53103-986 +B01d-17/02 B01j-13 C02b-01/20

Oil coagulant comprises 100 pts. wt. of a carboxymethyl yeast mixed with 10-150 pts. wt. of a polyvalent metal salt of ≥1 carboxylic acid selected from 8-22C fatty acids and 8-22C alicyclic carboxylic acids.

The yeast is esp. of the species *Saccharomyces cerevisiae*, *Torula utilis*, *Candida utilis* or *Candida lipolytica*. The higher fatty acid is esp. stearic acid. The alicyclic carboxylic acid is esp. a naphthaneic acid or a rosin acid. The metal is esp. Al.

The oil coagulant is very effective and used for treating oil spills in seas, rivers, lakes, harbours, swamps etc. 22.2.78 as 880278 (7pp997)

OLIN ★ D15 92669B/51 ★ US 4178-347
 Simultaneous prodn. of phosphoric acid and sodium silico-fluoride - by diluting with conc. sulphuric acid and scrubbing with phosphoric acid soln. contg. fluosilicic acid
 OLIN CORP 17.05.78-US-906889
 C04 E36 (11.12.79) C01b-25/22
 Process for recovering F and Si values from a waste-water stream produced in a wet-process phosphoric acid process comprises diluting H_2SO_4 with waste-water stream and producing an SiF_4 -contg. gas which is scrubbed with H_3PO_4 to produce a H_3PO_4 soln. contg. fluosilicic acid, which is recycled back to the wet process H_3PO_4 process. Na_2CO_3 is then reacted with the phosphoric acid soln. to opte. solid Na_2SiF_6 , which is then sepd.
 Wet process H_3PO_4 and Na_2SiF_6 are prepd. simultaneously with recycling of waste-water streams, e.g. gypsum pond water, to recover P_2O_5 , fluoride and silica values and thus reduce pollution. 17.5.78 as 906889 (4pp957)

CIBA D15 34475Y/20 = US 4178-438
 Purification of waste water with cellulose derivs. - cationically modified with methanolamide gps.
 CIBA GEIGY AG 14.11.75-CH-014798
 A91 F09 (A11 F06) (11.12.79) *BE-848-255 + B01d-39 C08b-15/06

Cationically modified cellulose material contains 0.4 wt. % of basic N and has a cationic constituent derived from a basic amide cpd. of formula $R_1R_2N-Q-CO-N(Y)-CH_2-OR$. In the formula, R is H or 1-4C alkyl. R_1 and R_2 are each H, lower alkyl opt. substd. by halogen, OH, lower alkoxy, or CN, or cycloalkyl or benzyl, or R_1 and R_2 together with the N atom which links them form a 5- or 6-membered heterocyclic gp. Q is alkylene or alkyl-substd. alkylene each with $\leq 8C$. Y is H, lower alkyl or $-CH_2OR$.

Alternatively the cationic constituent may be derived from certain quat. ammonium cpds. The modified cellulose material is useful for purification of industrial effluents, esp. for decolourising effluents from the textile, paper, leather and dyestuffs industries. Rapid purification is achieved by contacting the effluent with the material.
 1.9.78 as 941823 (+10.11.76-US-740586) (15pp927)

USDC D15 36982B/19 = WP 7901-083
 Flow through counter current chromatography appts. - has gravimetric sepn. device for eluting sepd. phases from rotating helical column

US SEC OF COMMERCE (USSH) 17.05.78-US-906868
 J01 K06 (13.12.79) *US4151-089 B01d-15/08
 D/S: N(JA) + E(CH, DT, FR, GB, SW).

Flow-through countercurrent chromatography apparatus includes an axially rotatable helical column with a series

of coil elements. A first phase feed conduit is connected near the tail end, and a second phase feed conduit is connected near the head end of the column.

First and second phase collection conduits are connected at the head and tail ends respectively. The first collection conduit has a gravimetric phase separator with an output conduit for eluting a selected phase separated according to relative density.

The apparatus is for laboratory or industrial use, esp. in nuclear fuel reprocessing and eliminating water pollution.

Continuous-flow extraction is provided.

17.5.79 as US0343 (18pp1312)

(E)ISR: US2029690; US3775309; US4028056; US4058460; US4051025; 1 Journal Reference.

STAHL/ D15 86284B/48 = WP 7901-095
 Aerobic sewage treatment - in tank with revolving emerging hollow elements of specified shape

STAHLER T 22.05.78-DT-822347
 (13.12.79) *EP--5-553 C02c-01/10

D/S: N(DK, JA, MD, MW, SU, US) + E(CF, GA, KA, SN, TO, TS, ZR).

A device for the biological decomposition and aeration of sewage and sludge, esp. with a faecal content, is a horizontal semicylindrical tank with several sets of hollow elements attached to a revolving shaft by arms. When the arms are in the horizontal position, the hollow elements (pref. round or rectangular shape) have side walls but are open on top and bottom, with a partition in the middle. Within the top 90° of one complete revolution, the hollow elements emerge from the fluid into the open air.

This design ensures that sludge cannot remain lodged in the hollow elements and undergo an anaerobic fermentation. There is a constant renewal of the air in the hollow elements to contact the mat of biogenic matter in them.

19.5.79 as DT0050. (17pp39).

(G) ISR: DT2615465; DS1184286; DS1815001; DS-159044; US3837492; FR1320157; DT2544177.

BRPE ★ D15 92751B/51 ★ ZA 7800-489
 Removal of actinide metals from soln. - using reaction prod. of solid having surface hydroxy gps. with a silane cpd.

BRITISH PETROLEUM LTD 08.12.77-GB-051062
 E33 J01 (E11) (26.07.79) C01a-43

See Also

D18 SU 655675

D22 US 4178375

D16: FERMENTATION INDUSTRY

SHIONO ★ D16 91140B/51 ★ BE-878-149
 Antibiotic K-41 for treatment of coccidiosis - has low toxicity and no resistant strains and may be added to feed or drinking water
 SHIONOGI KK 11.08.78-JA-098455
 B04 C03 (03.12.79) A61k C07g

Compsn. for treating coccidiosis in poultry contains 0.001-0.010 wt % of K-41 antibiotic or its salts. K-41 is a polyether produced by *Streptomyces hygroscopicus* (ATCC 31227, NCTERM-P 1342).

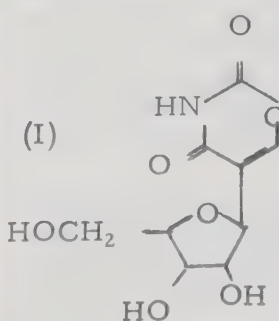
K-41 has the advantage that it has very low toxicity LD_{50} in mice is 47.4 mg/kg i.p. 506.6 mg/kg oral and > 1000 mg/kg s.c. and there are no resistant strains of *Cimeria* to K-41. K-41 is pref. administered in doses of 10-200 mg/kg, usually by addition of 0.001-0.05 wt % to poultry feed or by addn. of 0.005-0.03 wt % to drinking water. 8.8.79 as 878149 (15pp395)

SAN/ ★ D16 B/51 ★ BR 7802-872
 Refrigeration unit for plants for prodn. of alcohol from manioc
 DOS SANTOS A N 05.05.78-BR-002872
 Q75 (04.12.79) F25b-23

KAKE D16 22154S/13 = DS 2043-946
 Antibiotic minimycin preparation using - streptomyces culture
 KAKEN KAGAKU KK 05.09.69-JA-069949
 B03 (13.12.79) *DT2043-946 A61k-31/71 + C07d-265/10 C07h-07/06

Minimycin of formula (I) is new. It is produced by culturing a *Streptomyces* strain sp. 80432 (ATCC 21589) in aq. medium contg. assimilable C and N sources and inorganic salts, under aerobic condition and at $20-32^\circ C$, filtering the culture broth, and isolating pure (I) from the filtrate.

(I) is an antibiotic effective e.g. against *Staphylococcus aureus* and *E. coli*. It is useful against ascites, tumours and esp. ascites tumours and resistant tumours. 4.9.70 as 043946 (8pp997)



CGDA D16 02846T/02 = DS 2132-970
Automatic photometric identification of bacteria - eg by following the course of a colour reaction
CIE GEN AUTOMATISME 22.02.71-FR-005951 (02.07.70-FR-024562)
(13.12.79) *BE-769-112 + C12k-01/04

Bacteria are identified by photo-metrically measuring the development of reactions in a series of cells between a suspension of the bacteria and various chemicals, which differ from cell to cell.

The process comprises (a) measuring a first and second analogue signal representative of the optical density of the cell contents referred to first and second wavelengths characteristic of the development of reaction in the presence of the chemical substance, (b) prodg. a third signal from the first and second as a function of the development of reaction, and (c) coding the third signal referred to a range of coded variations, varying between two predetermined values, representing zero and total reaction development, so that the value of the third coded signal permits identification of the bacteria. 2.7.71 as 132970 (6pp913)

GBFB- D16 61639B/34 = DS 2805-823
Oil extn. by flooding with water - contg. glyco-lipid nonionic surfactants made by biosynthesis (NL 14.8.79)

GBF GES BIOTECH FOR 11.02.78-DT-805823

E13 H01 Q49 (13.12.79) *DT2805-823 E21b-43/22

Petroleum deposits and oil-sands are flushed using a dispersion of nonionic surface active materials in water. The flushing fluid is prepd. in a bioreactor using a culture of hydrocarbonutilising bacteria and contg. an organic C-swelling material. The pH is 2-9 and the reaction is carried out in the presence of air. The cell mass is sepd. in a second stage to give a dispersion of active materials, used in the flushing fluid.

In the initial stage, the active material formed is a glyco-lipid and is produced by the hydrocarbon-utilising bacteria from a hydrocarbon mixt. of 1-35 vol.%. The reaction temp. is 20-50°C and the pH is maintained constant at 3-9.

In the second stage the glycolipid formed is sepd. by temp. - or pH change or by extrn. The aq. phase contg. the dispersed glycolipide is used directly as flushing liq. or has flushing-water added. 11.2.78 as 805823 (11pp549)

SCHN/ ★ D16 91212B/51 ★DT 2823-320
Champagne lollipop - made by freezing sparkling wine with stick in bottle-shaped mould

SCHNEIDER U 29.05.78-DT-823320

(D13) (13.12.79) A23g-09 C12g-01/06

A champagne lollipop is produced by pouring a sparkling wine into a polyethylene mould and letting it freeze around a wooden stick. The frozen part has pref. the shape of a minute champagne bottle.

The inclusions of carbon dioxide bubbles make such a lollipop pleasant to lick. The stick is inserted at the bottle bottom which has a greater resistance to melting than the thin bottle neck. 29.5.78 as 823320 (10pp39)

LANG/ ★ D16 91224B/51 ★DT 2823-491
Yeasts prodn. from fluid animal dung mixts. - by adding biologically easily convertible nitrogen or carbon compounds

LANGENEGGER G 30.05.78-DT-823491

C03 (D13) (13.12.79) A23k-01 C12c-11/18

Nitrogen cpds. which are easily exploited biologically are added to masses of liq. and solid animal excreta in a more intensive process for the culture of yeasts providing valuable animal fodder. Alternatively, biologically, easily exploited organic cpds. such as molasses may be added during the culture. Both types of biologically, easily exploitable materials may be added to the substrate together.

Method overcomes the failings of existing conversion processes, the prods. of which have very little food value for the animals, and which need to be sterilised so that disease causing bacteria are not offered to them.

30.5.78 as 823491 (5pp1045)

EIRI/ ★ D16 91234B/51 ★DT 2823-959
Refuse conversion to compost - by storing in successive layers with intermittent stirring and ripening

EIRICH H 01.06.78-DT-823959

Q76 (13.12.79) C05f-09/02 F26b-03

A treatment (aeration, humidification, inoculation) of bulk material, esp. for turning refuse into compost, uses conveyors which spread the material in uniform layers to a certain height. The material is left undisturbed for a time to complete the reaction, followed by loosening it up throughout its height. This sequence is repeated until the desired ripeness is reached.

This prevents the formation of putrefactive foci and the emission of evil smells. The compost produced has a good quality and ripeness and can be produced at reasonable cost. 1.6.78 as 823959 (53pp39)

BOEF ★ D16 91310B/51 ★DT 2825-650
Serum thyroxine binding index diagnostic determination - using enzyme-labelled thyroxine and immobilised anti:thyroxine antibody

BOEHRINGER MANNHEIM GMBH 12.06.78-DT-825650

B04 R16 (13.12.79) G01n-33/16

In the determination of the serum thyroxine binding index (TBI), (A) the serum sample to be examined is treated with a certain amt. of thyroxine and a certain amt. of a determinable enzyme covalently bound to thyroxine, (B) the resulting soln. is contacted with antithyroxine antibodies in the solid phase, (C) the liq. is sepd. from the solid phase, and (D) the activity of the determinable enzyme is measured in one of the phases.

New test kit for carrying out the above procedure contains (a) thyroxine, (b) enzyme-labelled thyroxine, (c) antithyroxine antibody bound to a solid, (d) buffer, (e) reagent for determination of the enzyme activity, and, opt., (f) stabilising agents additives promoting immune reactions

Determination of TBI is used in the clinical diagnosis of thyroid disorders. Simple, reliable TBI determination uses equipment readily available in all laboratories. 12.6.78 as 825650 (14pp280)

SANO ★ D16 91346B/51 ★DT 2921-148
S 54832/A-type antibiotics produced by fermentation - of Micromonospora Globosa organism(s), useful as antibacterial agents and animal feed additive(s) NL 11.12.79)

SANDOZ-PATENT-GMBH 08.06.78-CH-006282

B04 C03 (D13) (13.12.79) A23k-01/17 A61k-35/74 C07g-17 C12d-09/22 C12k-03

Antibiotics S 54832/A-I, -II, -III and -IV are claimed. Also claimed is their prodn. by culturing a suitable microorganism, esp. the new strain Micromonospora globosa NRRL 11299 (ATCC 31465), in a nutrient medium.

The antibiotics are characterised by their physicochemical properties. All are pale-yellow amorphous powders with a m.pt. of > 310°C. Amino acid analysis shows that they all contain an amino acid with the same retention time as threonine (also alanine in the case of S 54832/A-IV).

The antibiotics have antibacterial activity against Gram positive bacteria, Mycoplasma spp. and Neisseria spp. (with MIC values ranging from ≤ 0.01 to 1 µg/ml). They can be used as medicaments or animal feed additives. 25.5.79 as 921148 (36pp367)

EXPE= ★ D16 91409B/51 ★DT 2923-144
Trichophytosis vaccine - contg. viable microconidia of an immunogenic strain of trichophyton mentagrophytes

EXPER VETERINARY 07.06.78-SU-618902

B04 C03 (13.12.79) A61k-39 C12k-01

New vaccine for prophylaxis and treatment of trichophytosis caused by Trichophyton mentagrophytes is a suspension of microconidia of an immunogenic strain of Trichophyton mentagrophytes in a physiological soln. of pH 6.2-7.0, the concn. of microconidia being 15-25 million/ml, 8-25 million/ml being viable microconidia.

Used in treatment and prophylaxis of Trichophyton mentagrophytes trichophytosis in veterinary practice. Trichophytosis is a widespread disease of fur animals and rabbits raised for meat. The vaccine is effective in fur animals and rabbits, as well as other animals. The

vaccine is non-injurious, and does not cause disease in healthy animals. 7.6.79 as 923144 (31pp280)

JSP ★ D16 91414B/51 ★DT 2923-297
 Plasmid(s) contg. DNA fragment attached to operon - for transformation into host bacterium on yeast to produce nutrient proteins, esp. ovalbumin from *E. coli* (NL 11.12.79)
 INST PASTEUR 08.06.78-FR-017221
 (13.12.79) A23j-01 C07g-07 C12k-01 C12k-03

The novel plasmid contains, in a part non-essential to its life cycle, a DNA fragment derived from a λ -phage. This DNA fragment (insertion) is attached to one part of a bacterial operon (esp. a lactose operon) which contains at least the bacterial promoter and, attached to this promoter, a structure gene fragment (e.g. the Z-gene which codes for the formation of β -galactosidase in the lactose operon).

The insertion is opt. restricted to the first nucleotide triplet(s) which code for the first amino acid(s) of the corresp. protein i.e. β -galactosidase in the case of the lactose operon. The plasmid also contains, in the structure gene fragment, a point of intersection for a specific endonuclease such as EcoRI, and pref. no more characteristic sequences for the same endonuclease in any other part.

The DNA fragments, after insertion in a suitable vector (plasmid) and transformation in a host cell lead to the formation of prokaryotic and eukaryotic proteins. This is used to produce nutrient proteins from a bacterium or yeast and is esp. suitable for the prodn. of ovalbumin from *E. coli*. The process is not possible with natural genes. The DNA fragments are considerably larger than the previously produced synthetic somatostatin genes. The process is economical and the greater part of the protein formed is composed of the desired protein fragments. 7.6.79 as 923297 (28pp1401)

PERU/ ★ D16 91434B/51 ★FR 2419-033
 Machine to size grade and trim dry mushrooms - sorts sizes via divergent conveyor bands and trims stalks to equal lengths
 PERUFFO A 02.02.79-IT-085510 (09.03.78-IT-085534)
 (09.11.79) A23n-15

In a size-grading section of the machine, mushrooms are received on a set of spaced conveyor bands which diverge progressively. Smaller mushrooms drop between the bands as larger mushrooms are carried further until they can drop through the bands. The falling mushrooms land on a transfer conveyor running at right angles to the size grading bands. The transfer conveyor comprises spaced pairs of cables and a prod. orientator to set the mushroom stalks between cables which support the underside of the mushroom head.

While held in the cables of the transfer conveyor, each mushroom is presented to a first trimming saw, which removes the tip of the stalk, and then to a second trimming saw. The second saw equalises the stalk lengths of all similarly sized mushrooms carried between a pair of cables. The prod. orientator pref. comprises a conveyor. In addition, one of each pair of cables is held temporarily lower than the other just downstream of the brushes.

The mushrooms are sized and trimmed in the dry state and require no further treatment prior to distribution. In each size category the mushrooms have stalks trimmed to a common length. 7.3.79 as 005864 (19pp448)

JMO ★ D16 91464B/51 ★GB 1557-944
 Enzyme immobilisation carrier - comprises porous anion exchanger bearing diethylamino-ethyl gp.
 SUMITOMO CHEMICAL KK 30.01.78-GB-003731
 A96B04 (19.12.79) C07g-07/02 C08f-08/32 C08j-09/36

The enzyme-immobilisation carrier comprises a porous synthetic anion-exchange resin bearing a diethylaminoethyl gp. The resin has a specific surface area of ≥ 1 square metre/g. (dry basis) and the total vol. of pores of size 100-2000Å is ≥ 0.1 ml/g. (dry basis).

The carrier when used to immobilise enzymes gives products with high activity, good activity retentivity and a high enzyme combining capacity, so that they can be used repeatedly and continuously in homogeneous reactions in batch systems. A very wide range of enzymes can be immo-

bilised with the carrier.

Pref. the resin has specific surface area of ≥ 5 square metres/g. an av. pore size of 150-1000Å, and a total vol. of 100-2000Å pores of ≥ 0.2 ml/g. The resin may contain other anion exchange gps. as well as $\text{Et}_2\text{NC}_2\text{H}_4$ gps. 30.1.78 as 993731 (18pp1248)

SANO ★ D16 91518B/51 ★GB 2022-573
 Antibiotics S 54832 from *Micromonospora globosa* NRRL 11299 - useful against gram positive bacteria, mycoplasmas and neisseriae
 SANDOZ LTD 08.01.79-CH-000131 (08.06.78-CH-006282)
 B04 C03 (19.12.79) A61k-35/70 C12d-09/14

Antibiotics S54832/A-I, A-II, A-III and A-IV are new. They all have characteristic i.r. and u.v. spectra. A-I is a light yellow solid; $[\alpha]_D^{20} + 118.7^\circ$ (C, 1.14 in pyridine); analysing for C 50.2, H 4.2, N 13.1, O 21.7, S 11.3%; with an equivalent wt. of 1521. A-II is a light yellow solid; analysing for (1) C 48.5, H 3.8, N 12.4% and (2) C 50.3, H 4.3, N 12.4, O 21.7, S 12%; with a characteristic p.n.m.r. spectrum. A-III is a light yellow solid; analysing for C 48.1, H 4.1, N 12.3%. A-IV is a light yellow solid; $[\alpha]_D^{20} + 153.2^\circ$ (C, 0.752 in pyridine), analysing for C 49, H 4, N 12.7, O 21.8, S 11.6%.

Micromonospora globosa NRRL 11299 (also ATCC 31465) is a new strain isolated from a Spanish soil sample in a rice field. It is identified by morphological and cultural characteristics. NRRL 11299 is cultured in a nutrient medium and the resulting antibiotic is extracted with solvent. The 4 components are sep'd. by repeated chromatography.

A-I to A-IV are active against a wide range of Gram-positive bacteria, mycoplasma and neisseriae, and so are useful as therapeutic agents, as animal feed additives etc. Dose is 10-3500mg daily. 4.6.79 as 019474 (22pp1248)

KYOW ★ D16 91653B/51 ★J5 4143-585
 Culturing and preserving *Lactobacillus sanfrancisco* - using a culture medium contg. L-cysteine, and freeze drying using skimmed milk, mono:sodium glutamate and maltose as protecting agent
 KYOWA HAKKO KOGYO KK (SHIK-) 28.04.78-JA-049889
 (D11) (08.11.79) C12k-01/08 C12k-03

Lactobacillus sanfrancisco is cultured in presence of 100-500 mg L-cysteine per litre of culture medium. The bacterial body is freeze-dried using skimmed milk, monosodium glutamate and 5-20 w/w% (of skimmed milk) of maltose as protecting agent.

The prod. is used to prepare sour dough French bread, L-cysteine is used as a substitute for fresh yeast extract, and that the preservation of the freeze-dried body is improved by using maltose together with skimmed milk and monosodium glutamate.

Pref. *Lactobacillus sanfrancisco* KY3689 (FERM-P4466) is used; L-cysteine is used in the form of casamino acid; and the culture is practiced at 25-35, pref. 28-32°C and pH > 5 . 28.4.78 as 049889 (3pp5)

NIKA- ★ D16 91654B/51 ★J5 4143-586
 Culturing high carbohydrate chlorella of good preservative properties - the ratio of carbon content to nitrogen content being kept above a prescribed level

NIPPON KAIYO SEIBUT 27.04.78-JA-051259
 C03 (D13) (08.11.79) A23k-01/18 C12k-01

The method comprises culturing chlorella in a culture medium, in which the concn. of carbon to nitrogen is kept above a prescribed level and obtaining the chlorella cells having high carbohydrate content.

Thus the obtd. pressed chlorella having carbohydrate content 50% can be preserved for 18 days and can be used as the initial feed for prawns shell-fishes, etc. and as the feed for bait or fish-rearing use such as *Daphnia*, *Hydatina* etc.,

Usually the concn. ratio of carbon to nitrogen is kept > 5 either by adjusting the compsn. of the culture medium at the start of the culture or in the case of continuous culture, adding carbon source during the culture. 27.4.78 as 051259 (3pp5)

NIKA-★ D16 91655B/51 ★J5 4143-587
Improving stability of chlorella - by treating culture under nitrogen-deficient conditions to increase carbohydrate content
NIPPON KAIYO SEIBUT 27.04.78-JA-051260
C03 (D13) (08.11.79) A23k-01/18 C12k-01
Process comprises treating cultured chlorella under N-deficient conditions to increase the carbohydrate content in chlorella cells.

Chlorella cells having carbohydrate content 51% can be preserved for 25 days and can be used as the initial feed for prawns, shellfishes, etc. and as the feed for baits of fish-raising uses such as Daphnia, Hydatina, etc..
27.4.78 as 051260(2pp5)

NIRA★ D16 91656B/51 ★J5 4143-588
Prodn. of sterilised and fixed enzymes - by treating sterilised carrier, e.g. polymer, glass or activated carbon, with sterilised enzyme soln.

UNITIKA KK 25.04.78-JA-049660
A96 B04 (08.11.79) C07g-07/02 C12d-13/10
Method comprises treating a sterilised carrier with a sterilised enzyme soln. Method gives sterilised and fixed enzymes having high activity. Examples of the carrier are cellulose, starch, dextran, agarose, collagen, polyester, polyamide, PVA, polyamino acid, polyacrylamide, polystyrene, poly(meth)acrylate, poly(meth)acrylic acid, polyacrylonitrile, polyurethane, polyethyleneimine, polymaleic anhydride, polyethylene, polypropylene, PVC, activated carbon, glass alumina, silica, gel, etc.

The carrier is sterilised by a usual method, e.g. by use of hot air, high pressure steam, boiling water, X-rays, UV-rays, antiseptics. Typical enzymes are urokinase, streptokinase, plasmin, thrombin, chymotrypsin, trypsin, lysozyme, amylase, catalase, arginase, asparaginase, phenylpyruvate oxidase, decarboxylase, and haemoglobin. The enzymes are also sterilised by a usual method as exemplified and fixed to the carrier in known manner. 25.4.78 as 049660(4pp33)

MOCH★ D16 91657B/51 ★J5 4143-589
Urokinase purificn. - by adsorbing on e.g. bentonite, diatomaceous earth, barium sulphate or zeolite and eluting with aq. 2,8-diethylamino-acridine

MOCHIDA PHARM KK 28.04.78-JA-051963
B04 (08.11.79) C07g-07/02 C12d-13/10
Purification of urokinase, comprises eluting urokinase which is adsorbed on an adsorbent with an aq. 2,8-diethylaminoacridine solution of pH 1.5-7.0 (~3).

Urokinase is used in treating thrombosis. Also, it is known that combination use of urokinase with mitomycin enhances anticancer activity. The process gives urokinase in a higher state of purity with simpler procedure than the known method.

Pref. concn. of the aq. 2,8-diethylamino-acridine solution as a developing solvent is 0.05-5%, esp. (0.4%).
28.4.78 as 051963 (4pp33)

MOCH★ D16 91658B/51 ★J5 4143-590
Purificn. of urokinase used for treating thrombosis - by contracting crude cpd. with gel prepd. by crosslinking N,N'-methylenebis:acrylamide with acrylamide and/or allyl:dextran

MOCHIDA PHARM KK 28.04.78-JA-051964
A96 B04 (08.11.79) C07g-07/02 C12d-13/10
Purificn. of urokinase comprises contacting a crude urokinase soln. with a gel prepd. by crosslinking acrylamide with N,N'-methylenebisacrylamide and/or a gel prepd. by crosslinking N,N'-methylenebis-acrylamide with allyldextran via covalent bonds. The dry gel is able to absorb water in amt. 7-25 ml/g. Examples of the gel are Biogel p-150, Biogel p-200, Biogel p-300 and Sephacryl S-200).

Urokinase is used in treating thrombosis. Urokinase in combination with mitomycin enhances anticancer activity. The process gives urokinase in higher purity than the known method. 28.4.78 as 051964(3pp33)

MOMI★ D16 91659B/51 ★J5 4143-591
Enzymatic prepn. of aldehyde from amino acid and polyphenol - using a polyphenol oxidase obtd. from Alternaria or cladosporium microorganism

MORINAGA & CO LTD 27.04.78-JA-050585
B05 E16 (08.11.79) C12g-01

Method comprises contacting a polyphenoloxidase produced by a polyphenoloxidase-producing micro organism belonging to Alternaria or Cladosporium, with a reaction mixt. contg. amino acid and polyphenol, the examples of the reaction mixt. are green tea extract, cacao bean extract or their combinations with amino acids.

Pref. microorganism is Alternaria tenuis A-2(FERM-P 332) which is aerobically cultivated at 30°C. Acetaldehyde, i-butylaldehyde, i-valeraldehyde, 2-methylbutanal, methional, phenylacetaldehyde, etc. can thus be formed from alanine, valine, leucine, i-leucine, methionine, phenylalanine, etc. respectively.

Thus formed aldehydes are aromatic substances which are used for enhancing flavour. 27.4.78 as 050585(3pp5)

KIKK★ D16 91660B/51 ★J5 4143-596
High quality wine prodn. - with pptn. of tartar from grape juice or obtd. wine by addn. of potassium (in)organic acid salt
KIKKOMAN SHOYU KK 27.04.78-JA-049303
(08.11.79) C12g-01

Prodn. of wine(I) comprises pptn. of tartar (II) in raw grape juice or in raw wine during or after fermentation by the addn. of K organic acid salt (III) and/or K, inorganic acid salt (IV).

The method prevents (II)-formation without deterioration of (I)-quality. (III) is K malate, citrate, lactate, acetate, succinate. (IV) is K sulphate, phosphate, carbonate. The quantity of (III) and/or (IV) is 0.3-3 g/l (III) and/or (IV) are/is pref. added to raw grape juice or raw wine during fermentation, because they are digested perfectly until the fermentation ends. 27.4.78 as 049303(4pp42)

TANA★ D16 91755B/51 ★J5 4144-315
D,L-Serine prodn. in high yield - by electrolytically reducing an acetylamido malonamic acid deriv. and hydrolysing the prod.

TANABE SEIYAKU KK 28.04.78-JA-051737
B05 E16 (10.11.79) C07c-101/30 C25b-03/04

Prodn. of DL-serine comprises electrolytically reducing cpds. of formula (I), and then hydrolysing the redn. prod. in a conventional manner. In (I) R¹ is H or NH₂; R² is COOH or CN; R³ is acylamino (e.g. acetamido, propionamido, isopropionamido, butyramino benzamido) when R² is COOH or isonitroso acylamino when R² is CN).

Examples of (I) are acetamidomalonic acid, propionamidomalonic acid, isopropionamidomalonic acid, butyramidomalonic acid, benzamidomalonic acid, acetamidomalonic acid, monohydrazide, their Li, K or Na salts; isonitrosocynoacetamide, isonitrosocynoacetic acid hydrazide, acetamidocynoacetamide, and acetamidocynoacetamide, and acetamidoocynoacetic acid hydrazide.

Process provides an industrially applicable process for producing DL-serine in high yields. 28.4.78 as 051737(4pp)

KOWA★ D16 91906B/51 ★J5 4145-205
Thrombus-dissolving agent contg. urokinase and sodium dextran-sulphate - with plasminogen-activator activity pref. administered intravenously

KOWA KK 01.05.78-JA-052453
A96 B04 (A11) (13.11.79) A61k-31/72 A61k-37/54
Thrombus-dissolving agent contains urokinase (UK)(pref. 10³-10⁶ I.V.) and dextran sulphate (DS)(pref. 5-5000mg). The (DS) is pref. sodium dextran-sulphate. Combination of (UK) and (DS) furnishes plasminogen activator activity effectively by admin. of UK in small amt. it shows striking thrombus-dissolving action and reduced blood agglutination acceleration on admin. of (UK).

In an example, (UK) (24000 thousands IU) and sodium (DS) (S content 3.0-6.0%, intrinsic viscosity 0.030-0.045) (3.000g) were added into distilled water and the soln, vol was adjusted to 3l. NaOH was added into the mixt. and pH of the mixt. was adjusted to 7. The mixt. was filtered under bacteria free condition, and poured in 3ml. ml. aliquots into bacteria-free vial of fractional injection. The liquor in vials, was subjected to preliminary freezing at -40 to -50°C from 3hrs. prim. drying at -40°C - +30°C and in vacuum of 0.4 x 10⁻³ 0.6 x 10⁻² mm Hg for 20 hrs. and then to sec. drying at 30°C in vacuum of 0.1 x 10⁻³

1.2-10⁻³ mm Hg. for 3 hrs. to freeze-dry. Powder of endompsn. was obtd. contg. 24,000 IU or (UK) and 3.000 mg of (DS). The substance was dissolved in physiological salt water or glucose injection liquor (500 ml) on admin. and resultant soln. was subjected to dropping injection. 1.5.78 as 052453(8pp69)

HIRA/ ★ D16 91910B/51 ★ J5 4145-209
Detecting antigenic substance - comprises adding sample contg. substance and colouring enzyme-marked substance to carrier contg. antibody or antiserum

HIRAI H 04.05.78-JA-053430
B04 R16 (13.11.79) G01n-33/16

Process comprises (a) adding sample contg. substance having antigenicity to be determined and substance having antigenicity to be determined which is marked with enzyme having a colouring action to a carrier contg. antibody or antiserum to substance having antigenicity to be determined homogeneously, (b) effecting immune reaction by immuno-diffusion to form antigen-antibody bonded substance; (c) colouring enzyme part in the bonded substance; and (d) determining degree of diffusion of the enzyme in the bonded substance.

Pref. immunity diffusion is immunity electric diffusion, or monogenic immunity diffusion. Pref. having antigenicity to be determined is human γ -globulin, human gammaglobulin G or human gammaglobulin E. Enzyme is pref. peroxidase and/or the carrier is agar-agar or agarose. 4.5.78 as 053430(11pp69)

OXF ★ D16 91921B/51 ★ J5 4145-280
Photosynthesis mycelium prodn. - by aerobically incubating Rhodopseudomonas microorganisms in culture medium contg. molasses

TOHO BESLON KK 04.05.78-JA-052808
(D13) (13.11.79) A23k-01 C12b-01 C12k-03

Photosynthesis mycelium (I) is prepd. by aerobically incubating Rhodopseudomonas microorganisms (II) in a culture medium contg. molasses (III) as carbon source, to obtain (I) in high yield.

The content of (I) in the culture medium reaches 10,000 ppm. (I) can be used as feed for animals.

(II) is Rhodopseudomonas sphaeroides, capsulata or gelatinosa. (III) comprises molasses contg. 25 wt.% water, 10-55 wt.% sugars, 20-25 wt.% ash and other components. The quantity of (II) added is adjusted so that the concn. of sugar in (III) is 0.5-6 wt.%. Pref. nitrogen source is ammonium sulphate, nitrate or chloride etc. 4.5.78 as 052808 (4pp42)

UMO ★ D16 91922B/51 ★ J5 4145-281
Urokinase extn. from e.g. urine or crude soln. - using ion exchange resin carrying metal ions

SUMITOMO CHEMICAL KK 04.05.78-JA-053368
A91 B04 (13.11.79) C07g-07/02 C12d-13/10

Method comprises contacting a metal ion carrying ion exchange resin with a soln. contg. urokinase to let the metal ion collect urokinase, and breaking the bond between the ion exchange resin and the metal ion.

In an example, Dowex-50W X 8 (10ml) was packed in a 6mm clear resin column, washed with water and 10m mol of copper sulphate aq. soln. added to carry out ion exchange. After water-washing with ion-exchanged water, 360 U/ml of crude urokinase-phosphoric acid buffer soln. (50ml) was added. Column-passed liquor had no activity. After washing the column with water, 0.05 M EDTA - 0.5 M NaCl was added to elute urokinase. Copper ion became copper-EDTA of thick blue liquor and was eluted simultaneously. Eluate was 30 ml. and total activity of crude urokinase was 14400 IU. 4.5.78 as 053368(4pp69)

AMAN ★ D16 91923B/51 ★ J5 4145-282
Treating enzyme used to mfr. high maltose content syrup - by interacting saccharifying enzyme of Bacillus polymyxa with liquefied starch in presence of alpha 1,6-glucosidase

AMANO PHARM KK 02.05.78-JA-052288
(D17) (13.11.79) A23l-01/09 C12d-13/10

A method for the treatment of an enzyme used for prodn. of a syrup having a high content of maltose, comprises setting saccharifying enzyme of Bacillus polymyxa which has been treated at pH 4.0-4.5 and 4-40°C for 1-3 hrs. so

as to adjust the ratio of beta-amylase activity to alpha-amylase activity to 1/0.02 - 1/0.2, interact with liquefied starch of D.E. < 5, in the presence of alpha-1,6 glucosidase, to produce a syrup contg. > 80 wt.% of maltose, 8-15 wt.% of maltotriose and < 0.4 wt.% of glucose.

A syrup contg. > 80 wt.% of maltose can be produced and in the syrup maltose does not crystallise because the sugars other than maltose contained in the syrup are composed of mainly sugars of polymerisation degree 4. 2.5.78 as 052288(6pp42)

IDEK ★ D16 91924B/51 ★ J5 4145-285
Biological prepn. of phenacyl alcohol - by culturing a Pseudomonas microorganism in a medium contg. bi:phenyl
IDEMITSU KOSAN KK 02.05.78-JA-052260
B05 C03 (13.11.79) C12d-13

Prepn. of phenacyl alcohol, useful as intermediate for pharmaceuticals and agricultural chemicals, comprises cultivating a microorganism belonging to genus Pseudomonas and capable of producing phenacyl alcohol (specifically Pseudomonas SG 9611, FERM-P No. 4469) in a medium contg. biphenyl and recovering phenacyl alcohol from the culture.

In an example Pseudomonas SG 9611 was inoculated in 50ml of a medium (pH 7.0) contg. biphenyl 2%, polypeptide 0.2%, disodium phosphate (12 hydrate) 1%, monopotassium phosphate 0.55% MgSO₄ 7H₂O 0.02% CaCl₂ 2H₂O 0.001%, Fe₂(SO₄)₃ 7H₂O 0.0001%, yeast extract 0.01% and corn steep liquor 0.01% and cultivated at 30°C for 3 days with rotating. The culture (850ml) was centrifuged, and the supernatant was adjusted to pH7 and extracted with benzene. The benzene layer was dehydrated with Na₂SO₄ and conc. to dryness. The residue was subjected to silica gel column chromatography (eluent: benzene: ethyl acetate = 50:1) to obtain crude phenacyl alcohol (50mg). Recrystallisation from benzene-n-hexane gave 30mg of pure crystals. 2.5.78 as 052260(4pp140)

SNAM D16 58455V/33 = J7 9038-657
Enzyme-contg. cellulosic fibres - with improved permeability and used as catalyst for enzymic reactions
SNAMPROGETTI SPA 22.03.73-IT-021944
A96 B04 F01 (22.11.79) *BE-812-571 A61k-35/66 C13l-01 D01f-02/26

Cellulosic fibres contg. enzymes are prepd. by dissolving a substituted cellulose (pref. nitrocellulose) in a water-immersible solvent, adding the soln. to an aqs. soln. of the enzyme to form an emulsion which is then spun and coagulated, the obtd. fibres are finally reduced to eliminate the substituent so as not to affect the enzyme. The unsubstituted prod. obtd. has improved catalytic activity compared to the starting substd. cellulose. 22.3.74 as 031589 (clg. 22.3.73-IT-021944) A61k-35/66, C13l-1/00, D01f-2/26 (22.11.79) (3pp) (J5 0029815)

DENY ★ D16 92165B/51 ★ J7 9039-314
Laver culture with accelerated growth and increased yield - involves progressively lowering culture temp. according to stage of growth
DENRYOKU CHUO LAB 00.00.78-JA-121305 (14.03.64-JA-014036)
P13 (27.11.79) A01g-33/02

In culturing laver under artificial conditions the improvement comprises lowering the culturing temp. progressively according to stage of growth of laver as follows: Initial stage (plumules) T₁ = 18-22, T₂ = 10-18, Δ ≥ 4, intermediate stage (leaflets) T₁ = 14-18, T₂ = 10-14 Δ ≥ 4, final stage (leaves) T₁ = 10-15, T₂ = 5-10 Δ ≥ 5. T₁ is the daytime temp, T₂ is the nighttime temp. and Δ is their difference all in °C.

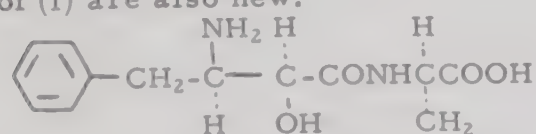
The method accelerates the growth of laver and increases the yield. Various light sources can be used as daylight. Combination of white and green fluorescent lamp with brightness of 2000-10000 lux is most suitable. Pref. daytime length is 12-15 hrs/day in the initial stage and 9-12 hrs/day in the final stage. The nighttime temp. should be as low as possible to prevent rot of leaves. 14.3.64 as 121305/78, Div. ex. 14036/64 A01g-33/02 (27.11.79) DENRYOKU CHUO KENKYUSHO. (4pp83)

TAKE D16 44040X/24 = J7 9039-473
Water-insoluble beta-1,3-glucan derivs - by treatment with cyanogen halides, for prepn of water-insoluble enzymes and packings for chromatographic columns
TAKEDA CHEMICAL IND KK 26.11.74-JA-136478
A11 B04 J01 (28.11.79) *BE-835-911 C07g-07/02 + C12d-13/10
β, 1, 3-Glucan derivs. are prepd. by treating a β-1, 3-glucan insoluble in water, with a cyanogen halide. The products are water-insoluble carriers with improved reactivity for preparing water-insoluble enzymes and packings for chromatographic columns. Alkali is progressively added during the reaction to avoid dissolution of the β-1, 3-glucan at high pH (pH 11 is customarily used in treating other polysaccharides). 26.11.74 as 136478, C07g-7/02, C12d-13/10 (28.11.79) TAKEDA CHEMICAL IND KK (7pp) (J51061686)

AGEN D16 15553Y/09 = J7 9039-475
Highly pure maltose prodn. from starch - by treatment with beta-amylase and alpha-(1,6) glucosidase then with alpha-amylase
AGENCY OF IND SCI TECH 04.07.75-JA-082595
E13 (D17) (28.11.79) *J52007-487 C12d-13
Process comprises treating starch or liquified starch with β-amylase and α-1, 6-glucosidase, and then treating it with α-amylase produced by *Aspergillus*.
Bacteria such as *Bacillus cereus* var. *mycoides* can produce α-amylase and α-1, 6-glucosidase simultaneously. But with the complex enzyme obtd. maltose usually contains a remarkable amt. of oligosaccharide which obstructs the crystallisation of maltose and lowers the purity of the prods. Further α-amylase produced by *Aspergillus* can decompose oligosaccharides even in the presence of a large amt. of maltose and can produce maltose. 4.7.75 as 082595, C12d-13/00 (28.11.79) AGENCY OF IND. SCI TECH. (6pp5) (J5 2007487)

AJIN D16 24981W/15 = J7 9039-476
L-serine prodn. - by culturing *Pseudomonas* or *Escherichia*, with betaine
AJINOMOTO KK 09.05.73-JA-051327
B05 E16 (28.11.79) *J49134-890 + C12d-13/06
In an example, bacteria were cultured with shaking for 24 hrs. at 31° on a medium contg. 2% (I) HCl, vitamins, minerals etc. at pH 8.0. The cells collected were resuspended in an equivalent volume of 0.2 M Tris buffer (pH 8.5). 5 ml reaction mixt. contg. 1 ml cell suspension, contg. 1.53 g/l betaine (I) HCl etc. incubated 24 hrs. at 31°.
L-Serine found in the reaction mixt. were: 34.7 mg/dl. in the case of *Escherichia coli* ATCC 9037, 41.3 mg. *Pseudomonas aeruginosa* ATCC 14216, and 1.9 mg without bacteria. 9.5.73 as 051327, C12d-13/06 (28.11.79) AJINO MOTO CO. LTD. (4pp) (J4 9134890)

ZAID D16 09548X/06 = J7 9039-477
Peptidase-inhibitor bestatin - produced by cultivating bestatin-producing streptomyces
ZH BISEIBUTSU KAGAKU KEN 01.07.74-JA-075090
B05 (28.11.79) *DT2528-984 A61k-31/19 C07c-101/44 C12d-13
Bestatin (I) is a new cpd. which inhibits aminopeptidase B. leucine aminopeptidase and bleomycin hydrolase and has the following properties, soluble in water MeOH and EtOH insoluble in ethyl acetate, ether and petroleum ether, $\alpha/\alpha^{22}_D = -15.1^\circ$ ($c \approx 0.861$, MeOH), positive Rydon-Smith and ninhydrin reaction negative Sakaguchi reaction. Acidic salts of (I) are also new.



On account of its inhibition of bleomycin hydrolase, (I) can be used as a synergist for bleomycin in the inhibition of tumours.

(I) esp. squamous cell carcinomas. (I) is also useful in the analysis of biological functions and disease processes. 1.7.74 as 075090, C12d-13/00, A61k-31/19, C07c-101/44 (28.11.79) MICROBIAL CHEM. RES. INST. (11pp) (J51007187)

MEIJ D16 60595V/34 = J7 9039-474
A novel antibiotic SF-1346 - produced by *Streptomyces chibaensis*
MEIJI CONFECTIONARY 28.08.72-JA-085292
B04 (28.11.79) *J49041-595 + A61k-31/44 C07d-213/65 C12d-09/14

A novel antibiotic, SF-1346, is produced from *Streptomyces chibaensis* SF-1346 (FERM-P 1523), SF-1246 has mol. formula of C₈H₁₀N₂O₃, m.p. of 260-261° (decomp) and α/α^{22}_D of 30° (H₂O). It is soln. in aq. HCl alk. H₂O, H₂O, and MeOH, hardly soln. in EtOH and insol. in EtOAc, CHCl₃, C₆H₆, and petroleum ether, and coloured reddish-brown and brin in ninhydrin and FeCl₃ reactions, resp. Rf on cellulose thin layer chromatog. (BuOH-HOAc-H₂O = 4:1:5) is 0.28.

Inhibitory zones against growths of *Bacillus subtilis*, *coli*, and *Piricularia sasakii* are 40, 20, and 70 mm. resp. tested by paper disc method (10 mg/ml). It is also effective against rice blast disease. UV and IR absorption spectra are presented. In an example *S. chibaensis* SF-1346 was aerobically cultured in a medium (pH 7.0) contg. millet jelly 4.0, soybean powder 2.0 sol. vegetable protein 0.5 Pharma-media 1.0, soybean oil 0.3, FeSO₄ 0.001 NiCl₂ 0.0001 and CoCl₂ 0.0001% at 28° for 72 hr. The culture filtrate (pH 3) was passed through a column of Dowex 50 W x 2 (H⁺). SF-1346 was eluted with 1 N NH₄OH. adsorbed on active C. and eluted with 10% Me₂CO. It was crystd. from the conc. left at 5° overnight, 4.9g from 17 l. 28.8.72 as 085292, C12d-9/14, A61k-31/44, C07d-213/65 (28.11.79) MEIJI CONFECTIONARY CO. (5pp) (J49041595)

DEUT/★ D16 92201B/51 ★NL 7904-243
Microporous element with tapered penetrations in each layer - induces flow of fluid through element without additional driving energy and without osmosis effect

DEUTSCH D H 14.05.79-US-038586 (30.05.78-US-910110)
J01 (04.12.79) B01d-13/04 B01d-31 B01d-39 B01d-53/22

Microporous element comprises ≥3 bonded layers, each layer contg. tapered, hollow penetrations. The larger ends of the hollow penetrations all terminate in one face whilst the narrower ends terminate in the opposite face, adjoining layers being so oriented that all the penetrations taper in the same direction. A fluid passing through the element passes through ≤10 x 10⁶ hollows in sequence.

Depending on the application, the total thickness of the composite element lies between 0.001 microns and 100 cms., whilst the average distance between adjacent pores across the surface of a layer is between 0.001 and 100 microns. The construction of the element is such that a gas of liq. in which the element is placed is caused to flow through the element without the use of any additional energy and without the necessity of a difference in concn. across the element creating an osmosis effect.

Element will induce the flow of the fluid for which it is constructed without the use of additional energy. It is partic. useful for cleaning the gaseous discharge from a chimney, inducing an atmosphere change in a biological reaction vessel without permitting the passage of liquid, or inducing the flow of a liq. in a reaction system. 30.5.79 as 004243 (19pp1370)

CHCO=★ D16 92241B/51 ★SU -654-683
Flowline mutagenic activity tester for chemical cpds. - has output from control to packaging unit connected to process unit at input to mixer and recorder for greater productivity

CHEM CPDS BIOL TEST 07.12.76-SU-430244
B04 (30.03.79) C12k-01

The known mutagenic activity tester for chemical cpds. contains a control, bacterial medium, agar medium prepn. unit and a process unit. In order to increase productivity and expand capability by recording the state of the cpds. a packaging unit with as many containers as cpds. is introduced along with a recorder, mixer and with a colony counter in the process unit. More than 50,000 cpds. can be tested, annually and new medicinal forms can be sought by flowline testing.

Abilev S. K., Voronin V. P., Kolokoltsev I. Ya. et al.
Bul. 12/30.3.79 7.12.76 as 430244 (3pp840)

AT= ★ D16 92258B/51 ★SU-654-828
 Hydrodynamic resistance reduction - by using microorganisms to generate surface active material
 HEAT MASS TRANSF 05.07.77-SU-506886
 A97 Q69 (30.03.79) F17d-01/20
 The method used for hydrodynamic resistance redn. claim ed in Parent Certificate No. 43962, involved introducing surfactant into the liquid. The surface active matter used can be carbonate salts, polysaccharides, polyacrylamides and etc.

Now to increase economy and efficiency, the surface active material is generated in the liquid itself by microorganisms growth. The micro-organisms used can be single cell fresh water growing organisms 'Porphyridium crugireum' (red). The total weight concn. of the surface active material is 8×10^{-4} - 5×10^{-6} .
 Perin I. T., Bul. 12/30.3.79 5.7.77 as 506886 Add to 36962 (2pp110)

ME D16 30755V/17 =SU-655-327
 Actinoplanes type glucose isomerase - prepd. in neutral culture medium for conversion of glucose to fructose
 ANHEUSER BUSCH INC 10.10.72-US-296000
 (D17) (30.03.79) *BE-805-852 C12d-13/10
 The enzyme is Actinoplanes missouriensis, phillippinesis meniacus and sp. ATCC 23342. Culture medium is (neutralised) maize liquor, distillery solubles, casein hydrolysate, soya hydrolysate, peptones, yeast extract and fish protein hydrolysate. Maize liquor is treated with NaOH, Ca(OH)₂, NH₄OH or KOH. Its concn. is 0.5-7% solids, pH 6-8.5, temp. 16-40°C. Co ions are also present in concn. 0.05 mM-0.5mM and Cu ions as 0.01-0.1 mM. Fermentation period is 24-168h. The enzyme is stable 80-85°C and gives an economic method for prodn. of ketoses.
 Li K.K., Li H.A., Donnelly B.D., Bul. 12/30.3.79 10.73 as 964130 (3pp)

ME= ★ D16 92269B/51 ★SU-655-371
 Selection of heifers according to milk yield - based on desoxyribonucleic acid content of skin sweat gland cell nuclei determination
 LIVESTOCK RES INST 03.02.77-SU-448808
 B04 C03 P14 (05.04.79) A01k-67
 Heifers histological skin tissue cells tests are used to select animals as possible high yield milk producers. The accuracy of selective method is increased by the determination of desoxyribonucleic acid content of sweat gland cell nuclei in test animals. The DNA content is estimated by means of cytoseptrophotometry of tissue samples and comparing results with known milk producers. High DNA content indicates that the test animal in a future high yield milk producer.
 Nikhov I. Ya., Ivanova N.P., Bul. 13/ 5.4.79 3.2.77 as 448808 (3pp938)

ALI= ★ D16 92270B/51 ★SU-655-372
 Liquid agricultural growth stimulant - prepd. by treating partly decomposed peat with nitric acid and oxidising prod. with alkali
 KALININ PEAT IND 03.02.76-SU-326774
 C03 (D13) (25.03.79) A01n-05
 Liquid growth stimulating agent, useful in agriculture to increase growth rate of plants, microorganisms and animals, is obtd. by the oxidn. of peat in a high or av. decomposition state with nitric acid, followed by neutralisation of oxidn. prods. with an alkaline reagent.

In order to increase growth stimulation activity of the final prod. peat is oxidised with 2-10% nitric acid at 10-90°C and 15-25 atmos. for 1-3 hrs. at reaction hydro-modulus 15-25 (pref. 20) followed by treatment with alkali.
 Yakovskii V.E., Dyachkov G.S., Kruglov V.P., et al. Bul. 13/5.4.79 3.2.76 as 326774 (4pp938)

PID= ★ D16 92429B/51 ★SU-656-099
 Cell hypersensitivity reaction simulation - by removing sensitised cells, re-infecting and cultivating in test medium to evaluate cell resistance
 EPIDEMIOLOGY MICROBI 06.09.77-SU-528807
 B04 R32 (05.04.79) G09b-23/28
 Specific lung cell reactions to Mycoplasma pneumoniae infection is achieved by reinjecting the lung tissue and

cultivating in a test medium at 36-37°C. Thus guinea pigs are injected with the live culture of M. pneumoniae with strictly controlled culture medium.

After 50-60 days the lung is removed, cutting off test sections under strictly controlled and sterilized conditions. Then the samples are inoculated again and cultivated for 5-7 days in a test medium at 36-37°C, maintaining constant pH of 7.2-7.4. The samples are periodically tested.

Such arrangement allows local cell immunity investigation and could be used for live vaccine safety testing.
 Baizhomartov M.S., Tsarevskii L.V., Irzhanov S.D. et al. Bul. 13/5.4.79 6.9.77 as 528071 (2pp537)

ROTH/ D16 92943X/50 =US 4178-154
 Synthetic fuel for internal combustion engines - from cellulose by hydrolysis, fermentation and conversion of isopropanol formed
 ROTH LISBERGER H 05.02.75-FR-004397
 H09 (11.12.79) *FR2300-127 C10l-01/02

Prod. of light fuel for internal combustion engines comprises (i) crushing and composting a cellulose to separate out the lignin; (ii) acid hydrolysing the obtd. cellulose to form a glucose, (iii) mixing the glucose with a basic medium and fermenting the mixture at a pressure of 30-50 atmos. at 75-90°C. to form isopropyl alcohol, (iv) converting the alcohol to isopropyl ether, (v) combining the ether with a minor amt. of isooctane, and (vi) treating the combination with a Co catalyst.

The catalyst consists of Co aluminate and/or Co acetate and the catalysis is carried out at ~500°C. at a pressure of ~50 atms. in an inert atmos. for ~10-20 seconds. The cellulose can be cereal straw, maize husks, wood waste, etc. 4.2.76 as 655229 (2pp924)

MONS ★ D16 92609B/51 ★US 4178-209
 Appts. for continuous cell culture - with stationary filter surrounded by rotating agitator to prevent clogging of filter pores
 MONSANTO CO 06.03.78-US-884076 (14.11.77-US-850987)
 (11.12.79) C12k-09

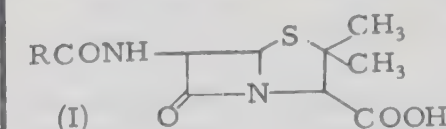
Appts. for continuous suspension culturing of cells comprises a flask with a top opening from which depends a stationary hollow shaft with no lower bearing. A stationary filter unit is supported downwardly from the shaft again with no lower bearing and without any moving seals. In use fluid passes through the filter which has a pore size to prevent passage of the cells being cultured.

A rotatable agitator is concentrically disposed about the filter unit for rotation by suspension from a sleeve bearing having low-friction engagement with the shaft. Used for suspension culturing of mammalian cells. The agitator prevents clogging of the filter. 6.3.78 as 884076 C.i.p. 4166768; (c.f. 68020B/37) (8pp295)

MASI ★ D16 92610B/51 ★US 4178-210
 Cephalosporin preparation from penicillin(s) - by contacting with a cell-free extract of cephalosporium acremonium and ATP
 MASSACHUSETTS INST TECH 17.03.78-US-880036 (07.03.77-US-775156)
 B02 (11.12.79) C12d-09

Cephalosporin antibiotic is produced by contacting a cell-free extract of cephalosporin acremonium with a substrate of the formula (I) under conditions promoting oxygen transfer and in the presence of ATP as energy source.

R = (1-4C) hydrocarbyl terminally substd. by carboxy and/or amino. The exact structure of the product is not known.



The cell-free extracts of C. acremonium may be obtd. from the strains ATCC 20339 and ATCC 14553. The ATP is preferably used in combination with an ATP generating system which is a phosphate donor and a phosphotransferase enzyme. This is preferably phosphoenolpyruvate and pyruvate kinase.

The process gives cephalosporin antibiotics, without fermentation or laboratory synthesis. 17.3.78 as 880036 (7pp916)

ETHY ★ D16 92611B/51 ★ US 4178-211
Citric acid prodn. by cultivation of *Candida lipolytica* - on a medium contg. a carbohydrate and aliphatic carboxylic acid or its salt as carbon source

ETHYL CORP 30.05.78-US-910359 (03.03.77-US-773976)
B05 E17 (11.12.79) C12d-01/04

Citric acid is prepd. by aerobic submerged cultivation of *Candida lipolytica* ATCC-20510 on a mixed carbon source medium for 1-15 days. The medium initially contains 1-5% by wt. acetic acid or its salt and 0.5-2.5 wt.% carbohydrate and further acetic acid or its salt, 5-20 wt.% is added during the fermentation.

Citric acid is used in the food and pharmaceutical industry and as a detergent builder. The process gives a product with citric acid : isocitric acid ratio of 4:1, higher than in prior art processes. 30.5.78 as 910359 (5pp916)

WELL D16 60229X/32 = US 4178-212
Compsn. for determining antifolate sensitivity of bacteria - contg. purified bacterial thymidine phosphorylase (BE270776)

BURROUGHS WELLCOME 27.01.75-GB-003445
A97 B04 + R16 (11.12.79) *DT2602-996 C07g-07/02

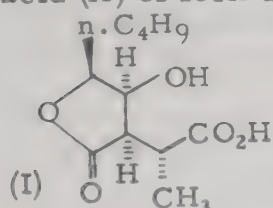
A stabilised thymidine phosphorylase formulation comprises thymidine phosphorylase of bacterial origin in phosphate buffer contg. ammonium sulphate, the formulation contg. ≥ 5 mg. of protein per ml. Pref. the buffer contains ~10% or 10-80% ammonium sulphate.

The formulation constitutes a culture medium used in testing for the susceptibility of bacteria to anti-folate antimicrobial agents such as sulphamethoxazole (SMX) and/or trimethoprim (TMP). 27.3.78 as 890781 Div.ex. 4097337 (+27.1.76-US-652770) (5pp990)

ICIL D16 49712A/28 = US 4178-213
Tetra:hydro:furyl-acetic acid deriv. prodn. - by fermenting *Penicillium* or *Aspergillus* strains, useful as antiulcer agent

IMPERIAL CHEM INDS LTD 14.03.77-GB-010622 (13.01.77-GB-001310)
B03 (11.12.79) *BE-862-718 C12d-13

A fermentation process for the prodn. of (+)-2-(5 β -n.butyl-4 β -hydroxy-2-oxo-tetrahydrofuran-3 β -yl)-2 α -methylacetic acid (A) of formula (I) comprises (i) cultivating a dihydro-



canadensolide yielding strain of a species of genus *Penicillium* or *Aspergillus* in an aq. nutrient medium contg. sources of assimilable carbon and nitrogen; (ii) isolating (A) by extracting the culture filtrate at a pH of 3.8-5.0 (4.0-4.5) with a water-immiscible organic solvent; and

(iii) evaporating the extract to dryness. Pref. a strain of species *Penicillium canadense*, *P. arenicola* or *Aspergillus terricola* var. *indicus* is cultivated.

(A) possesses ulcer healing properties and is administered to warm blooded animals at a daily oral or subcutaneous dose of ≤ 50 (0.25-5) mg./kg. repeated if necessary at 4-5 hourly intervals. In man this is equivalent to a dose of 12.5-250 mg. 4 times per day. 27.12.77 as 864473 (5pp990)

SHIS/ D16 26539B/14 #US 4178-214
Culture media contg. vegetable matter and peat hydrolysates - for high biomass yield cultivation of fodder yeasts

SHISHKOVA Z P 08.09.77-GB-037474 (08.09.77-US-831602)
C03 (D13) (11.12.79) *GB1543-491 A23k-01 C12c-11/08 + A23j-01/18 C12k-01

Liq. culture medium for cultivation of fodder yeasts which provide a source of proteins, vitamins and minerals in the diet of animals and birds is described.

Medium comprises by wt. (a) 48-97% hydrolysate of ligneous wastes other than peat with pH 4.0-4.4; (b) 0.1-50% peat hydrolysate obtd. by hydrolysis of peat with H_2SO_4 and having pH 4.0-4.4; (c) 0.02-0.08% N from a source other than (a) and (b); (d) 0.03-0.12% P measured as P_2O_5 from a source other than (a) and (b); (e) 0.016-0.064% K from a source other than (a) and (b); and the balance water.

Pref. the source of N is an aq. soln. of $(NH_4)_2SO_4$ in which case the P source is esp. ammonium or Ca phosphate and the K source is K_2SO_4 or KCl. Increased yields of fodder yeasts is obtd. 8.9.77 as 831602 (4pp936)

HOFF ★ D16 92676B/51 ★ US 4178-30
Immunoassay for antibodies to microbial organisms - with maximum label binding for good sensitivity

HOFFMANN-LA ROCHE INC 15.03.78-US-886849 (12.10.76-US-731237)

B04 K08 R16 (11.12.79) A61k-43 G01n-33/16

Immunoassay for determ. of presence of microbial antibodies in mammalian serum involves providing a reaction mixt. of buffered aq. medium, serum sample, antigen from the virus or microbes and anti-antibody to the serum to be tested. The anti-antibody bears a detectable label. The vol. ratio of anti-antibody to serum sample is adjusted to a value where an agglutinate is formed but it is less than the value required to effect pptn. of an antigen-antibody conjugate. The reaction mixt. is incubated at 4-45° for 24-2 hrs. at pH 6.5-8.5 so that an antigen-antibody conjugate can form. The level of the label is determined as a measure of the conjugate.

Yield of label is at a maximum, so that the sensitivity of determ. of the microbial antibodies is improved. Useful as a diagnostic screen in detecting infection by e.g. rubella, *N. gonorrhoeae*, *N. meningitidis*, *T. pallidum*, *Strep. pyogenes*, *Histoplasma capsulatum*, *C. albicans*, *T. vaginalis* etc. 15.3.78 as 886849 (6pp1248)

HOFF ★ D16 92677B/51 ★ US 4178-36
Rubella virus labelled with iodine-125 - useful in radioimmunoassay for detection of rubella specific antibodies

HOFFMANN-LA ROCHE INC 15.03.78-US-886848
B04 K08 R16 (11.12.79) A61k-43 G01n-33/16

Rubella virus labelled with iodine-125 (I) is new. (I) is an antigen for use in a radioimmunoassay for detecting the presence of rubella specific antibodies in human serum samples without pretreatment, standardisation problems etc. (I) may be used in the procedure described in U.S. 4178359.

To prepare (I) rubella virus, e.g. grown in vero cells and then concd., is treated in phosphate buffer with an iodine-125 source and chloramine T. The prod. may be purified by column chromatography. 15.3.78 as 886848 (5pp1248)

CNRS D16 75958Y/43 #US 4178-36
Antischistosomal immunological agent - contains schistosomal extracts comprising target antigens of schistosomal medicaments, used to treat bilharziasis

INST NAT SANTE RECH MED 29.06.76-FR-020687 (11.07.77-US-814211)

B04 C03 (11.12.79) *BE-855-898 A61k-39

Prepn. of antischistosomal immunological agent for human or animal schistosomes comprises (a) obtaining a total extract of antigens of schistosomes, the antigens being target antigens of the schistosomes w.r.t. the drug, which is a liquid, with the total extract, so that the target antigens become fixed on the drug as target antigens bound to the ligand.

Method further involves (c) immobilising the drug on an insol. support in an affinity chromatography step so that the target antigens are retained as antigens bound to the ligand, on the support and (d) sepg. the target antigens from the ligands on the support by elution with solvent.

The agent is useful in the preventive treatment of schistosomiasis. 11.7.77 as 814211 (6pp393)

PILL/ ★ D16 92693B/51 ★ US 4178-38
Compsn. for domestic prepn. of alcoholic beverages - contg. dried granular yeast nutrients, with flavour and fermentation cpds.

PILLA D P 27.05.77-CA-279366
(11.12.79) C12c-05

Compsn. suitable for preg. an alcoholic beverage by mixing with a fermentable sugar (I) and H_2O , then fermenting the mixt. contains: (a) a dried granular yeast nutrient combination; and (b) flavour conferring and fermentation ingredients with wt. ratio (a):(b) = 1:7-16.

Ingredient (a) is obtd. by mixing H_2O with (all by wt.) NH_4 phosphate (3-5 pts.), urea (3-5 pts.) KH_2PO_4 (1.5-3 pts.), and tri-Ca phosphate (0.5-1.5 pts.), then drying the semi-solid, non-flowing paste and granulating it. Ingredient (b) contains (by wt.) food grade lecithin (3-5 pts.), $CaCO_3$ (5-7 pts.), wine yeast (10-15 pts.), Na citrate (20-25 pts.), and malic, succinic, tartaric or citric acid (60

5 pts.).

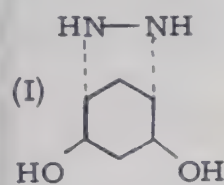
Compsn. affords a wine or cider of alcohol content 12-16%, and which possesses good clarity and taste after a simple (domestic) fermentation of ca. 28 days. 28.3.78 as 90932 (4pp478)

CHE ★ D16 92729B/51 ★ US 4178-453
7-Diaza-2,4-di:hydroxy-bi:cyclo(3.2.1)octane - useful as intermediate for 2,5-di:deoxy streptamine and antibacterial Mutamicin 2

SCHERING CORP 13.01.78-US-869207 (15.02.74-US-443051)
B02 (11.12.79) C07d-231

7-Diaza-2, 4-dihydroxybicyclo(3, 2, 1)octane of formula (I) and its acceptable acid addition salts are new:

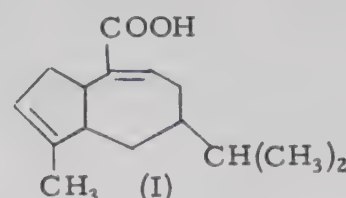
(I) may be subjected to hydrogenolysis to produce 2, 5-dideoxystreptamine (A) which in turn is used in the prepn. of Mutamicin 2, a broad spectrum antibacterial agent esp. useful in admixture with soaps and detergents for cleaning hospital equipment and laboratory glassware.



Specifically Mutamicin 2 is prepd. by cultivating *Microspora inyoensis* strain 1550F-1G NRRL 5742 US 4092359 claimed (A) and its acid addition salts. 13.1.78 as 869207 Div.ex. 4092359 (3pp990)

NODA D16 78261B/43 = US 4178-462
5-Isopropyl-8-methyl-bi:cyclo(5,3,0)-deca-2,8 diene-2-carbaldehyde - produced by culturing fungi of genus *Sclerotinia*
NODA INST SCI RES 09.03.78-JA-025942 (29.09.77-JA-116139)
B05 (11.12.79) *J54119-443 + C07c-61/28

5-Isopropyl-8-methyl bicyclo(5.3.0)deca-2, 8-diene-2-carboxylic acid of formula (I) is new:



Cpd. (I) termed SF-1 substance and the corresp. 2-carboaldehyde termed SF-2 substance. (Cpd. II) induce sporulation of microorganisms partic. moulds. They are extd. from the cultivated mixt. of *Sclerotinia* S-1,

which has been sepd. from plum infected with *Monilia* disease and rotten. Cpd. (I) and (II) are useful in industrial mould cultivation processes, e.g. for prodn. of antibiotics such as cephalosporins or enzymes such as amylase or protease. 26.9.78 as 945831 (10pp945)

PRDY ★ D16 92772B/51 ★ ZA 7805-602
Culture collection and transportation device - comprises open ended tube with piston which is partially collapsible under pressure to open fluid passages

PRECISION DYNAMICS CORP 25.08.78-US-935841
P31 (13.08.79) A61b C12b

See Also

D13 CA 1067334	D13 CA 1067335	D13 GB 2022459
D13 J5 4143561	D13 J7 9038747	D13 J7 9039307
D13 SU 655282	D13 US 4178391	D17 J7 9039472
D21 J5 4145603		

D17: SUGAR; STARCH

AYB D17 59309S/37 = DS 2108-748

Oligosylfructose prepn

HAYASHIBARA KEN 24.02.70-JA-015692

E13 (D11) (13.12.79) *DT2108-748 + C07h-03/06

Oligosaccharide mixt. contg. oligoglucosyl fructose is prepd. by first liquefying and hydrolysing a 5-45 wt. % starch suspension with alpha-amylase or an enzyme splitting alpha-1, 6-glucoside linkages. To the hydrolysate is added 0.2-5 (1/3-3) times the amt. of crude sugar and/or fructose, pref. invert sugar or honey. The resulting mixt. is treated at pH 5-7 and 40-90°C with an alpha-amylase obtd. from *Bacillus subtilis*, *Endomycopsis*, fungus, pancreas or saliva.

The mixt. is a valuable sweetening agent. 24.2.71 as 08748 (4pp068)

BRBL ★ D17 91271B/51 ★ DT 2825-080
Dust feed back system for beet cutting dryer - returns dust to dried cuttings on elevator by gravity

BRAUNSCHWEIG MASCH 08.06.78-DT-825080
(13.12.79) C11d-01/12 C13c-03

In the conveyor line between the dust hopper of a dryer for sugar beet cuttings and an elevator, a cell wheel is positioned, and some distance below the opening of the chute into the elevator, there is an air inlet with an adjustable flap. Between the dust hopper and the cell wheel, the conveyor is a worm, whilst between the cell wheel and the elevator it is an inclined pipe.

The arrangement efficiently ensures the return of the dust to the dried cuttings.

The advantages of a simple dust conveyor are combined with those of an uncomplicated and inexpensive dust recirculating system. 8.6.78 as 825080 (8pp1045)

MASW ★ D17 91294B/51 ★ DT 2825-504
Enlarged capacity diffusion column esp. for sugar beet - has additional feeders ensuring continuous cleaning of sieve bottom

MASCH BUCKAU R WOLF 10.06.78-DT-825504 (00.00.72-DT-243168)
(13.12.79) B01d-11/02 C13d-01/08

The parent patent describes a diffusion column for swilling out liquors, esp. the juice from sugar beet cuttings in counter-current, formed by a vertical cylindrical tube in which a centre tube is positioned concentrically. The central tube carries a rotary cutting distributor beneath which a sieve

bottom is cleaned constantly.

A pump delivers the mash of beet cuttings through a channel to the distributor, the front edge of which is formed by a number of slide shoes resting on the sieve bottom. The central tube has, at its bottom end a plate, beneath which, there is, supported coaxially, a shaft journal in a bearing in the bottom housing.

The improvement is that the opening through which the shaft journal passes has two or more channels in the housing provided with guide plates. Each mash channel in the housing has a flanged connection, which for pref. is connected to the main mash feed pipeline by pipe bends, each of which offers the same resistance to the flow.

The new arrangement ensures that behind each mash distributor the surface of the sieve is kept clear and the most efficient draining of the juice is achieved. 10.6.78 as 825504 (12pp1045)

MITU D17 04899X/03 = J7 9039-472
Isomerisation of glucose to fructose - using glucose isomerase activated by magnesium and iron ions

MITSUBISHI CHEM IND KK 26.06.74-JA-073125

A97 E13 (D16) (28.11.79) *NL7507-547 C07g-07/02 C12d-13/10

Glucose is isomerised to fructose using glucose isomers in the presence of Fe ion and Mg ion. The Fe ion and Mg ion increase the activity of the glucose isomerase over long periods, and obviate the use of the toxic Co ion normally used.

Pref. the glucose isomerase used is isolated from microbiologically cells of *Streptomyces*. The enzyme is insolubilised by mounting on a suitable carrier such as a macroporous ion exchange resin such as a styrene-divinylbenzene copolymer resin contg. quat. ammonium anion exchange gps. or a cyanohalide deriv. of a cross linked agar in particulate form. The glucose soln. contains 2-20 m. mol/l Mg ion and 0.005-5 m. mol/l Fe ion. 26.6.74 as 073125, C07g-7/02, C12d-13/10 (28.11.79) MITSUBISHI CHEM. IND KK. (4pp) (J5 1001690)

STRK ★ D17 92193B/51 ★ NL 7805-914
Moist sugar block drying system - uses air current through HF voltage field to draw off moisture

STORK BEPAK BV 31.05.78-NL-005914

Q76 (04.12.79) F26b-03/34

The system dries items contg. moisture by means of heat. An air current is generated in high-frequency

voltage field of a high-frequency generator.

The current is drawn off over the greater part of the surface area of this field, and the moisture extracted from the items passed into the field is transported away by the air. A continuous stream of items can be passed between the two electrodes of the generator, the air being delivered through one electrode in the transverse direction and discharged through the other. 31.5.78 as 005914 (11pp)

INCH- ★ D17 B/51 ★RU --67-255
Continuous sugar extractor for sugar beet - including paired roller assembly in rails with special curve sections, to facilitate operation
INST IND CHIM ALIME 01.06.74-RU-079020
(30.01.79) C13d-01/10

TATL D17 84825V/49 =SU -656-535
Continuous sugar recovery - from phosphating flotation scum in sweet liquor clarification

TATE & LYLE LTD 11.05.73-GB-022594
A91 (15.04.79) *DT2422-889 C13d-03

Continuous recovery of sugar from clarification scum arising in the phosphating flotation in sugar refining by the known technique of dispersion of the scum in de-sweetening water and refootation, whereby the scum is subjected to at least two successive stages of counter-current extn. each stage comprising: (a) dispersion of the scum in de-sweetening water to produce a homogeneous mixt., which is then aerated with simultaneous distribution therein of an anionic org. flocculant to bring about flocculation of the scum, (b) transfer of the mixt. to a clarifier without additional motion, sepn. of the flocculated scum by flotation and separate withdrawal from the clarifier of clarified dilute sugar soln. (I) and a flocculated scum (II) and (c) transfer of (II) from each extn. stage, other than the last to the next successive stage and discarding (II) from the last stage as de-sweetened scum, while transferring (I) from each extn. stage except the first and retg. (I) from the first stage for further processing. Randell J.T., Bennet R.G., Rich K.V. et al. Bul.13/5.4.79 8.5.74 as 024578 (8pp)

SANT- ★ D17 92567B/51 ★US 4177-953
Chopping, raising and cleaning machine for sugar cane harvester - with chopping cylinder ejecting chopped cane to cleaning ducts (BR 16.5.78)

SANTAL EQUIP COM SA 30.11.77-BR-007999 (26.08.77-BR-005738)

P12 + P41 (11.12.79) A01d-43 A01d-45/10 B02c-13/28

A sugar cane treating appts. includes a cylinder having a central rotating shaft carrying ≥ 1 radial fin having an external edge abutting the internal surface of the cylinder.

The cylinder has an entrance opening no higher than the level of the shaft to allow pre-cut cane billets to be fed transversely to the shaft. The cylinder also has a tangential outlet which allows the billets to be launched outside the cylinder by the action of the fin in a generally vertical path.

The duct is bent upwards and outwards and may be rotated by about 180° around a vertical axis passing through the centre of the discharge outlet. The duct is formed adjacent its base with two opposed openings having an external fan for providing a forced air stream through the opposed openings. 29.3.78 as 891282 (13pp295)

WESS- D17 86325B/48 =WP 7901-112
Washing particulate feedstock esp. starch in hydrocyclones - arranged as multistage enclosed system with partial final stage recycling

WESSANEN UK LTD 24.05.78-GB-022187

P41 (13.12.79) *EP--5-651 B03b-05/34 C08b-31 + C13k-01/08
D/S: N(CH, DT, GB, JA, I.U, OE, SW, SU).

In a multistage enclosed system for upgrading particulate feedstock, contaminating material is removed by wash liquid fed countercurrent to the feedstock. Pumps are positioned between stages and in the final stage a controlled portion of the underflow stream is returned to the inlet side of the pump which feeds this final stage.

The regulation of the amount of recycled liquid round the final stage is controlled by a calibrated orifice disc or a metering pump. Pref. all stages are operated under identical conditions and pref. include identical multi-hydrocyclones. Pref. the recycled portion is 15 to 40% of the vol. of the final stage underflow.

The appts. washes contaminating material from corn starch or potato starch. The recycling of the final stage creates in it working conditions similar to the other stages. This increases the removal of contaminants; reduces the amt. of wash water consumed; reduces the number of hydrocyclones needed in a stage, typically to 74; and reduces power consumption. 23.5.79 as GB0073(28pp295).

(E) ISR: FR1120588; 1 Journal Reference.

DASU- ★ D17 92771B/51 ★ZA 7805-165
Feeding sugar cane to disintegrator - by arranging it in trough-shaped channels which are oscillated

DANSKE SUKKERFAB A/ 27.09.77-DK-004272
(23.07.79) C13c C13d-01/06

See Also

D16 J5 4145282

D16 J7 9039475

D16 SU 655327

D18: SKINS; HIDES; LEATHER; TOBACCO

HAUN D18 72646S/46 =DS 2019-369
Tobacco drying plant

HAUNI-WERKE KORBER KG 22.04.70-DT-019369
P15 (13.12.79) *DT2019-369 A24b-09

The humidity of the dried tobacco on a drying conveyor is measured, and depending upon the measured value of the humidity, the heat content of the first and the second heating media are regulated. The first heating medium is blown in countercurrent in the form of a hot gas, through the material on the conveyor. The second medium heats indirectly through the dryer walls, and the heat content of the one medium is regulated with reference to the heat content of the other.

A control device is thus provided which is as cheap as possible and by which short term as well as long term variations of the inlet humidity are reduced to a required constant output value, without an excessively long convey-or being necessary. 22.4.70 as 019369 (8pp1045)

FARB D18 69993T/44 =DS 2118-363
Chloroparaffin sulphonic acid prodn - by sulfoxidation and subsequent chlorination of satd paraffins under irradiation

BAYER AG 15.04.71-DT-118363

E16 (13.12.79) *DT2118-363 + C07c-143/08

Chloroparaffin sulphonic acids and their alkali, ammonium or amine salts, are prepd. from 17-30C paraffinic hydrocarbon contg. ≤ 25 wt. % branched, unsatd. paraffinic hydrocarbons, by sulfoxidn. with SO₂ and oxygen, air or other O₂-contg. gases, to a paraffinic sulphonic acid content of 4-40 wt. %. Opt. part of the unreacted paraffinic hydrocarbons are removed, and the sulfoxidn. mixt. is chlorinated at 20-60°C with Cl₂ in the presence of air, and then opt. converted to salts by adding the appropriate bases.

Pref. sulfoxidn. is effected to a 12-34 wt. % paraffin sulphonic acid content (based on mixt.). The prods. are free of olefin sulphonic acids, and are suitable for greasing leather (opt. with addn. of (non)ionogenic emulsifiers) without forming salt by-prod. 15.4.71 as 118363 (4pp913)

AVP D18 83095Y/47 = DS 2618-924
 Tanning animal hides - using powdery mixt. contg. trivalent chromium cpd. and magnesite acid binder contg. magnesia and lime
 ZAV A ZAPOTOCKEHO 29.04.76-DT-618924
 E31 (E33) (13.12.79) *DT2618-924 C14c-03/06
 Powder mixt. for tanning animal skins comprises trivalent chromium cpd(s) in amt. to give 3-35% Cr₂O₃ and 0.5-25% magnesite contg. 60-90% MgO and 0.6-15% CaO. Pref. an additional acid binder (esp. CaCO₃) is included such that the basicity of the magnesite is $\geq 10\%$ total basicity.
 The mixt. is a self-basifying chromium extract. and no basifying or neutralising reactions occur between Cr cpds. and magnesite in the absence of water. so that the basicity of the Cr cpds. remains unaltered during storage. When used, basifying rate is uniform, alkali capacity of magnesite is consumed and tanning accelerated. 29.4.76 as 8924 (3pp913)

FRB ★ D18 91194B/51 ★ DS 2834-121
 Condensation product for tanning leather - prep'd. from terphenyl sulphonic acid, naphthalene sulphonic acid bis(hydroxyphenyl) phone and formaldehyde
 BAYER AG 03.08.78-DT-834121
 A97 (A26) (13.12.79) C08g-16/02
 Condensation prods. obtd. by cocondensation of terphenyl sulphonic acids (I), naphthalene sulphonic acids (II), bis-(4-hydroxyphenyl)-sulphate (III) and HCHO or HCHO producing prods. in an acidic aq. medium are claimed.
 The prods. are water soluble and may be used as tanning agents to produce white light fast leather and as post-tanning agents for tanned leather esp. for brightening and filling chrome leather.
 Pref. the mol. ratio of (I), (II), (III) and HCHO or HCHO forming cpds. is 1:2.2 to 2.0:0.3 to 3.5:0.65 to 5.2. Pref. condensation is carried out at 75-130 pref. 95-115°C. (I) and (II) are pref. prep'd. by sulphonation of a terphenyl/naphthalene mixt. 3.8.78 as 834121 (3pp952)

PAN ★ D18 91245B/51 ★ DT 2824-488
 Punching machine - with inflatable actuating bladder for low height and uniform force distribution
 STANZTECHNIK R GMBH 03.06.78-DT-824488
 P54 P62 (13.12.79) B23d-15/12 B26f-01/38 C14b-05
 Machine for parting materials, esp. for punching sheet and strip, is actuated by a bladder which can be inflated by a pneumatic or hydraulic medium. This acts on a divided carrier element to which a punching tool is attached and which is fitted with return springs.
 This machine has a much smaller overall height than conventional designs with a linear actuator. The force is applied in a uniformly distributed way and not linearly with the risk of deflections of the tool carrier. 3.6.78 as 4488 (45pp39)

MMN D18 83274Y/47 = GB 1558-103
 Aid application to absorbent material - keeping strip speed constant by pickups controlling drive and brake motors and applicator pump (NL 8.11.77)
 ROTHMANS CANADA LTD 04.05.76-CA-251800
 E15 P15 P42 Q36 + Q34 (19.12.79) *DT2719-793 B05c-11/10
 Liq. is applied to a material band by appts. which includes drive motor for driving a hub of a take-up spool for the band; a brake motor for the hub of a source spool for the band; guides for guiding the band between the spools; a liq. application located near the path of movement for the band; and a control mechanism to ensure uniform liq. application by controlling the drive motor, brake motor and applicator functions.
 The mechanism has a sensor for the speed of the band, pump control for the liq. connected to the speed sensor, drive motor control connected to the speed sensor to maintain the speed passing the applicator constant, and a brake motor control to keep a constant braking force on the band irrespective of the dia. of material. on the spool. 4.4.77 as 017198 (9pp1376)

MIPA ★ D18 91925B/51 ★ J5 4145-299
 Coloured cigarette paper - with humic acid layer free of water soluble humic acid salts and opt. contg. potassium or sodium tartrate
 MISHIMA SEISHI KK 04.05.78-JA-052795
 F09 P15 (13.11.79) A24c-05 D21h-05/16

A coloured cigarette-paper has a humic acid layer which contains mainly onlyhumic acid (II) or mainly (II) and one of (i) Rochelle salt or (ii) mixt. of potassium tartrate and sodium tartrate and does not contain water-soluble salt of (II).

The paper is prep'd. by (a) dissolving humic acid in aq. ammonia soln. of pH > 8 , (2) painting or printing this soln. on a cigarette-paper, (3) drying the paper and (4) heating the paper at a temp. higher than the temp. of drying in (3), to making (II) water-insoluble. Attractive papers can be produced inexpensively. (II) can be used without purification.

When (II) contg. a many amt. of gelatinous complex is used as raw material, one or more of Rochelle salt, mixt. of potassium tartrate and sodium tartrate and water-miscible organic solvent shall be added to the ammonia soln. for complete dissolution of (II)-raw material. As the organic solvent, methanol and ethanol are used. 4.5.78 as 052795 (9pp42)

SUMO D18 73261U/48 = J7 9039-441
 Leather treating compn - based on ethylenically unsatd ester/(halo) hydrocarbon copolymer
 SUMITOMO CHEMICAL KK 04.10.72-JA-100115
 A97 (28.11.79) *NL7306-402 + C14c-11 D06n-03/08

New copolymer consists of (I) a 4-22C ethylenically unsatd ester, and (II) an ethylenically unsatd 2-20C hydrocarbon or its halogenated derivative. Specifically the copolymer consists of 20-70 mole % (I) 30-50 moles % (II), and (III) 0.1-30 mole % of another vinyl cpd. (I) includes (m)ethyl, butyl, (meth)acrylate, ethyl crotonate etc. (II) includes propylene, isobutylene, but-1-ene etc. (III) is acrylic acid, acrylamide, acrolein etc. The copolymer is mixed with another polymer, pref. polyamide, polyurea etc. and inorganic powder, pref. SiO₂, Al₂O₃, etc. and dissolved in an org. solvent, pref. PhOH, acetone etc.

Compsn. prevents migration of dyes from the leather, and improves its resistance to solvents. Surface gloss and structure of the leather can be controlled. 4.10.72 as 100115, D06n-3/08, C14c-11/00 (28.11.79) SUMITOMO CHEMICAL CO. LTD. (6pp) (J4 9055801)

KUPO = ★ D18 92243B/51 ★ SU -654-686
 Treatment of pelts with agent which strengthens hair-skin linkage - consisting of aq. soln. of chloramine, esp. chloramine-B with addition of calcined soda and detergent
 KAUN POLY (KUFU) 12.07.77-SU-506613
 E12 (30.03.79) C14c-01

Pelts can be treated before the tanning with a soln. of an agent strengthening the linkage between the hair and the skin. Superior results are obtd. by using as a strengthening agent a 0.3-1.0 g/l soln. of a water-soluble chloramine esp. chloramine B.

Chiznaite V.A., Beleshka K.V., Skrodenis A.A. et al.
 Bul. 12/30.3.79 12.7.77 as 506613 (2pp70)

MATE = ★ D18 92324B/51 ★ SU -655-675
 Frost-resistant concrete mixt. - contg. Portland cement, filler, aq. waste of leather mfr. contg. sulphonated phenol-aldehyde resin and lignosulphonate, and water
 MAT TEC PROC PHYS (NIIM) 07.09.77-SU-522732
 A93 L02 (A21 D15) (08.04.79) C04b-13/24

Use of the aq. waste of leather mfr. (I) as water-soluble polymeric adduct increases the frost-resistance and mechanical strength of the concrete. The waste contains (in wt. %): sulphonated phenol aldehyde resin 1-15, lignosulphonate 1-10 and water the rest. The concrete mixt. comprises (in wt. %): (I) 0.03-0.6, Portland cement 10-25 filler 65-75 and water the rest.

Tests show that addn. of 0.3% (I) increases the strength of the concrete after 7 and 28 days from 210 and 380 to 280 and 450 MPa, and frost resistance from 50 to 100 cycles.

Cherkinskii Yu.S., Zhukova L.F., Khomenko N.B. Bul

13/5.4.79 7.9.77 as 522732 (2pp124)

LIGG- ★ D18 92553B/51 ★ US 4177-822
Tobacco compsns. contg. palladium salts - producing reduced amts.
of poly-cyclic aromatics on smoking

LIGGETT GROUP INC 27.01.77-US-763267 (26.03.73-US-344589)

E31 P15 (11.12.79) A24b-15-02

Smoking compsn. consists of tobacco (I) and 0.001-0.1%
(by wt. as Pd metal) of a Pd salt (II). (II) is an H₂O-solu-
ble Pd chloride, and can be decomposed by heat into metal-
lic Pd.

Compsns. pref. contain 0.01-0.06% of (II) which pref.
has particle size < 100 US mesh. (II) may be (NH₄)₂PdCl₄
etc. (and also Pd black), pref. (NH₄)₂PdCl₆. Reconstituted
tobacco sheet prods. contain 4-8% fibrous materials, 1-20
% binder, 3-9% casing (2.5-6% glycerine and 0.5-3% propy-
lene glycol), and tobacco (to 100%).

Incorporation of catalytic amts. of (II) into a variety of
tobacco prods. reduces the polycyclic aromatic content of
the pyrolysis reaction prods. of the tobacco. 27.1.77 as
763267 (+11.2.75-US-548983) (5pp478)

PHIM ★

D18

92731B/51 ★ US 4178-458

2,2-di:methyl-3-hydroxy-3-aryl-propionic acid ester cpds. - useful as
flavouring agents for tobaccos

PHILIP MORRIS INC 17.10.78-US-952077 (20.02.76-US-659691)

E14 (11.12.79) C07c-69/76

Esters of formula R-CH(OH)-CR'R"-CO₂R''' (I) are new,
(where (a) R = Ph, R' = R'' = Me, R''' = Me or n-amyl, (b)
trans-R is PhCH=CH, R' = R'' = Me, R''' = Et; (c) R = 3,4-
OCH₂OC₆H₃, R' = R'' = Me, R''' = Et).

(I) are useful as inexpensive flavouring and aroma pro-
ducing agents for a variety of tobacco prods. Thus (I) re-
lease cherry-like or fruity flavours or notes reminiscent
of Turkish tobacco on smoking, and the flavours are pre-
served during processing and storage.

The parent patent claims smoking compsns. contg. (I).
17.10.78 as 952077 Div.ex. 4036237 (+3.5.77-US-793400)
(6pp478)

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

ALBO/ ★ D21 B/51 ★ BR 7802-625
Dental resin injector
ALBORTA E G 26.04.78-BR-002625
A96 P32 (04.12.79) A61c-13/20

BRIM ★ D21 91179B/51 ★ CA 1067-411
Hair bleaching powder compsn. for mixing with aq. soln. - contg. oxidising agent, water swellable terpolymer as thickening agent, alkenoic acid, other unsatd. cpd. and polyether
BRISTOL MYERS CO 21.11.75-US-634213
A96 (04.12.79) A61k-07/13

A powder for mixing with an aq. medium to form a paste for bleaching human hair contains a solid particulate hair bleaching oxidising agent, and 0.1-10% of alkali metal, ammonium or arrine salt of a highly water swellable cross-linked copolymer consisting of $\geq 40\%$ of a polymerisable alkemoic acid, 0.60% of at least one other olefinically unsat'd monomer, and 0.1-10% of a polyether derived from a $\geq 4C$ polyal contg ≥ 3 OH gps, 2 of which on average are etherified by alkenyloxy gps.

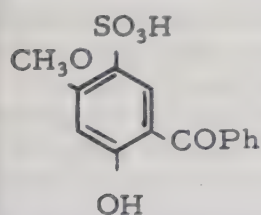
The compsn may be used with water or added to aq. H_2O_2 soln. as a booster. 28.5.76 as 253569 (14pp955)

GENA ★ D21 91184B/51 ★ DS 1643-400
3-benzoyl-4-hydroxy-6-methoxy benzenesulphonic acid - as ultraviolet absorber for cosmetics or plastics, prepd. by sulphonation under anhydrous conditions

GAF CORP 22.11.66-US-596072

A60 E14 (13.12.79) C09k-15/14

Use of 3-benzoyl-4-hydroxy-6-methoxy benzene sulphon-ic acid (I), prepd. by sulphonating 2-hydroxy-4-methoxy benzophenone (II) in the absence of water, as a UV absorber is new. (II) is reacted with $ClSO_3H$ in refluxing lower aliphatic halohydrocarbon solvent then (I) recovered in crystalline form from the cooled reaction mixt.



In cosmetics (sunscreening creams and aq. shampoos contg. dyes)

and for stabilising aq. dispersions of plastics and disperse dyes. (I) prepd. this way has better absorption characteristics than conventional hydrated (I), e.g. K value 45-50 compared with 40-42, and easier to handle. 3.11.67 as 643400 (3pp1251)

CTCH- D21 56171R/32 = DS 1771-224
Fast setting plaster of paris bandgages - containing no ammonia salts

CONTINENTAL CHEM CO (SMI /) 26.04.67-US-633708

A11 L02 + P34 (A96) (13.12.79) *US3523-806 + A611-15/07

Gypsum based dressing for orthopaedic applications etc. is made from a slurry consisting of an ammonium salt fr-ee aq. dispersion which contains 8-29% ammonia together with 0.4-5.17 dissolved dextrin relative to the wt. of ammonia and water. The slurry also contains per 100 pts. wt. gypsum 0.25-1.5 pts. wt. hydroxy ethyl methyl cellulose as binder.

The slurry has a setting time of a few hrs. Typically the setting time can be ≥ 70 hrs. By changing the proportions of the constituents this can be made shorter. By omitting the dextrin the setting time can be 1-2 hrs. 24.4.68 as 771224 (3pp926)

KYOW D21 79787Y/45 = DS 2717-002
Permanent wave compsn. - contains cysteine and (N)-acetyl cysteine and prevents crystal deposition or allergic reactions

KYOWA HAKKO KOGYO 19.04.76-JA-043609

E16 + P24 (13.12.79) *DT2717-002 A61k-07/09

Permanent waving agent for human hair contains as active components 3-15 wt. % cystein and 0.2-3 wt. % N-acetylcystein, based on total wt. of agent. Pref. the N-acetylcyst-ein is ≥ 10 wt. % of the cystein, and the two components

combined constitute 4-10 wt. % of the agent. The agent has a pH 7-10.

The agent can be used for hot or cold waving, and is free of prior art disadvantages e.g. skin allergic reactions, sp-litting of hair, damage to roots, fall-out, decolouration, deposition of cystein crystals on scalp, or during storage. The material is also cheap to produce. 18.4.77 as 717002 (5pp913)

KAMM/ ★ D21 91296B/51 ★ DT 2825-529
Mfg. pieces of floating soap - by bonding porous open cell plastic wafer to one side

KAMMER M 10.06.78-DT-825529

A97 (13.12.79) C11d-17/02

A piece of soap or other washing medium is joined at one end to a wafer, made of a plastic foam with a closed cell structure. On the side towards the soap, the wafer carries grooves, recesses and/or webs to improve the adhesion. On the free side, the wafer has a fine granular texture or fine grooves so it cannot slip on slightly inclined surfaces.

The complete piece of soap has thus a specific gravity of < 1 and will float on the water in a bath tub. The grain-ed underside can be used to massage the skin. A piece of soap can be used up, without wastage, to the last remnant. 10.6.78 as 825529 (6pp39)

SHIS ★ D21 91322B/51 ★ DT 2854-109
Thixotropic nail varnish with stable viscosity - contains gel prepd. from swollen organic modified montmorillonite, plasticised nitrocellulose and solvents (NL 11.12.79)

SHISEIDO KK 08.06.78-JA-069087

A96 E17 G02 (A11 A25 A82) (13.12.79) A61k-07/04

Thixotropic nail varnish contains a gel, dispersed as gel former, with (1) 10-30 (wt. %) chip mass, produced from (A) 25-70% organic modified montmorillonite clay, (B) 5-70% nitrocellulose and (C) 5-30% substance which can swell (A) and plasticise (B) under the action of heat and pressure, and (2) 70-90% organic solvent mixt.

The viscosity is stabilised about a week after mfr. of the varnish and does not continue to rise, so that even the last traces in a bottle can be used. Specifically, there is no need to use aromatic hydrocarbon solvents, e.g. toluene or xylene, which tend to cause embrittlement of the nail and other problems in time. 14.12.78 as 854109 (34pp016)

WEBE- ★ D21 91397B/51 ★ DT 2922-824
Tooth-cleaning dental floss - comprises nylon yarn covered with flocked-on, dentifrice-treated, nylon bristles

WEBER FAB ELEKTR AG 05.06.78-CH-006141

A96 P24 P32 (13.12.79) A46d-09/04 A61c-15

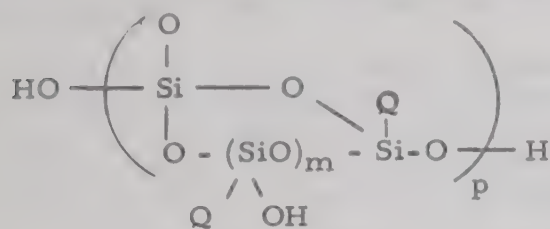
Implement for cleaning a person's teeth and/or esp. for removing food particles from between the teeth, comprises a carrier thread covered by flocking with radially extending bristles. The thread is flock-covered with bristles only zone-wise, its flock-free sections being at least partly coated with a wax.

Both the thread and the bristles are suitably made of a polyamide, at least part of the latter being coated with a dentifrice or a disinfectant. All components of the article may be coloured. For the flocking of the thread with the bristles, a physiologically acceptable adhesive is used. An acrylate may be suitable. The thread is polyamide-6,6 (7 dtex) and the bristles are 0.7 mm long. 5.6.79 as 922824 (11pp267)

MINN ★ D21 91399B/51 ★DT 2922-932
Oligomeric methacrylated siloxane prepolymer used in dental filler - is produced from purified methacrylated alkyl trialkoxy-silane free from inhibitor

MINNESOTA MINING CO 02.06.78-US-911892
A96 E11 (A14 A26) (13.12.79) A61k-05/06 C07f-07/21

Oligomeric methacrylated siloxane prepolymer (I) has the structure (in which each m independently is 1, 2 or 3. p = 2-10. Q is CH₂=CMeCO-X (CR₂)_n-. X is O, S or NR. The R gps. independently are H or max. 2R gps. can be 1-2 C alkyl. n = 3-12).



Q is CH₂=CMeCO-X (CR₂)_n-. X is O, S or NR. The R gps. independently are H or max. 2R gps. can be 1-2 C alkyl. n = 3-12).

Pure methacrylated alkyl-trialkoxysilane cpds. (II), which are used in the prodn. of (I) by hydrolysis and have the formula CH₂=CMe-CO-X-(CH₂)_n-Si(OR')₃ (in which R' is unsubst. 1-4C alkyl), are colourless and free from initiators (sic - inhibitors in text and examples) are also specified. When approx. equal amts. to which 1.5 wt. % benzoyl peroxide (III) and 3.0 wt. % N, N-bis-(hydroxyethyl)-p-toluidine (IV) have been added, are mixed thoroughly, an exothermic reaction with a substantial (at least 5-fold) increase in viscosity or solidification takes place within 20 mins. at ambient temp.

(I) is specified for use in dental filler compsns. It forms stable pastes, which can be polymerised by addn. of free radical initiators or by UV light after addn. of a photocatalyst and accelerator. 1.6.79 as 922932 (26pp)

NATR D21 09707Y/06 =GB 1558-175
Triazines contg. reactive halogen and amine bonded alkenyl - used in bonding dental resins to biological tissue

NATIONAL RES DEV CORP 09.07.75-GB-028927
A41 E13 (A96) (19.12.79) *DT2630-745 C08f-220/14 +C08f-226/02

New mixt. or copolymer is derived from (1) a cpd. of formula (I) (where R is 3-6C alkenyl and X₁ and X₂ are R-NH-C(=N)-N=C-X₂ each F, Cl or Br, and (2) a clinically tolerated resin having polymerisable olefinic double bonds. Specifically R is allyl and X₁ and X₂ are both Cl; and the resin is a dental resin comprising mono-meric or incompletely polymerised

methyl methacrylate or diacrylate ester of 2, 2-(bis-p-phenoxyphenyl)-propane.

The mixt. or copolymer is used to bond polymeric materials to biological tissue, partic. dental enamel, dentine or bone. 9.7.75 as 028927 (3pp964)

STAH D21 49747A/28 #GB 1558-328
Crosslinked maleic anhydride-indene copolymer - with di:vinyl benzene or other vinyl crosslinker, is an aq. thickening agent for cosmetics, pharmaceuticals washing liquid etc.

STANDARD OIL CO (OHIO) 26.11.76-US-745203 (14.02.78-GB-005814)

A13 B07 G02 (A14 A82 A96 A97) (19.12.79) *BE-863-909 C08f-212/36 C08f-220/54 C08f-222/06 C08f-226/06 C08f-232/08

Crosslinked, water-swellaable solid polymer compsn. is prepd. by the polymerisation of a monomeric mixt. of maleic anhydride, indene and a crosslinker (I) with ≥ 1 CH₂=C gp.

Pref. (I) is present as 0.01-10 wt. % by wt. of other monomers. Pref. the maleic anhydride and indene are used in approximately equimolar proportions. Polymerisation is pref. effected in an inert diluent which has some solubilising action on ≥ 1 of the monomers but none on the polymer prod.

Compsns. are useful as water thickeners and suspending agents useful in cosmetics pharmaceuticals, cleaning and polishing cpds., latex coating applications, textile printing, well drilling and water purificn. 14.2.78 as 005814 (3pp936)

PROC ★ D21 91492B/51 ★GB 2022-415
Hair conditioning article contg. conditioner - and soluble salt in separate coatings on flexible substrate

PROCTER & GAMBLE CO 06.06.78-US-913139
E37 (E12) (19.12.79) A61k-07/06

Hair conditioning article comprises a flexible substrate having a first releasable coating of 0.3-15 (1.5-3)g/sq.m. of water-soluble salt (I) and second releasable coating of 1.5-20 (6-15)g/sq.m. of a normally-solid hair conditioner

(I) is ≥ 1 of (a) Na, K, NH₄ or Mg halides, sulphates, (acid) phosphates, borates, acetates, formates or benzoates; (b) Al hydroxychloride or sulphate; (c) Zr oxychlor sulphate or hydroxychloride; or (d) Mn acetate, MnSO₂ or MnCl₂.

The substrate is paper or (non)woven cloth (esp. non-woven cloth) and has size 7x10 to 50x80 cm. Pref. (I) is KCl or NaCl and the conditioner is esp. ditallow dimethylammonium chloride (II).

When hair (pref. still wet after shampooing) is rubbed with the particle, combing, detangling, static fly-away, softness and manageability are improved. These devices are more convenient than liq. viruses and allow the conditioner to be applied exactly where needed. 5.6.79 as 919629 (10pp1251)

OSOL ★ D21 91643B/51 ★J5 4143-529
Aerosol shaving foam compsn. - prepd. by use of oleic acid as fatty acid component, giving stable foam at low temps.

OSAKA AEROSOL KOGYO KK 27.04.78-JA-049218
E17 (08.11.79) A61k-07/15

New aerosol shaving foam compsn. is obt'd. by incorporating 0.5-7.0 wt. % of oleic acid as the fatty acid component in the soln. to be foamed during its prepn. By replacing fatty acid component such as palmitic, stearic, myristic acid, etc. in the soln. to be foamed partly or wholly with oleic acid, an aerosol which can provide stable foam at low temp. (0-10°C) can be obt'd. not only when using triethanolamine, but also when KOH or NaOH as saponifying agent.

Apart from the fatty acid component, the aerosol can be prepd. as usual. Pref. oleic acid is incorporated in an amt. of 0.5-7.0wt. %, pref. 1.0-5.0 wt. % in the soln. to be foamed, but oleic acid-soap forms a little weak foam. This problem can be overcome by using oleic acid together with stearic acid and myristic acid. Thereby the foam of stearic acid-soap and myristic acid-soap can also be improved. 27.4.78 as 049218(5pp5)

LIOC ★ D21 91644B/51 ★J5 4143-530
Oral compsn. for preventing tooth decay - contains poly(meth)acrylic acid opt. in alkali metal salt form

LION DENTIFRICE KK 26.04.78-JA-049634
A96 B05 (08.11.79) A61k-07/16

Oral compsn. contains 0.005-0.5 wt. % of polyacrylic acid polymethacrylic acid or one of their alkali metal salts in the free state, and has pH 5-10. Compsn. is in a pastry or solid form and has a good texture. Thus it can be favourably used in dentifrice, troche, plaster, fluoride gel, etc.

A 0.0025 wt. % Na polyacrylate soln. prevents decay more effectively than a 0.005 wt. % chlorohexylidene soln. 26.4.78 as 049634(9pp5)

DAIL ★ D21 91916B/51 ★J5 4145-22
Base material for cosmetics - comprises 2-hydroxyalkyl polyol ether with m. pt. 25-100 degrees Celsius

DAICEL KK 02.05.78-JA-052928
E17 (13.11.79) A61k-07

Base material (I) for cosmetics comprises a 2-hydroxyalkyl polyol ether (II) having 10-20C 2-hydroxyalkyl and m. pt. 25-100°C. Specifically (II) is obt'd. by the reaction, in the presence of a suitable catalyst such as tert. amine, of (a) 10-30C 1,2-epoxyalkane (e.g. 1,2-epoxydecane, 1,2-epoxydodecane, 1,2-epoxyhexadecane, etc.) and (b) polyol, such as dihydric alcohol (ethylene glycol, propylene glycol, butylene glycol), trihydric alcohol (glycerin, trimethylol propane), polyalcohol having ether bond) diethylene glycol, triethylene glycol).

(I) is softened adequately and spreads onto the human skin to form a water-repellant, soft, thin film. (10)

stable in wide pH-range, and is non-toxic to the skin, (II) impart a wet feel to the skin. Typically (I) is prepd. by mixing 25-90 wt. % of (II) and oils such as sesame oil, cotton oil, fish oil, etc., higher alcohol, and other additives. 2.5.78 as 052928(4pp42)

POKK ★ D21 91917B/51 ★ J5 4145-225
Cosmetic with suppressed skin stimulation - comprises anionic surfactant-contg. cosmetic base and polyethylene glycol
POLA KASEI KOGYO KK 04.05.78-JA-053561
A96 (A25) (13.11.79) A61k-07

The cosmetic comprises (1) cosmetic-base-material contg. anion surfactant (II) as essential component and (2) 10-90 (10-30) wt. % polyethylene glycol. The skin stimulation of cosmetic is suppressed without the addition of anti-allergy agents and/or antiphlogistic agents. The compsn. is used in milk lotion, stick-cosmetics, shampoo, linse, face-cream etc.

Examples of cosmetic base are Na laurate, triethanolamine stearate, Na-polyoxyethylene lauryl ether carboxylic acid salt, Na glutamate, etc. 4.5.78 as 053561(4pp42)

SHIS ★ D21 91993B/51 ★ J5 4145-603
Rapid ageing of alcohol solns. - by jetting monovalent alcohol into hot water or vice-versa through nozzle fixed in ageing device
SHISEIDO KK 08.05.78-JA-054211
B05 E17 (D16) (14.11.79) C07c-29 C07c-31/02

Monovalent alcohols (1-4C) are aged quickly by jetting 1-4 C monovalent alcohols into hot water or through a nozzle in a ageing device. The method is used to cause physical change of cosmetics, medicines and liquor. The alcohol solns. obtd. are less irritant to the skin.

Monovalent alcohols include e.g. ethyl alcohol, isopropyl alcohol, n-butyl alcohol. The water held at 20-90 (30-70) °C is used. In an example 600ml of distilled water is heated at 50 °C with stirring. 200 ml. of ethyl alcohol (95%) is jetted into the hot water from a nozzle under a pressure of 0.2 kg/cm². The homogeneous soln. obtd. is cooled to 25 °C. 8.5.78 as 054211(3pp136)

GILL ★ D21 92199B/51 ★ NL 7904-061
Self lubricating safety razor head - moulded from mixt. of hydrophobic polymer and water leachable hydrophilic polymer
GILLETTE CO 31.05.78-GB-024749
A96 P62 (A18) (04.12.79) B26b-21/44

Safety razor has a shaving head with ≥1 blade situated in a moulded polymeric carrier having protective and capping surfaces which are in contact with the skin. The carrier is moulded from a polymer comprising a mixt. of ≥1 hydrophobic polymeric material and ≥1 water-leachable hydrophilic polymeric material. The head is pref. moulded from a mixt. of 85-5 wt. %, esp. 50-60 wt. % of a hydrophobic polymer such as polystyrene, polyethylene, polypropylene or polyacetal, and 15-95 wt. %, esp. 50-40 wt. % of a leachable hydrophilic material such as polyethylene oxide, PVC, polyacrylamide, hydroxypropylcellulose, polyvinylimidazole or polyhydroxyethylmethacrylate.

By using the stated polymer mixt. in the moulded razor head, the skin need only be wetted with water before shaving. The hydrophilic polymer is leached out by the water in the shaving area and acts as a lubricant for the blade, so that shaving soap or cream is no longer required. 23.5.79 as 004061 (14pp513)

MIRA- ★ D21 B/51 ★ RU --68-401
Moisturising cosmetic cream - comprises saponified wax, vaseline, wax salts, pectin and methylcellulose
MIRAJ INTR COSMETIC 25.09.76-RU-087683
A96 (30.11.78) A61k-07/40

CIBA ★ D21 92222B/51 ★ RD -188-031
Storage stable cosmetic compsn. for treating skin, etc. - comprises an active ingredient, diethylamino:ethyl stearamide as emulsifier and a liq. carrier
CIBA-GEIGY UK LTD 20.11.79-RD-188031
B07 E19 (10.12.79) A61k-00/*

Cosmetic compsns. comprise an active ingredient, diethylaminoethyl stearamide or its salt as emulsifier, and a liq. carrier. The cosmetic compsn. may be e.g. a cosmetic cream such as a cleansing or cold cream, a night or massage cream, a foundation or vanishing cream, a hand or

body cream, an all-purpose cream or an emulsified lotion e.g. hand or face lotion, hair dressing lotion, tonic or rinse, foot lotion, medication lotion, baby lotion, suntan lotion or a liq. cream sachet.

The active ingredients present may be any agent known to improve or protect the skin e.g. an antimicrobial or antibiotic agent, a hormone, nutrient or vitamin prepn., UV absorber e.g. para-amino benzoic acid or an aliphatic esters or perfumes. Pref. the proportion of the active ingredient is 0.01-5 (0.05-1) wt. % based on the total wt. of the compsn. The proportion of the diethylaminoethyl stearamide in the compsn. is pref. 0.1-10% (0.2-1) wt. % based on the total wt. of the compsn. The

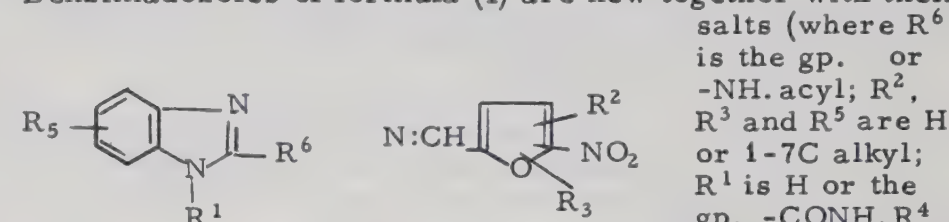
The cosmetic compsns. are stable on storage and, relative to known compsns. increase the durability of the active ingredient on skin treated with the compsns. (982)

CHIN D21 05755Y/04 = SU -655-315
Antifungal substd. benzimidazoles - substd. by acylamido or nitro furfurylidene amino gps., used in human and veterinary medicine, agriculture and as disinfectants

CHINOIN GYOGYSZER 16.09.75-HU-C11605

B02 C02 E13 (10.04.79) *BE-846-215 A01n-09/22 C07d-235/30 + C07d-491/04

Benzimidazoles of formula (I) are new together with their



R⁴ is opt. substd. cycloalkyl, alkyl or aryl). 15 cpds. including 2-(5-nitrofurfurylidene)-aminobenzimidazole, 2-(5-nitrofurfurylidene)aminobenzimidazole are specifically claimed.

Cpds. are useful for disinfectants and fungicides for use in human and veterinary medicine, in cosmetics, pesticides and for use in agriculture. Esp. active against Fusarium, Basithiomyces and Helminthosporium. Esp. used against Tilletia tritici on wheat, Fusarium nivale on rye and Cerospora baticola on sugar beet.

Tot G., Tot I., Bul.12/30.3.79 16.9.76 as 399449 (2pp)

RIHO= ★ D21 92276B/51 ★ SU -655-391
Tooth filling amalgam prepn. - by mixing silver alloy shavings, mercury and ammonia

RIGA HOSPITAL 20.12.77-SU-591072

M26 P32 (08.04.79) A61c-05/06

The amalgam used for tooth cavity filling usually is prepd. by mixing silver alloy shavings with mercury and resulting amalgam cleaning. Now in order to improve amalgam quality 40-60 % wt. of ammonia soln. is added prior to mixing.

For example to prepare 1.2g of the filling mass, 0.5g of mercury and 0.7 g of silver alloy shavings are used. When the amalgamation chamber size is 26 mm the prepn. time is 10-12 sec. When the chamber is opened the ammonia soln. with dissolved silver oxides is removed with a piece of cotton wool.

Garleis V.A., Bul.13/5.4.79 20.12.77 as 591072 (2pp110)

FARB D21 87799A/49 = US 4177-563
Two/part dental filling paste compsn. - contains synthetic resin binder pref. bisphenol/A deriv. and UV absorbing or diffracting fillers

BAYER AG 25.06.77-DT-728764

A96 (A14) (11.12.79) *BE-867-576 + C08k-03/22

Formulated dental filling material, in the form of a polymerisable organic plastics material contg. inorganic fillers, comprises ≥2 pastes in intimate admixture in a paste/paste system in which hardening is initiated by a peroxide initiator and an accelerator. The pastes contain different inorganic fillers with different chemical constitutions such that one of the pastes contains a filler (I) with a substantially higher proportion of elements with high atomic number than does the other of the pastes.

Pref. compsn. contains a mixt. of polymerisable derivs of bisphenol A and dimethacrylates of aliphatic glycols as binder. Pref. (I) comprises a glass and/or glass ceramic

contg. a high proportion of elements which absorb X-rays well or scatter them considerably.

The X-ray opacity of the filling material can be adjusted to the clinically desired value. 19.5.78 as 907639 (8pp927)

TELE- D21 90119R/48 =US 4178-362

Toothpaste contg a hydrogen-peroxide - liberating enzyme

TELEC SA (TEL -) 03.06.69-NL-008379

(11.12.79) *BE-751-390 A61k-07/28 + A61k-09/68

Enzyme dentifrice chewing gum or tablet consists of ~0.5-20 units per g./ml. of glucose oxidase enzyme which forms hydrogen peroxide by oxidative decomposition of a glucose substrate present in saliva and tooth plaque.

The H_2O_2 is formed in a continuous concn. of $>10^{-4}\%$, the unit being the quantity of enzyme which will oxidise 1 μ mole of substrate per minute at 30°C. and pH 6. The gum or tablet is applied to a dental surface of acid pH to restore pH to neutrality. Pref. the compsn. includes aminoglucosidase. 9.11.78 as 959162 (+22.5.70; 21.7.72; 9.4.73; 23.1.76; 19.1.78-US-039887; 276390; 349317; 651862; 870815) (6pp964)

MILL/ ★ D21 92679B/51 ★US 4178-363

Reducing dental plaque and pellicle precursor - with compsns. contg. undecenoic acid and zinc undecylenate

MILLER T C 09.05.78-US-904335

B05 E17 (E12) (11.12.79) A61k-07/16 A61k-31/20

Dental plaque and pellicle precursor of plaque are reduced by brushing or irrigating the teeth with a dental compsn. contg. 2 wt.% undecylenic acid (I), and 2 wt.% by wt. of Zn undecylenate (II).

Method improves oral hygiene by preventing yeast and other infections, reducing tooth decay caused by bacteria, reducing the bacterial count in the mouth, and reducing and preventing plaque formation on teeth. Angular Cheilosis-chronic soreness is improved. 9.5.78 as 904335 (7pp478)

RUCK/ ★

D21

92680B/51 ★US 4178-364

Hair shaving method reducing pseudofolliculitis barbae comprising applying di:methyl polysiloxane fluid coated razor to water-wetted skin

RUCKER J 08.08.75-US-603145

A96 P62 (A26) (11.12.79) A61k-07/15 B26d-07/08

Shaving method comprises washing the skin clean and wet with water to provide a first colourless transparent first liq. phase over the skin area from which the hair is to be shaved, spreading a drop of water-immiscible fluid consisting of dimethyl polysiloxanes of viscosity 600-700 cs. across the length of the razor edge to produce a further colourless, transparent liq. phase repellent to the first, and moving the razor edge across the wet skin area.

A sharply defined low frictional interface is created between the two liq. phases, so that the razor edge slides smoothly across the skin and cuts cleanly close to the skin with minimal pull on the hair and frictional resistance between the skin and razor edge. The need of shaving cream and soaps is eliminated and the shaved area can be viewed during the act. The method reduces the problem of pseudofolliculitis barbae. 8.8.75 as 603145 (4pp558)

RORE ★

D21

92683B/51 ★US 4178-373

Coal tar gel topical compsns. for treating eczema and psoriasis - contg. a sarcosine deriv. and fatty acid glyceride as solubilisers

RORER W H INC 21.08.78-US-935341

B05 (11.12.79) A61k-31/61 A61k-47

Compsn. comprises a gelling agent (I), 0.5-20% coal tar, 2-10% of a fatty acid deriv. of sarcosine (II) (the fatty acid has 6-16C) and 25-75% of a glyceryl ester of a fatty acid (III) of 6-22C and having m.pt. of -20 to 80°C.

The vehicle solubilises sufficient coal tar to give a compsn. suitable for topical treatment of skin disorders, while being dermatologically beneficial, stable, and pharmaceutically acceptable. 21.8.78 as 935341 (3pp1248)

See Also

D13 GB 2022459

D22 US 4178375

D23 J5 4144352

D23 J5 4144353

D22: BANDAGES; DRESSINGS

FARE/ ★

D22

B/51 ★BR 7802-900

Insect repellent and air disinfectant

FARES N F 09.05.78-BR-002900

P34 (04.12.79) A61I-09/*

HETO

D22

44257X/24 #DS 2512-288

Cyanacrylate ester adhesive - contg. fluorinated alkyl (meth)acrylates giving high bond strength and stability

HETEROORG CPDS AS USSR 19.03.75-DL-184878 (20.03.75-DT-512288)

A14 G03 (A96) (13.12.79) *DL-119-433 C09j-03

New adhesive comprises 1-7C alkyl α -cyanoacrylate(s) and/or allyl α -cyanoacrylate, (70-90 wt.%); acrylic ester (s), esp. fluorinated derivs. of formula $CH_2=C(R)COOCH_2(CF_2CF_2)_nH$ or $CH_2=C(R)COOCH_2(CF_2)_mCF_3$, (10-30 wt.%); and a radical polymerisn. inhibitor, (0.01-0.05%), esp. hydroquinone or methylhydroquinone. In the formulae, R is H or Me; m is 1-2; and n is 1-3.

The prods. rapidly produce a strong bond to a wide range of materials, esp. glass, metals, wood and plastics. 20.3.75 as 512288 (6pp047)

FAME- ★

D22

91366B/51 ★DT 2921-876

Baby's disposable napkin pants - featuring piece of plastics film with recess contg. absorbent pad fixed with tape

FAMECCANICA SPA 05.06.78-IT-024191

A96 P21 (13.12.79) A41b-13/02

Baby's diaper or "panties" has a piece of water-proof, esp. plastics, material forming an outer ply, with a depression between longitudinal and transverse side strips. The depression is packed with an absorbent pad.

Plastics, liq.-retaining strips are provided which are fastened to the longitudinal and transverse strips by means of a 1st tape and have a 2nd tape that covers marginal sections of the depression or of the pad in it. The

2nd tape is suitably made of polyethylene, PVC, polypropylene, polyester or a polyamide. The claimed article is a "throwaway" i.e. a disposable, prod. 30.5.79 as 921876 (16pp267)

CIBA ★

D22

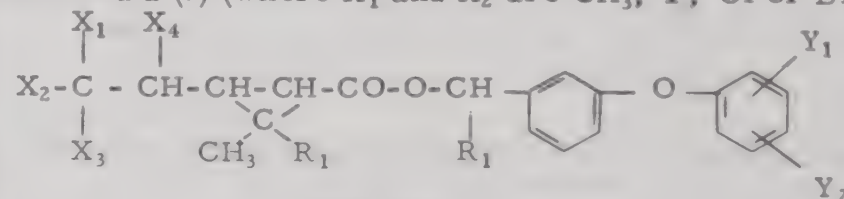
91412B/51 ★DT 2923-217

Protection of keratin-contg. materials against attack by insects - e.g. clothes moth, using phenoxy-benzyl halo subst. cyclopropane carboxylate pyrethroid insecticides

CIBA GEIGY AG 12.06.78-CH-006384

C03 E14 F06 (13.12.79) D06m-03 D06m-13/16

In protecting keratinic or keratin-contg. materials against attack by keratin-eating insects or against eating by insects, the material to be protected is treated with cpds. of formula (I) (where X_1 and X_2 are CH_3 , F, Cl or Br; X_3



(I)

and X_4 are Cl or Br; R_1 is H, CH_3 or C_2H_5 ; R_2 is H, CH_3 , CN, ethynyl or vinyl; and Y_1 and Y_2 are H, F, Cl, Br, CH_3 or CF_3). New agents for finishing of wool-contg. materials, pelts and skins contain >1 cpd. of formula (I).

(I) have good activity against keratin-eating insects (esp. against the larvae of clothes moth, pelt moth and pelt and carpet beetles) and are fast to light and washing 8.6.79 as 923217 (18pp280)

PROC D22 94323X/51 =GB 1558-198
Continuous mfr. of composite non woven matting - for disposable cloths with good drape and hand properties

PROCTER & GAMBLE CO 06.06.75-US-584312

A94 F04 + P73 (A23 A96) (19.12.79) *BE-842-632 D04h-03/14

Nonwoven fabric of low basis weight and/or high porosity with good draping qualities comprises two types of organic polymer fibre, one elastomeric and the other stretchable but non-elastic. One type is dispersed to give frequent random fibre crossings, most or all autogeneously bonded with strength sufficient to allow stretching of non-elastic fibres between bonds without bond breakage.

The crossings include bonds both within and between the types. The elastomeric fibre is pref. polyurethane and the non-elastic is polypropylene or polyethyleneterephthalate, and each comprises melt spun filaments mechanically drawn into 0.5-1.5 denier filaments. 4.6.76 as 023227 (17pp1358)

PROC D22 94323X/51 =GB 1558-199
Continuous mfr. of composite non woven matting - for disposable cloths with good drape and hand properties

PROCTER & GAMBLE CO 06.06.75-US-584312

A94 F04 + P73 (A23 A96) (19.12.79) *BE-842-632 D04h-03/04

Nonwoven fabric with low basis weight and/or high porosity and/or low elasticity and with good draping qualities is made by melt-spinning filaments downwardly, engaging against a flat porous draw member as a spaced flat skein and holding against the member by suction, then moving the member in a closed loop path to draw the filaments.

Gas is blown through the member in alternate directions obliquely towards opposite sides of the member to strip the filaments and direct them in a wave pattern onto a porous forming element moving in a closed loop at less than drawing speed to form a web. The member is pref. a twill weave belt and the filaments are of elastomeric polyurethane and non-elastic polypropylene or polyethyleneterephthalate and are bonded at crossing points. 4.6.76 as 008152 Div ex 1558198 (16pp1358)

JOHJ D22 03086A/02 =GB 1558-220
Adhesive bonding agent

JOHNSON & JOHNSON 18.05.76-US-687563

A81 G03 (19.12.79) *J52140-544 C081-53/02 + C081-57/02

Novel pressure-sensitive adhesive compsns. comprises a thermoplastic elastomeric component (I) and a resin component (II). (II) is a tackifier resin for (I) and is at 20-300 pts. wt. per 100 pts. wt. (I).

(I) comprises 55-85 wt. % simple A-B block copolymer and 15-45 wt. % linear A-B-A or radial (A-B-)_nX block copolymer. A blocks are derived from styrene (derivs). and are at 10-18 wt. % (w.r.t. A-B) and >20 wt. % (w.r.t. (I)). B blocks are derived from isoprene in the A-B polymer or from conjugated dienes or 2-6C alkenes in the other polymer. 17.5.77 as 020692 (4pp974)

ALLI-★ D22 91485B/51 ★GB 1558-273
Bacteriostatic compsn. for paper, cardboard, etc. - contg. three different quaternary ammonium cpds.

ALLIANCE SMURFIT CA 16.06.76-GB-024843

E14 F09 P34 (19.12.79) A611-13

The bacteriostatic compsn. consists of a soln. of (a) a quaternary ammonium salt having two 1-4C alkyl gps. an 8-18C alkyl gp. and an opt. substd. phenoxy alkyl gp. bonded to the N atom; (b) a quaternary ammonium salt having two 1-4C alkyl gps. a benzyl gp. substd. by an 8-18C alkyl, and an hydroxyalkyl gp. bonded to the N atom, and (c) a quaternary ammonium salt different from (a) and (b) and contg. an 8-18C alkyl gp.

The compsn. is useful for controlling bacteria etc. on paper, cardboard, fibreboard etc. esp. when these materials are intended for food packaging. It may be applied directly, or added to adhesives used for bonding layers of laminates or labels. 14.6.77 (3pp955)

BENS/★ D22 91499B/51 ★GB 2022-448
Brine prodn. by water injection into gravel bed below salt layer - the injection being downwards from a perforated pipe

BENSIMAN V 07.06.78-FR-017071

E34 (19.12.79) B01f-01

Brine is produced by injecting water from a pipe into a bed of gravel covered with a layer of salt disposed within a tank. The pipe has downwardly directed perforations for discharging the water into the gravel bed.

The method produces brine of uniform concn. at a vol. of 500-1000 l/day. The water is supplied to the pipe at a controlled rate. The brine is collected by overflow from the tank, and is filtered after that. 6.6.79 as 019700 (5pp1050)

COUR ★ D22 91512B/51 ★GB 2022-505
Highly absorbent regenerated cellulose fibres - having a cellulose wall with substituent gps. or a dispersed polymeric material

COURTAULDS LTD 11.07.79-GB-024122 (12.04.78-GB-014298)

A11 F01 (A96) (19.12.79) D01d-05/24

Regenerated cellulose fibres comprise a cellulosic wall defining a lumen, the cellulose wall incorporating substituent gps. on the cellulose and/or a dispersed polymeric material, the gps. or polymeric material serving to increase the liq. absorbency of the fibres.

The use of a cellulose ether, e.g. a carboxy-alkyl cellulose such as Na carboxy-methyl cellulose, an alkali metal or ammonium salt of polyacrylic acid or an acrylic acid-methacrylic acid copolymer, e.g. Na polyacrylate, an N-vinyl amide polymer such as poly(vinyl-pyrrolidone) carboxy-alkylated starch or poly(ethylene glycol) as the dispersed polymer; and carboxy- or hydroxy-ethyl as the cellulose substit. gps. is claimed.

The fibres are useful for the mfr. of swabs, dressings, and catamenial tampons. They usually have a water imbibition of 150-300%. 11.7.79 as 024122 (4pp558)

TOWA-★ D22 91632B/51 ★J5 4143-501
Insect control in wood - by impregnating with aq. soln. contg. boron cpd., and an amine

TOWA MOKUZAI KK (YAMA-DAIL) 28.04.78-JA-051767

C03 E19 F09 P63 (E36) (08.11.79) B27k-03/02

Method comprises impregnating an aq. soln. contg. boron cpd. (e.g. boric acid) and amine with the molar proportion of 1:0.1-3 and treating it through (a) the restoration of pressure and/or the loading of pressure or (b) drying.

By combining (e.g. alkylamine, alkanolamine, polyvalent amine, cyclic amine, etc.) boric acid can be easily dissolved in water to the prescribed concn. in a short time and the soln. can be kept liq. at above -2°C. Thus the contact of the solution and wood can be practised at normal temp. Further the amine-boric acid compsn. shows strong affinity to water and can be easily impregnated in wood rapidly. Thus the method can be adapted for the wood having moisture content as low as above 25 wt.%. Practically the amine-boric acid solution having boric acid concn. 10-30 w/w% can be used and pH of the soln. is previously adjusted to 7-7.5 with acid. 28.4.78 as 051767 (9pp5)

HISM ★ D22 91635B/51 ★J5 4143-517
Cataplast of good softness and adherence - contains uncured elastic block copolymer water-in oil type emulsion and active component

HISAMITSU PHARM KK 28.04.78-JA-051908

A96 B07 (08.11.79) A61k-09/70

Cataplast (I) is prepd. by using as base ingredients A-B-A type uncured elastic block copolymer and W/O type emulsion and adding a pharmacologically active component there-to. A is e.g. styrene and B is butadiene.

Various disadvantages of known cataplasts including weak stickiness of cataplast to skin due to low viscosity, low adhesion and bad softness can be overcome by (I). (I) can be preserved at low temp. below 0°C for along time without losing softness. 28.4.78 as 051908 (9pp104)

ENCL-★ D22 91645B/51 ★J5 4143-531
Semi-solid aromatiser compsn. prepn. - by mixing liquid perfume with substance which is semi-solid at room temp. e.g. low molecular wt. synthetic polymer

ENCLER BUSINESS KK 25.04.78-JA-049654

A97 E17 (08.11.79) A61k-07/46

The compsn. is prepd. by combining 10-150 pts. wt. of the liquid perfume, in which 1-60 pts. wt. of flower wax is combined, in 100 pts. wt. of a cpd. which is semi-solid at normal temp. such as natural or synthetic higher fatty acid-higher alkylester, natural or synthetic higher fatty acid-glyceride, natural or synthetic hydrocarbon and low

molecular synthetic polymer. The aromatising device consists of (a) the semi-solid aromatiser compsn. or a substance spread with the compsn., (b) a fan, from which air is forcibly blown on (a).

The aromatiser compsn. has high effective perfume content and can form fragrance continuously for long periods. 25.4.78 as 049654(6pp5)

MITO ★ D22 91691B/51 ★ J5 4143-765
Decomposition deodorisation of malodorous exhaust gas - by injecting ozone at several points along gas passage such that relation of reaction rate and molar ratio of ozone to gas is constant

MITSUBISHI HEAVY IND KK 01.05.78-JA-050741

E37 J01 P34 (E19) (09.11.79) A611-09/* B01d-05/33

Decomposition deodourisation of mal odorous exhaust gas, e.g. contg. H_2S , NH_3 , methylmercaptane, methylsulphide and methylamine etc. is improved by providing ozone-injecting means in a passage for the exhaust gas, and injecting ozone from the injecting means in such a manner that the ratio between amt. of a remaining portion of the malodorous substance and amt. of ozone becomes constant at the ozone becomes constant at the ozone-injecting points.

The relation between the reaction rate and the molar ratio (between the malodorous substance and ozone) is constant over a wide range of exhaust gas passage. The total reaction rate is elevated by supplying in succession ozone to the exhaust gas along the stream even in such case that the total ozone injecting amt. is constant. 1.5.78 as 050741(2pp34)

ASAH ★ D22 91909B/51 ★ J5 4145-208
Poultice compsn. - comprises pharmaceutical powder, e.g. kaolin; liq. e.g. glycerine; essential oil; and fine crystalline and/or powdered cellulose

ASAHI CHEMICAL IND KK 02.05.78-JA-052264

B07 (13.11.79) A61k-47

Poultive compsn. comprises a pharmaceutical powder, liq. substance, essential oil component and fine crystalline cellulose and/or powdered cellulose.

Pharmaceutical powder is a mineral powder such as kaolin, bentonite, beangum, silica gel and/or boric acid, and comprises 40-60 wt.% of poultice compsn. Liq. substance is glycerine, propylene glycol and/or water; when non-aq. liq. is used, usually 40-50 wt.% is added. Essential oil component is peppermint oil or methyl salicylate. Fine crystalline cellulose or powdered cellulose is a partially depolymerised α -cellulose depolymerised by acidic hydrolysis or alkaline oxidative decomposition. They are used in an amt. of 1-10 wt.%.

Typical compsn. comprises 110 kaolin powder, 10 boric acid, 80 cmc. glycerine 0.1 thymol, 0.5 methyl salicylate, 0.1 peppermint oil and 2.5 fine crystalline cellulose-Abicell PH-101 (RTM, Asahi Cehmical Co. Ltd.) Prod. strips smoothly from cellophane, is not sticky, has good contact with the skin, has moderate viscosity and does not cause flash. 2.5.78 as 052264(3pp69)

NAKA- ★ D22 91918B/51 ★ J5 4145-234
Germicidal compsn. - comprises organic acid(s) and inorganic salt(s) and/or alcohol(s)

NAKANO SU MISE KK 04.05.78-JA-052689

E19 (D13 E37) (13.11.79) A231-03/34

A compsn. (I) for use as a germicidal agent is composed of one or more organic acids (II) and one or more of inorganic salts (III) and alcohols (IV). (II) are pref. acetic acid, vinegar, monosodium fumarate, citric acid, succinic acid, malic acid, lactic acid, tartaric acid and gluconic acid.

(III) are pref. $NaCl$, KCl , NH_4Cl , $MgCl_2$, $CaCl_2$, (IV) is pref. ethanol.

Pref. combination of (II), (III) and (IV) is (1) vinegar or acetic acid, (2) monosodium fumarate, or citric acid or tartaric acid, (3) $NaCl$ and (4) ethyl alcohol. The wt. ratios of (III)/(II) and (IV)/(II) are 0.03-27, e.g. (0.33-3), and 2.2-3980, e.g. (20-180). When (I) is used, it is diluted to a (II)-concn. of 0.01-1 wt.% or a (III)-concn. of 0.1-10 wt.% or a (IV)-concn. of 0.2-20 wt.%.

(I) has germicidal effect against many germs, such as *Escherichia coli*, *Staphylococcus aureus*, Gram-positive and Gram-negative bacteria etc. (I) is not toxic. 4.5.78

as 052689(18pp42)

MATU ★ D22 91955B/51 ★ J5 4145-370
Exhaust gas treating appts. - including conduit with reduced dia. end portion for fitting into a flue, gas outlet ports and catalyst across width of passage

MATSUSHITA ELEC IND KK 06.05.78-JA-053951

J01 P32 Q74 (13.11.79) A61f-09 B01d-53/34 F24f-03/16

A gas treating device for removing smelly components from the air as it is rejected from a rest room, a kitchen, etc., to the atmos., comprises a conduit having a reduced dia. end portion to be fitted into a flue, a roof covering the top of the conduit, a number of gas outlet ports formed in the conduit wall near the top, a catalyst bed disposed across the width of the passage of the conduit and located adjacent the outlet ports, and a heater associated with the catalyst bed for maintaining the bed at its operative temp.

As the air passes through the heated bed, the smelly components carried by the air are converted into non-smelling material. 6.5.78 as 053951(6pp47)

SANT- ★ D22 92033B/51 ★ J5 4145-711
Fungicidal steriliser for contact lens - comprises cpd. contg. ene:diol gp., water-soluble copper cpd., and a chloride salt and specified glycine deriv.

SANTEN ARAGAN KK 06.05.78-JA-053890

C03 E19 R21 (14.11.79) C11d-07/60 G02c-13

A fungicidal steriliser for contact lens comprises an aq. soln., pH 5-8 and an osmotic pressure the same as that of a 0.7-1.2 W/V% aq. $NaCl$. and contains (a) a compound or its salt, contg. enediol gp. in its molecule, selected from tetrionic acids e.g. ascorbic acid, isoascorbic acid, gluco-ascorbic acid, etc., reductic acids e.g. reductic acid, 5-methylreductic acid, etc., enediol carboxylic acids, e.g. hydroxyacrylic acid, dihydroxymaleic acid, dihydroxyfumaric acid, 1,2,3-trihydroxy-1-butene-1-carboxylic acid, etc., dihydroxybenzenes e.g. pyrocatechin, pyrogallol, gallic acid, etc., and dihydroxypyridones e.g. pyromegazonic acid, hydroxycommenamic acid, 3,4-dihydroxy-6-methyl-alpha-pyridone, etc. (b) a water-soluble Cu ; (c) >1 cpds. such as a combination of an alkali metal chloride, an alkaline earth metal chloride, or the hydrochloride of an amine and a lower aliphatic carboxylic acid, and N-[2-hydroxy-1,1-bis(hydroxymethyl)-ethyl] glycine.

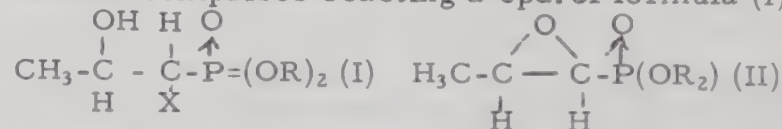
The fungicidal steriliser for contact lens has a great power enough to sterilise contact lens effectively in a short time when contact lens is simply dipped in an aq. soln. of the steriliser. 6.5.78 as 053890(10pp117)

NNSH ★ D22 92173B/51 ★ J7 9039-368
Antibacterial epoxy cpd. prodn. - by reacting hydroxypropyl phosphorous acid cpd. with ion exchange resin

NIPPON SHINYAKU KK 27.04.71-JA-027734

E11 (27.11.79) A61k-31/66 C07f-09/40

Method comprises reacting a cpd. of formula (I)



(where R is H or lower alkyl, and X is halogen) with a cpd. (R_3' -N-resin)+ OH^- (where R_1 is lower alkyl) to give an epoxy cpd. of formula (II). 27.4.71 as 027734, C07f-9/40 A61k-31/66 (27.11.79) NIPPON SHINYAKU KK (3pp22) (J4 7039033)

TAKS D22 23673V/13 = J7 9039-410
Discolouring concentrated soln using a pyrenetrisulphonic acid - for use in external medical supplies, cosmetics, and agrochemicals

TAKASAGO PERFUMERY KK 29.00.72-JA-002299

B02 C01 E12 (28.11.79) *J48072-227 + A01n-17 A61k-47 C09b-57 C11d-03/40

A Na salt of 1-hydroxy-3,6,8-pyrenetrisulphonic acid (I), and effective components are dissolved in an aq. soln. sufficient to render the colouring matter colourless. The aq. soln. contains water-sol. hydroxy or ketone cpds. The soln. may be coloured with other colourants if necessary. The concd. colourant may be used in external medicines, cosmetics, agrochemicals, etc. The concd. soln. is colourless or has a light colour, but is coloured green upon dilution with water because of (I).

In an example (I) 0.3, EtOH 60.0 propylene glycol 23.4

polysorbate 80, 4.0, H₂O 10.0, perfume (rose) 2.0 and no 213 red (0.1% aq. soln) 0.3 % were thoroughly mixed to yield a bath liq. (10-20g). 29:00.72 as 002299, C09b-57/00, A01n-17/00, A61k-47/00, C11d-3/40 (28.11.79) TAKASAGO PERFUMERY (3pp) (J4 8072227)

SUMO D22 01199Y/01 = J7 9039-446
Mothproofing agent for wool - contains 3-phenoxy benzyl chrysanthemate, having good durability and low toxicity to mammals

SUMITOMO CHEMICAL KK 15.05.75-JA-058341

C03 E14 F06 (28.11.79) *J51133-600 + A01n-09/08

The agent may comprise 0.5 pts. of 3-phenoxybenzyl-DL-cis, trans-chrysanthemate (I) dissolved in 99.5 pts. of kerosene to obtd. pale yellow, transparent mothproofing oil. Alternatively, 5 pts. of (I), 7.5 pts. of emulsifier and 87.5 pts. of xylene are mixed to obtd. a pale yellow, transparent soln. easily emulsifiable in water.

A soln. composed of 0.25g (I) and 100 cc of kerosene may be packed in a pressure-resistance can, and mixed with propellant contg. LPG, dimethylether and from gas (vol. of the propellant being 200 cc). A spraying valve is attached to the can to obt. an aerosol mothproofing agent.

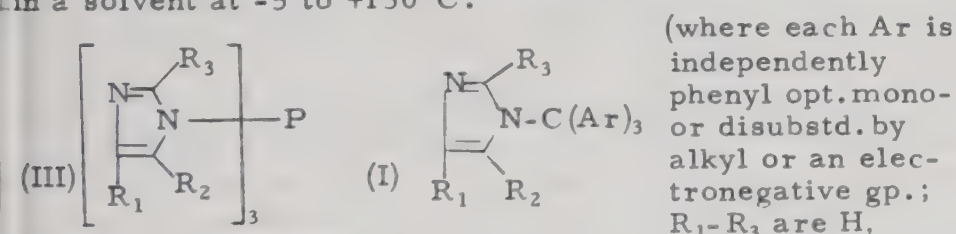
(I) Emits no sweaty odor which is characteristic to permethrin (5-benzyl-3-furylmethyl-DL-cis, trans-chrysanthemate, probably because of difference of decompsn. prods. 15.5.75 as 058341, A01n-9/08, (28.11.79) SUMITOMO CHEMICAL KK (4pp) (J5 1133600)

SUMO ★ D22 92203B/51 ★ NL 7904-329
Prepn. of antimicrobial N-trityl-imidazole cpds. - from triphenylmethanol cpds. and triimidazolyl phosphine cpds.

SUMITOMO CHEMICAL KK 01.06.78-JA-066341

C02 P34 (04.12.79) A611-13 C07d-233/62

Prepn. of N-tritylimidazoles of formula (I) is carried out by reacting a triphenylmethanol cpd. of formula (Ar)₃COH (II) with a tri(1-imidazolyl)phosphine cpd. of formula (III) in a solvent at -5 to +130°C.



alkyl, or phenyl).

Cpds. (I) are antimycotic and antibacterial agents (see US 3321366 and 3707172). The process gives high yields (e.g. 60-90%).

Cpds. (III) can be prepd. by reacting the corresp. imidazole with PCl₃ in the presence of an acid binder. The prefd. cpd. (II) is o-chlorophenyldiphenylmethanol (IIa), which can be prepd. by reacting o-chlorobenzotrichloride with benzene in the presence of AlCl₃. 1.6.79 as 004329 (11pp367)

SIDO/ ★ D22 92272B/51 ★ SU -655-374
Pyrotechnical pesticidal compsn. for insect etc. control - contg. sulphur, sodium nitrate and ferrochromium lignosulphonate, used in agriculture, food industry and public health

SIDOROV A I 01.11.77-SU-538373

C03 (09.04.79) A01n-17/04 C06d-03

Pyrotechnical pesticidal compsn. contg. sulphur oxidiser, filler and catalyst, is used for disinfection and insect control in agriculture, food industry and public health.

The pesticidal compsn. contains (in wt. %): sulphur 76-84; sodium nitrate (I) 12-18 and ferrochromium lignosulphonate (II) 4-6.

Cpd. (II) acts as filler and catalyst to accelerate ignition rate, reduce prodn. costs and improve sulphur utilisation.

Sidorov A. I., Purtov Yu. I., Silin N. A. et al. Bul. 13/ 5.4.79 1.11.77 as 538373 (3pp938)

PFAU D22 63088Y/36 = US 4177-524
Surgical prosthetic fixing with selfcutting screw threads - having abrasive coating to facilitate insertion and improve screw grip

PFAUDLER-WERKE AG 14.05.76-DT-621384

P32 + P31 (11.12.79) *BE-852-131 A61f-01/24

Medical securement element for engagement with a counter

thread in a bone comprises a self-tapping screw thread with biocompatible abrasive grains at the surface of the thread. Pref. the grains comprise Ca hydroxy apatite or quartz sand and have a grain size of >0.7 mm., esp. 0-2 0.4 mm. The grains are pref. embedded in an enamel, the thread being covered with a layer comprising 20-60 wt. % of the grains and the balance of enamel matrix.

Optimum utilisation of the strength of the bone can be achieved and the torque required for insertion is reduced. 10.5.77 as 795658 (6pp927)

BIKO- D22 63263Y/36 = US 4177-544
Tampon prodn. machine - has easily detachable rotor-mounted units each contg. a press to form finished tampon

BIKOMA GMBH 27.02.76-DT-607975

F07 P32 (11.12.79) *DT2607-975 A61f-13/20

Tampons are made automatically at high speed by continuously rotating spaced treatment stations around a circular path, and withdrawing pressable strip from a supply and feeding tangentially to the path. The strip end is gripped and pulled by one station, then gripped and severed at the next station.

The length is released at the first station and then wound up at the second into a blank, and pressed into a finished tampon at and discharged from the second station. The stations are pref. oribited at least 5 times per min., and the strip is wound by wedging the end in a slotted mandrel and rotating the mandrel. 28.2.77 as 772632 (14pp1358)

AIRW- D22 84719B/47 = US 4178-264
Gel compsn. for sterilising and deodorising air - contains stearate salt as gelling agent, volatile active material and freezing inhibitor e.g. polyethylene glycol

AIRWICK INDS INC 31.01.78-US-873827

A97 E12 P34 (E17) (11.12.79) *J54110-990 + A61k-07/46 A611-13/04 B01j-13

Thermally stable gel compsn. comprises in an aq. system 1.5-15 wt. % of carrageenan and a stearate salt of Na, K or alkanolamines, with a carrageenan to stearate wt. ratio of 0.3-5:1; 0.5-6 wt. % of a volatile active agent; 1-20 wt. % of a component for enhancing stearate solubility, selected from glycols and 2-18C alcohols; and water to 100%.

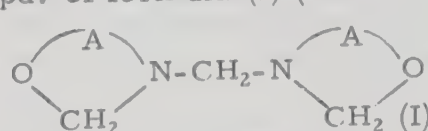
The gel is esp. an air-treating gel, which is simple and economical to produce and has high and low temp. stability. 31.1.78 as 873827 (4pp997)

STER D22 12498A/07 = US 4178-375
Heterocyclic methylene-bis-aza-oxo- and -aza-thio cpds. - preservatives and disinfectants, prepd. from aminoalcohol or amino:thiol and formaldehyde

STERLING DRUG INC (SCHU) 06.08.76-DT-635389

B03 E13 G02 (B07 D15 D21 G03) (11.12.79) *DT2635-389 A01n-09/22

Preventing or retarding growth of bacteria and fungi in a material comprises treating the material with an oxazine cpd. of formula (I) (where A is 3-10C (3-5C) 1,3-alkaned-



diyl. Specifically (I) is N, N'-methylenebis(tetrahydro-1,3-oxazine).

The method is useful for preserving and disin-

fecting industrial solns., emulsions, dispersions and suspensions, e.g. paints, lubricants, adhesives, cosmetics, pharmaceuticals, waxes, and in water circulation systems. 17.8.78 as 934792 Div. ex. 4148905 (+27.7.77-US-819245) (4pp964)

RUBE/ ★ D22 92703B/51 ★ US 4178-407
Disposable towelling material - comprises fibres or tissue paper applied to adhesive on both sides of plastic sheet

RUBENS H E 28.06.74-US-484169 (23.09.66-US-581771)

A96 F07 P73 (11.12.79) B32b-15

The material comprises a thin compliant plastic sheet with a uniform adhesion layer on both sides carrying a dry soft compliant layer with the absorbency of facial tissue and little inherent wet strength. The adhesive is flexible, thin and insoluble, and will not strike through the plastics.

The layer may be formed by loose fibres randomly attached to the adhesive and electrostatically applied, or by applying a layer of tissue paper to the adhesive. The sheet

is e.g. of "Saran" (RTM) vinyl chloride copolymer, or polyethylene, and the adhesive is e.g. rubber-based. 28.6.74 as 484169 (+2.3.70-US-015819)(4pp1358)

EXCE **D22** 71732B/40 = WP 7901-074
Prefilling sterilisation of milk containers with bactericidal aerosol - produced by ultrasonic atomisation of liq. for entrainment in air current

EX-CELL-O CORP 16.05.78-US-906159

P34 + P42 (D13) (13.12.79) *BE-876-292 + A61k-01 A61l-03
A61m-11/06 B05b-13/02 B05b-17/06

R/S: N(DK,JA) + E(DT,FR,GB,SW).

A predetermined vol. of a bactericidal liq. is contained in a nebulising chamber. The chamber is fitted with a piezo-electric crystal oscillator which produces ultrasonic vibration atomising the surface of the liq. to fine particles. Compressed air is piped into the chamber to pass over the liq. surface, entrain the particles and form an aerosol. The aerosol is piped to a nozzle which is directed into the container to be sterilised.

The chamber outlet for aerosol is pref. located centrally just above the surface level of liq. The chamber inlet

for compressed air is above the aerosol outlet level. The liq. level in the chamber is pref. maintained automatically by controlled make up from a supply reservoir. The chamber is pref. provided with a liq. overflow outlet and a low-level cutout.

The rate at which liq. is atomised is pref. controllable and can be monitored by a photo-electric sensor on the nozzle feed pipe. The nozzle is pref. heated e.g. by warm air or electrically.

Used for fitting to a filling machine to sterilise containers to be filled with homogenised milk, skimmed milk, butter, egg-based drinks etc.

Optimum mixt. of liq. in carrier gas is obtd. Continuous control of aerosol concn. is achieved. Very fine atomisation of liq. is obtd. with no danger of droplet agglomeration in the nozzle.

7.5.79 as US0300 (26pp448).

(E) ISR: US3387607; US2723060; US4031171; US3828773
US4018534; US2828231; US3481689; US3901443.

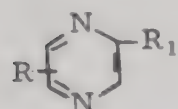
D23: OILS; FATS; WAXES

UNIL **D23** 92989R/50 = DS 2028-097
Alkoxyalkylpyrazines in perfumery prodn

UNILEVER NV 10.06.69-GB-029388

E13 (13.12.79) *NL7008-387 C11b-09

Alkoxyalkylpyrazines of formula (I) (where R₁ is a 1-10C alkoxy gp. and R is a 1-10C alkyl gp.;



when R₁ is methoxy or ethoxy R is not methyl) are used in perfume compsns. Suitable cpds. (I) include 2-methoxy-5-nonylpyrazine, 2-sec-butyl-3-methoxy-pyrazine, 2-methyl-3-propoxypyrazine and 2-decoxy-3-methyl pyrazine.

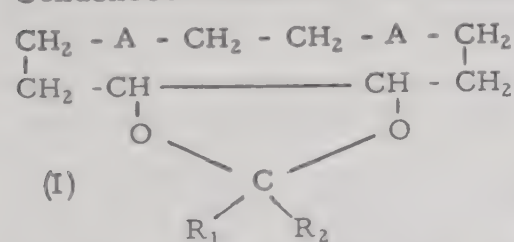
8.6.70 as 028097 (3pp068)

GIVA **D23** 47974S/29 = DS 2063-166
Dioxolanes for perfumery use prepd from glycols - and carbonyl cpds

GIVAUDAN L & CIE SA 09.01.70-CH-000242

E13 (13.12.79) *DT2063-166 C11b-09 + C07d-317/44

Condensed dioxolanes of formula (I) are new.



In (I) A is -CH₂-CH₂- or -CH=CH-; R₁ and R₂ are H 1-3C alkyl or together are tri- or tetramethylene; when both A gps. are -CH=CH- one is in the trans- and the other in the cis- or trans-configuration; when the A gps. are thus cis and trans both oxygen atoms of the dioxolane ring are in the trans position.

(I) may be prepd. by condensing a suitable cyclic glycol with a carbonyl cpd. R₁R₂C=O in the presence of an acid catalyst. (I) are useful as perfumes. 22.12.70 as 063166 (7pp068)

HENK **D23** 15994U/12 = DS 2144-117
Ketones from vicinal diols - by liquid phase catalytic oxidation, for high yields of pure product

HENKEL KG AUF AKTIEN 03.09.71-DT-144117

A60 E17 (13.12.79) *DT2144-117 C07c-49/04

Ketones are prepd. by oxidn. of pure aliphatic di-tert., sec.-tert. or prim.-tert 5-35C vicinal diols with a gas contg. oxygen. Reaction is effected at 40-200°C in the liq. phase in the presence of a cobalt salt of a higher carboxylic acid, e.g. cobalt (II) laurate, as catalyst.

Octanone-2 may be prepd. from 7,8-dimethyltetradecanediol-7,8. A solvent may be present. The ketone prod. is obtd. in high yield and purity and may be used as solvent, viscosity regular in plastisols and organosols and as perfume. 3.9.71 as 144117 (3pp068)

BRTO ★ **D23** 91521B/51 ★ GB 2022-587
Extracting fatty acids from tall oil heads - by conversion to amide, imidazoline or oxazoline derivs. or amine salts

BOC LTD 07.06.79-GB-019943 (10.03.78-GB-009657)

E17 (19.12.79) C07c-53/24 C07c-103/12 C07d-233/04 C07d-263/08

Extraction of fatty acids (I) from tall oil heads (A) comprises reacting with NH₃ or an amine to give an amide, an imidazoline or oxazoline deriv. of (I), or the corresp. salt of (I) then sepg. the deriv. or salt from the remainder of (A).

Esp. monoamides are made by reaction with NH₃ (esp. generated in situ from urea) or NHR₁R₂ (R₁ and R₂ are each H, 1-3C alkyl or CH₂CH₂OH). Alternatively bis-amide are formed from NH₂.R.NH₂ (R is (CH₂)_x or (CH₂CH₂NH)_yCH₂CH₂; x and y are integers, pref. 1 or 2). When x is 1 the amine is pref. formed in situ from HCHO and NH₃.

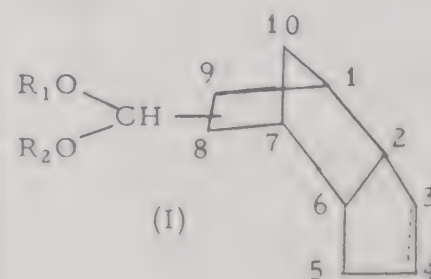
Amides are useful as surfactants; bisamides as lubricants for PVC or in wire drawing, as mould-release agent and as defoamers; the oxazolines or imidazolines are surfactants, flotation agents and drilling mud components; NH₄ salts are waterproofing agents for paper and cements and useful in mfr. of light bulbs and cosmetics, and amine salts are surfactants. 7.6.79 as 019943 (8pp1251)

KAOS ★ **D23** 91776B/51 ★ J5 4144-35
Acetal derivs. for perfumes, cosmetics, shampoos, soaps etc. prepd. by e.g. reacting 9-exo-formyl-endo tri:cyclo(5.2.1.0) deca-3-ene with monovalent alcohol or diol

KAOSOAP KK 02.05.78-JA-052999

E15 (D21) (10.11.79) A61k-07/46 C07c-41 C07c-43/30

New acetals are of formula (I) (where R₁, R₂ are each 1-5 alkyl., or they may combine to form a 2-4C alkyl-ene; R₁O-CH- gp. bo



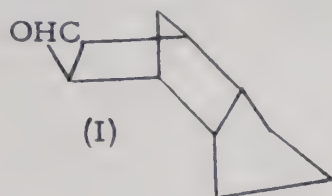
ds to norbornane ring on the exo side at the 8 or position; the bond indicated with the dotted line maybe or may not be present).

(I) are used for atomisation of perfume, cosmetics, shampoo, soap and waxes. The are produced by reacting 8- or 9-exo-formyl-endo-tricyclo 5.2.1.0²,⁶ deca-3-ene (IIa or IIb) or 8-exo-formyl-endo-tricyclo [5.2.1.0²,⁶] decane (III) with monovalent alcohols or diols. (III) is produced by hydrogenating (IIa) or (IIb) with rhodium catalysts. Monovalent

alcohols include, e.g. methanol, propanol, butanol, amylalcohol, Diols include, e.g. ethylene glycol, 1,2-propanediol, 2,3-butanediol. 2.5.78 as 052999(6pp136)

KAOS ★ D23 91777B/51 ★ J5 4144-353
8-Exo-formyl-endo-tri:cyclo(5.2.1.0) decane - has grass-like aroma and is useful for perfumes, soaps, cosmetics, shampoos and waxes
KAO SOAP KK 28.04.78-JA-051542
E15 (D21) (10.11.79) A61k-07/46 C07c-47/34

8-Exo-formyl-endo-tricyclo [5.2.1.0.^{2,6}] decane is of formula (I). The cpd., when mixed with perfume compsns. has green grass-like aroma and is used for aromatisation of perfume compsns. shampoo, soap, cosmetics and waxes.



(I) is produced by hydro-genating 8- or 9-exo-formyl-endo-tricyclo 5.2.1.0.^{2,6} deca-3-

ene (Cpd. IIa or IIb with rhodium catalysts. The cpd. IIa or IIb is dissolved in inert solvents such as n-hexane, benzene, toluene, THF and is allowed to absorb equiv. of hydrogen with the aid of rhodium catalysts such as tris-triarylphosphine rhodium chloride in a pressure vessel. 28.4.78 as 051542(4pp136)

KURI- ★ D23 91953B/51 ★ J5 4145-368
Solvent extraction of perfume from plants, spices, etc. - where dry gas is introduced to obtain vapour contg. perfume, then perfume is adsorbed from vapour and the dry gas is recycled
KURI KAGAKU SOCHI 02.05.78-JA-052322
J01 (13.11.79) B01d-01 B01d-53/02

The method comprises (i) extracting a substance contg. a perfume of a relatively low vapour pressure, such as, plant, food, or spice, with a solvent, to obtain a solvent extract contg. the perfume, (ii) introducing a dry gas into the extract to obtain a vapour contg. the perfume, (iii) introducing the vapour into an adsorbing tower to adsorb the perfume from the vapour and by-produce a dry gas, (iv) recycling the dry gas to the extract and (v) recovering the adsorbed perfume from the adsorbing tower to obtain a conc. perfume.

Specifically a dry gas is introduced through a pipe into a solvent extract contg. a perfume to obtain a vapour of the perfume. The vapour is introduced through a pipe into one of adsorbing towers to adsorb the perfume. One portion of the resulting dry gas is recycled through pipes into the extractant, and the other portion is introduced through a pipe into the other adsorbing towers to recover a conc. perfume. The conc. perfume is stored in a vessel. 2.5.78 as 052322(4pp51)

NIHA/ D23 00703A/01 = J7 9039-374
(3)-Methyl-(2)-methyl-butenyl furan prodn. for use as perfume - by reacting halogenated (3)-methyl-(2)-furyl magnesium with (1)-halo-(3)-methyl-(2)-butene

NIHAMA K 28.04.76-JA-049157
E13 (27.11.79) *J52136-162 C07d-307/36 + C07f-03/02
3-Methyl(2-(3-methyl-2-butenyl)furan (I) is produced by reacting halogenated 3-methyl-2-furylmagnesium (II) with 1-halo-3-methyl-2-butene (III). (I) a component of refined oil from Rosa damascena mill, is useful as a perfume. (II) is prepd. by adding a soln. of 2-bromo-3-methyl furan in THF to a Cu-Mg alloy treated with I₂.

In an example, 0.33g an alloy with 10% Cu and 90% Mg produced by heating Cu and Mg under N₂ stream was warmed for 1 hr. at 50°C with 0.11 g I₂ and added with 1.21 g 2-bromo-3-methylfuran to produce (II). 1.11g (III) (X is Br) in 3 ml THF were added under N₂ stream with (II) over 45 min. and heated under reflux for 3 hrs. After being made acidic, extn. with ether gave 0.445 g of (I) in a 40% yield. 28.4.76 as 049157, C07d-307/36, C07f-3/02 (27.11.79) NIHAMA K (3pp) (J5 2146162)

NAAR

D23

11835U/09 = J7 9039-450

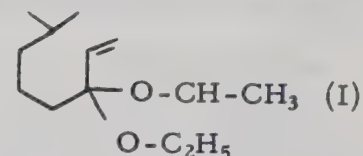
Acetaldehyde ethyl linalyl acetal - as perfume ingredient

NAARDEN CHEMISCHE FAB 11.08.71-NL-011071

E17 (28.11.79) *NL7111-071 A61k-07/46 C07c-43/14

Aromatising agents and perfumes contg. acetaldehyde ethyl linalyl acetal as active component.

(I) can be made by the addition of linalole to vinyl ethylether in the pres. of H₂SO₄. Perfumes contg. the (I) have a pleasant floral odour. 8.10.72 as 079550 (clg. 9.4.73-NL-011071) A61k-7/46, C07c-43/14 (28.11.79) N.V. CHEMISCHE FABRIEK 'NAARDEN' (3pp)



HITB

D23

17256Y/10 = J7 9039-451

Perfume compsn. contg. ethylidene -norbornene opt. with tricyclodecane - having lasting fragrance

HITACHI CHEMICAL KK 16.07.75-JA-086767

E15 (28.11.79) *J52010-428 A61k-07/46

A mixed perfume contains 2-ethylidene-norbornene (I) opt. with tricyclo(5, 2, 1, 0.^{2,6}) decane (II) as the aromatic ingredient(s) (I) is prepd. by reacting cyclopentadiene with butadiene by a Diels-Alder reaction and isomerising the side chain double bond of the 5-vinylnorbornene deriv. obtd. in a polar solvent using a base catalyst.

The fragrance of (I) can be greatly intensified by using it together with (II). The compsn. can be used either as the base for preparing a mixed perfume of woody fragrance or as an additive for mixed perfumes. 16.7.75 as 086767, A61k-7/46 (28.11.79) HITACHI CHEMICAL KK (2pp5) (J5 2010428)

INFL ★

D23

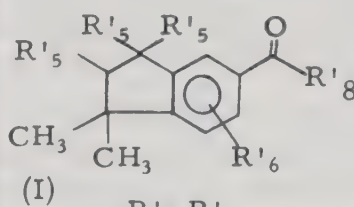
92650B/51 ★ US 4178-311

Acyl-benzene intermediates for perfumery - obtd. by aluminium chloride catalysed acylation of benzene derivs. in satd. hydrocarbon

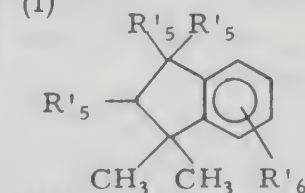
INT FLAVORS & FRAGR INC 27.10.78-US-955330 (19.04.78-US-897903)

E13 (11.12.79) C07c-45/14

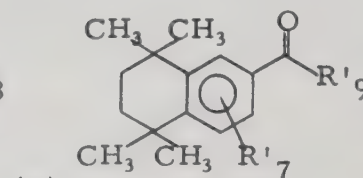
Acyl-benzene derivs. of formula (I) or (II):



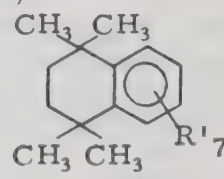
(I)



(III)



(II)



(IV)

where R'₅ is H or Me; R'₆ and R'₇ are H or 1-3C alkyl; and R'₈ and R'₉ are 1-3C alkyl, are prepd. reacting benzene derivs. of formula (III) or (IV), with R'₁₀COX' (V) where R'₁₀ is

1-3C alkyl and X' is Cl, Br or I, in the presence of an Al chloride catalyst and 2, 2, 4-trimethyl-pentane, n-hexane or n-octane as solvent at -20 to -5°C. The mole ratio of solvent to (I) or (II) is 1:10-10:1, the molr ratio of catalyst to (V) is 1:2-2:1 and the mole ratio of (I) or (II) to (III) is 1-10:1.

Synthetic musks (e.g. isochroman cpds.) are prepd. by a simplified, economical method from (I) or (II). The use of the solvent in conjunction with (III) and the catalyst causes the reaction mass to decrease in viscosity, improving dispersion and heat transfer. High yields are achieved by minimising undesirable side reactions. 27.10.78 as 955330 Div.ex. 4162256 (cf. 59738 B/32) (10pp558)

D24: SOAP; SOAP DETERGENTS

BLAS/ ★ D24 92571B/51 ★ US 4177-965
Soap bar and holder - the bar being supportable either loosely or firmly

BLASZKOWSKI H 12.06.78-US-914859 (27.11.70-US-093000)
(11.12.79) C11d-17/04

A soap bar is supported upon a holder fixable to a substrate and having a projecting post by a recessed plastics insert which is embedded in the soap. The recess has a wider section adjacent its mouth and a nonwoven section adjacent its base.

To support the bar loosely on the post the bar is pushed over the post so that the end of the post only penetrates

the wider section of the insert recess. To support the bar firmly the soap is pushed more firmly over the post so that the post penetrates into frictional engagement with the nonwoven section of the insert recess.

Loose mounting enables the bar to be easily removed. Firm mounting enables a flannel or hands to be wiped over the soap without it falling from the post. 12.6.78 as 914859 (+24.7.72; 29.8.73; 10.6.75; 27.8.76-US-274641 392817; 585706; 718183). (7pp525)

D25: OTHER DETERGENTS

FMCC D25 71121W/43 = DS 2515-141
Granulated sodium tripolyphosphate with medium heaping weight - for use in washing compsns

FMC CORP 08.04.74-US-459256

E34 (13.12.79) *DT2515-141 C01b-25/40

Granulated sodium tripolyphosphate with a medium bulk density of 0.55-0.75 g/cm³ is produced from rotating, finely comminuted tripolyphosphate with a particle size distribution of ≥ 50 wt. % of $\leq 149 \mu\text{m}$, 0-25 wt. % of 149-297 μm and 0-25 wt. % of $\geq 297 \mu\text{m}$. The material is sprayed with an aq. soln. of 20-65 wt. % sodium orthophosphate (having a total solids content of 9-12 wt. % based on the tripolyphosphate being formed) and a Na:P molar ratio of 1.67:1. The agglomerate formed is calcined at 300-600 °C.

Pref. the starting material is spray dried sodium tripolyphosphate with a particle size distribution such that ≥ 80 wt. % is $\leq 149 \mu\text{m}$. The orthophosphate soln. has a concn. of 45-60 wt. %, and is sprayed at 90-110 °C. The whole operation is effected in a calcination drum at 410-460 °C.

The prod. is esp. suitable for use in dry mixed washing compsns. 8.4.75 as 515141 (4pp913)

ASHL D25 82097A/46 = DS 2820-035
Detergent compsn. partic. for shampoos - contg. glycerol ester alkoxylate and anionic surfactant gives low eye irritation

ASHLAND OIL INC 07.11.77-US-848978 (09.05.77-US-795342)

A96 E17 (A25 A97) (13.12.79) *BE-866-868 C11d-01/83

Fine washing agent contains (a) an alkylene oxide adduct (I) of a glycerine partial ester of a 10-18C fatty acid with a monoclyceride content of 15-45 wt. % and the remainder diglyceride and (b) a salt of a higher alkylbenzene sulphonic acid in a wt. ratio of (a) to (b) of 1:1 to 4:1 or a salt of a higher alkyl (ether) sulphate in a wt. ratio of (a) to (b) of at least 1:1.

Adduct (I) is prepd. by reacting 1 mole of the glycerine partial ester with 15-100 moles ethylene oxide or propylene oxide or their mixts. in molar ratio 2:1 to 4.5:1. An alk-anolamide may be present as foam stabiliser. The compsn. has a mild action and is suitable as a child's shampoo. 8.5.78 as 820035(8pp068)

CIBA ★ D25 91326B/51 ★ DT 2909-757
Washing powder contg. silicone oil foam regulator - supported on dry, water soluble non-surfactant components (NL 11.12.79)

CIBA GEIGY AG 07.06.78-CH-006225

A97 (A26) (13.12.79) C11d-03

Prod'n. of washing powder with controlled foaming properties comprises homogeneously mixing (a) 80-99.9 (esp. 97-99.9) wt. % powdered, water-soluble non-surfactant components with (b) 0.1-20 (esp. 0.1-10) wt. % silicone oil (opt. mixed with SiO₂) which is homogeneously partitioned or dissolved in a solvent.

The solvent, which has b.pt. below m.pt. of (a), is then distilled out, the resulting mixt. opt. dried (esp. by spray-drying) then other necessary components mixed in.

bleach (esp. Na perborate), neutral or alkaline salt (esp. Na₂SO₄) or an alkali metal (esp. Na) silicate. The powders themselves are also claimed.

Used for domestic or industrial cleaners. Component (b) is more effective in this form c.f. its use as soln. or emulsion, so less is needed. The foam regulating effect is stable during the entire washing process over a wide temp. range (30-100 °C) and no agglomeration of (b) occurs. 13.3.79 as 909757 (25pp1251)

SAGA- D25 18218Y/11 = GB 1557-976
Conditioning deformable gelatin microcapsules contg. stain remover - by coating outside of capsules with soln. of water-insoluble synthetic material in chlorohydrocarbon

SAGAPHA AG 13.11.75-DT-551061

A97 + P42 Q31 Q32 Q34 (A82) (19.12.79) *BE-847-977 B01/13/02

A stain-removing material is packaged in a paste form in capsules for use in portions, making use of gelatine as the encapsulating material which can be deformed under the cation of pressure.

The stain-removing material comprises an anhydrous compsn. of the material with the exclusion of low mol. wt. alcohols. The encapsulating material is treated with a soln. of a water-insoluble plastics material on the side which lies to the outside of the finished capsules forming a coating after the solvent is removed. Pref. the solvent used is a chlorinated hydrocarbon.

The stain-removing material may be dispensed from the encapsulating material without evaporation of solvent which would cause the paste to dry out. 12.11.76 as 047161 (3pp931)

KEMP/ ★ D25 91524B/51 ★ GB 2022-60
Additive for soap or detergent compsns. - contains essential oil surfactant and fixed oil deriv. as softener

KEMPF W 29.03.79-AU-008237 (07.06.78-AU-004626)

(19.12.79) C11d-03/38 C11d-10/02

Soap or detergent additives is a mixt. of (a) an essential oil (pref. 50-70 vol. %); (b) a detergent compsn. (esp. 1-25 vol. %) contg. ≥ 1 anionic, cationic or nonionic surfactant; and (c) as softener, a fixed oil deriv.

Specifically (a) is pine or esp. eucalyptus oil, and (c) is a coconut oil diethanolamide of high free diethanolamin content. The additive may also contain an alkali metal salt (esp. NaCl) soln.; an aliphatic alcohol and an emulsifier. Soap/detergent compsns. contg. 3-35 wt. % of this additive and 65-97 wt. % soap base or liq. detergent are also new.

Used for removing dirt, varnish, stains etc. from fabric, metal (esp. Al), plastics, natural fibres etc. without damaging the material. 24.5.79 as 018096 (8pp1251)

KANE ★ D25 91749B/51 ★ J5 4144-30
N-(3-olexyloxy-2-hydroxypropyl) amine derivs. - useful as nonionic surfactants, emulsifiers and dispersing agents

KANEBO KK 28.04.78-JA-051491

E16 (10.11.79) B01f-17-46 C07c-93 04 C11d-01 66

The cpds. have excellent surface activity, and are useful

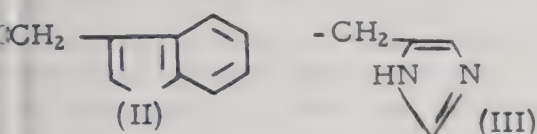
nonionic surfactants, emulsifiers, or dispersing agents. They are prepd. by reacting 200g of trimethylolaminomethane with 400g. of glycidylether in a flask of 2000ml. capacity equipped with a stirrer and reflux condenser at 10°C for 3 hours with vigorous stirring. 1000ml. of petroleum ether is added to the reaction mixt. and the whole mixt. is sufficiently stirred, followed by standing for 2 hours at 20°C. Pptd. crystals (unreacted trimethylolaminomethane) are removed by decantation, and the supernatant is conc. The conc. soln. is left standing at 5°C to allow the crystals to ppte. The crystals are recrystallised from acetone twice to obtain 511g. of N-3-olexyloxy-2-hydroxypropyltrimethylolaminomethane. (yield : 93%). 28.4.78 as 51491(4pp75)

KAOS ★ D25 91996B/51 ★ J5 4145-608
N-acylamino acid derivs. for cation surface activators - having antistatic and sterilising properties

AJINOMOTO KK 08.05.78-JA-054240

E19 (14.11.79) C07c-103/37 C07c-149/23 C07d-209/20

N-acylamino acid derivs. of formula $R_1\text{CON}(\text{X})\text{Y}-\text{CONH}(\text{CH}_2)_n\text{NR}_2\text{R}_3$ (I) are new. In (I), R_1 is 7-17C aliphatic hydrocarbonyl; X is methyl; Y is $-\text{CH}_2\text{CH}_2$ or $-\text{C}(\text{R}_4)\text{H}$; R_4 is H, 1-4C alkyl, benzyl, (I), (II), $-\text{CH}_2\text{OH}$, $-\text{O}(\text{OH})\text{HCH}_3$, $-\text{CH}_2\text{SH}$, $-\text{CH}_2\text{CH}_2\text{SCH}_3$, $-(\text{CH}_2)_m\text{CONH}(\text{CH}_2)_k\text{NR}_2\text{R}_3$ or $-(\text{CH}_2)_n\text{NH}-\text{OR}_1$; m and k are each 2 or 3; R_3 and R_2 are each H, $-\text{CH}_3$ or $-\text{CH}_2\text{CH}_2\text{OH}$; and n is 3 or 4.



(I) provide the cation surface activators having flexibility, antistatic property, sterilising property and having only slight

skin-irritation. Specifically (I) are prepd. by condensing N-acylamino acid lower alkyl $R_1\text{CON}(\text{X})-\text{Y}-\text{COOR}_5$ (II) where R_5 is 1-5C alkyl) and substd. diamines of formula $\text{H}_2\text{N}-(\text{CH}_2)_k\text{NR}_2\text{R}_3$ (III) in solvents such as benzene or hexane. 8.5.78 as 054240(8pp136)

KAOS ★ D25 91999B/51 ★ J5 4145-613
N-acylamino acid aminoalkylamide cationic surfactant mfr. - by condensing N-acylamino acid alkyl ester and a di:amine

AJINOMOTO KK 08.05.78-JA-054241

E16 (14.11.79) A61k-07/06 C07c-102/06 C07c-103/50 C11d-01/38

N-Long chain acylamino acid aminoalkylamides (I) are produced by condensing N-long chain acylamino acid lower alkyl esters and diamines of formula $\text{H}_2\text{N}-(\text{CH}_2)_k\text{NR}_1\text{R}_2$ (II) where k is 2 or 3; R_1 - R_2 are H, $-\text{CH}_3$ or $-\text{CH}_2\text{CH}_2\text{OH}$.

(I) is white crystal soluble in water, alcohols, acetic esters and aromatic hydrocarbons. When the cpd. is dissolved in water or acid aq. soln. the amine portion of the molecule of the cpd. is converted to ammonium type and is used as cation surfactant.

The cation surfactant act mildly on the skin and have excellent flexibility, penetrating power, sterilising property. 8.5.78 as 054241(7pp136)

KAOS D25 41373W/25 = J7 9038-603
Detergent surfactant - comprising compsn. contg. non-ionic ethylene oxide adduct of fatty acid esters with hydrophilic lipophilic balance 8 to 16

KAO SOAP KK 11.12.73-JA-139336

A97 E17 (22.11.79) *DT2457-927 C11d-01/72

Detergent mixt. contains 1-40 wt % of ≥ 1 non-ionic org. surfactant having HLB-value 8-16 (10-14) of formula (I):
 $\text{CH}_2 - \text{O} - (\text{C}_2\text{H}_4\text{O})_m - \text{X}$ (where n is integer 1-4, X is H or RCO, R is 9-23 (12-18C) alkyl or a monovalent olefinically unsatd. acyclic hydrocarbyl gp. e.g. alkenyl or alkadienyl, provided that if n = 1, no. of RCO- gps. ≥ 1 , if n = 2 or 3, no. of RCO gps. is 2, if n = 4, no. of RCO gps. is ≥ 3 and $m'+m''+m'''$ is ≥ 1).

The detergent is e.g. used for washing cotton textiles, dishes and hair, and they have high emulsifying activity on oils and/or dispersant activity towards inorg. substances. 11.12.73 as 139336, C11d-1/72 (22.11.79) KAO SOAP KK (8pp) (J5 089405)

KAWA- D25 20142A/11 = J7 9038-604
Highly clear liquid detergent compsns. - contg. (N)-acyl amino acid as hydrotropic agent

KAWAKEN FINE CHEM K 24.05.74-JA-057810

E12 (E34) (22.11.79) *J50150-701 + C11d-01/10

Liq. detergent compsns. with high clarity contained N-acyl amino acid as hydrotropic agent.

In an example, an aq. compsn. contg. Na dodecylbenzene-sulphonate 6.0, N-cocotyl-N-methyl- β -alanine Na salt (I) 4.0, K pyrophosphate 11.0, and $\text{Na}_2\text{SiO}_3 \cdot 9\text{H}_2\text{O}$ 5.0% had clarity (at 0-60°), comparable to that of compsn. contg. > 10% Na butyrate in place of (I). 24.5.74 as 057810, C11d-1/10 (22.11.79) KAWAKEN FINE CHEM.K. (4pp) (J50150701)

KAOS D25 00458X/01 = J7 9038-605
Coloured liquid cleaning compsn - stabilised to colour change by substd cresole/anisole

KAO SOAP KK 07.06.74-JA-064629

A97 E15 (22.11.79) *DT2524-785 C11d-01/12 C11d-03/20 C11d-10/02

A coloured, liq. cleaning compsn. having improved colour stability contg. an anionic surfactant having a sulphonate gp. (I) and a tar dye suitable for cosmetic/pharmaceutical purposes also contains 0.02-1.0 wt % (based on(I)) butylated hydroxytoluene or butylated hydroxyanisole (II). The compsn. may be used for dishwashing, hair-washing house-hold use, etc. No discolouration of the compsn. occurs even if (II) be added in appreciable excess. 7.6.74 as 064629, C11d-10/02, 1/12, 3/20 (22.11.79) KAO SOAP KK (8pp) (J5 0155505)

LIOY D25 13823X/08 = J7 9038-606
Granular detergents of improved hygroscopicity and stability - comprising alkali (ne earth) salt of acylated condensed oxyacid

LION FAT & OIL KK 26.06.74-JA-073106

A97 E12 (22.11.79) *J51001-501 C11d-01/04

Granular detergents contain a salt of an acylated condensed oxyacid (I):

(where R is straight chain or unsatd. hydrocarbyl of 5-19C, R_1 is H, CH_3 or $\text{RC}(\text{OCH}_2)_n\text{OM}$ (I) C_2H_5 , n is 1, M alkali(ne earth) metal), have improved hygroscopicity and storage stability. The equiv. ratio of alkali metal salt to alkali earth metal salt is 97/3 - 70/30.

The detergent has a homogeneous compsn. and contains only a small amount of fine powder. 26.6.74 as 073106, C11d-1/04 (22.11.79) LION FAT & OIL KK (3pp) (J5 1001501)

SUNZ D25 33452Y/19 = J7 9039-006
Liq. detergent compsn. keeping its viscosity over wide temp. range - obtd. by mixing propylene glycol with a liq. detergent compsn. contg. high polymer

SYN STAR DENTIFRICE 25.09.75-JA-116219

A97 G02 (A25 A82 A96) (26.11.79) *J52039-706 C11d-03/37

The compsn. is prepd. by mixing 0.1-10 wt % polypropylene glycol (having 100-10000 mol. wt.) with a liq. detergent compsn. contg. e.g. gum tragacanth, casein, agar-agar sodium alginate, starch etc.

Used in shampoo, liq. detergent, shoe cream, cleaner for polishing floor etc.

In an example a compsn. for shampoo is obtd. by mixing 15% sodium lauryl ether sulphate, 3% coconut oil fatty acid diethanolamide, 0.5% polypropylene glycol (pref. ca 2000 mol. wt) trace perfume, trace colouring matter, trace antiseptic and balance water. Similar compsn. contg. no PPG is prepd. as the standard. The change of viscosity of the compsn. contg. PPG is minimal as compared to that of the standard. 25.9.75 as 116219, C11d-3/37 (26.11.79) SUN STAR DENTIFRICE (5pp) (J5 2039706)

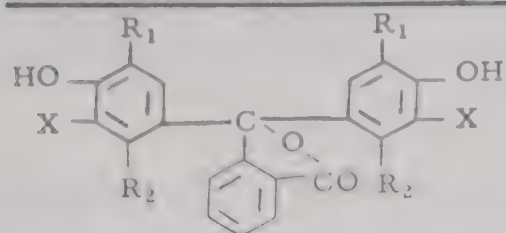
DAIC D25 48422A/27 = J7 9039-007
Cleaning compsn. contg. pH indicator - i.e. halogenated alkyl phenolphthalein

DAINICHISEIKA COLOR CHEM 09.11.76-JA-133808

E13 (26.11.79) *J53058-506 C09b-11/08 C11d-03/40

Cleaner compsn. contains pH indicator which changes the colour according to the hydrogen ion concn. The indicator is of formula (I).

(I) is a phenol phthalein



obtd. by the halogenation of a cpd. prep'd. from 2 mols. of 2,5-dialkylphenol and 1 mol. of phthalic anhydride. (where R_1, R_2 are each 1-3C alkyl, X is Cl, Br, I).

Wash materials are not dyed, and the pH indicator does not discolour in cleaner compsn. 9.11.76 as 133808, C09b-11/08, C11d-3/40 (26.11.79) DAINICHI SEIKA KOGYO KK (4pp170) (J5 3058506)

KOHR- D25 76741X/41 = J7 9039-178
Emulsion based cleaning compsn - used to clean oil contaminated surfaces and based on nonvolatile, odour free surfactants and hydrocarbon

KOHR YU KOGYO KK 25.02.75-JA-023622

A97 M12 (26.11.79) *J51097-541 C23g-05/02 + C11d-07/24

Cleaning agent is obtd. by mixing (a) polyoxyethylene alkyl phenyl ether and/or polyoxyethylene alkyl ether gp. surfactant, (b) polyethylene glycol alkylate gp. surfactant, and (c) sorbitan alkylate surfactant, such as sorbitan mono laurate with aliphatic hydrocarbon of b. pt. 180-330°C, such as kerosine. Compsn. is used for cleaning oil contaminated metal surfaces such as oil tanks and decks of ships, and for removing oil and grease stains. Mixture is diluted with $\leq 50\%$ water and has high cleaning ability when used with steam. 25.2.75 as 023622, C23g-5/02, C11d-7/24 (26.11.79) KOHR YU KOGYO KK (4pp) (J5 1097541)

BERP D25 30216X/17 = SU -655-325
Aqueous liquid detergent composition - based on surface active nonionic alkylene oxide adducts-phosphoric ester-salts

BEROL KEMI AB (BERO-) 25.11.74-SW-014792

A97 E19 (30.03.79) *BE-835-803 C11d-01/34

Compsn. for washing textiles contains as surface-active agent a mixt. of a nonionogenic surfactant with an alkyl phosphate. The compsn. also contains a complex-forming cpd. and additives. The washing ability of the compsn. and its stability are improved by using as a surface-active agent a 30:70 to 70:30 (by wt.) mixt. of a nonionogenic surfactant and alkyl phosphate. The nonionogenic surfactant has pref. the formula $RO(A)_xH$ (in which R is 8-24C alkyl; A is an oxyalkylene gp.; X = 5-50). The alkyl phosphate has pref. the formula $(R'O)_yPO(OM)_3-y$ (in which R' is 9-11 C alkyl; y = 1-2; M is a monovalent cation). The compsn. contains (in wt.%) the surface-active agent 0.5-35, a complex-forming cpd. 5-35, the remainder is additive.

Hellsten K. M. E., Karlsson B. T. G., Bul. 12/30.3.79 21.11.75 as 191055 (4pp70)

PROC D25 68459B/38 = US 4178-254
Fabric care compsn. - contg. smectite clay, gelatinised vegetable starch and opt. water

PROCTER & GAMBLE CO 13.03.78-US-885933

(11.12.79) *EP-4-111 D06m-13

Novel fabric care compsns. comprise (a) 0.5-75% smectite clay; (b) 1-90% gelatinised vegetable starch; and (c) 0-98% water. The clay is an alkali(ne earth) metal montmorillonite, saponite and/or hectorite and has an ion exchange capacity of ≥ 50 meq. per 100 g.

Pref. components are at 0.5-15, 1-15 and 50-98% resp. Pref. compsns. also contain 10-30% surfactant(s), and pref. also 0.25-8% cationic quat. ammonium anti-static and/or fabric softener. 13.3.78 as 885933 (7pp974)

COLG D25 69975B/39 = US 4178-255
Detergent compsn. for washing powder contg. meta-kaolin - and quat. ammonium cpd.; plus meta-kaolin textile softening compsn.

COLGATE PALMOLIVE CO 15.05.78-US-905718

E33 (E16) (11.12.79) *BE-876-231 D06m-13/50

A detergent compsn. comprises a surface active detergent (I) and metakaolin in a ratio of 1: ≥ 0.8 . Pref. the compsn. also contains a builder salt and a quaternary ammonium

softening agent, and (I) is an anionic detergent, the compsn. comprising 10-20% anionic surfactant, 20-35% builder salt, 12-20% metakaolin and 3-6% quaternary ammonium softening agent.

The addition of the metakaolin gives some fabric-softening effect and good detergency. 15.5.78 as 905718 (6pp9)

BADI ★ D25 92632B/51 ★ US 4178-2
Spotting-agent compsn. for use in laundering garments - con-
nonionic surfactant obtd. from fatty alcohol(s), ethylene oxide a
propylene oxide, together with isoparaffinic solvent
BASF WYANDOTTE CORP 22.08.77-US-826512 (23.03.77-US-
780557)

E17 (11.12.79) C11d-07/50

Spotting-agent compsn. consists of a soln. of (1) 10 wt. of nonionic surfactant (I) in (2) an isoparaffinic solvent consisting of a mixt. of isoparaffins contg. an average of 11-14C. (I) is the prod. of reacting a mixt. of 10-18C fatty alcohols (with the proviso that the proportion of such alcohols contg. $\geq 17C$ is ≥ 20 wt.%) with a mixt. comprising 50-70% ethylene oxide and 30-50% propylene oxide, the mixt. of alkylene oxides comprising 57-68 wt.% of the total fatty alcohols plus alkylene oxides.

Compsn. uses less fatty alcohols than known sp. ttin compsns. and has improved detergency. The Parent Pat. claimed a method of spotting and laundering a garment contg. organic soil on part of it, by applying the above compsn. and then laundering. 22.8.77 as 826512 Div. ex. 4093418 (5pp927)

AQOR D25 11212T/07 = US 4178-30
Sepn. of sulphonic acids - from solns also contg. sulphuric water and unsulphonated hydrocarbons

ATO CHIMIE (SNPA) 07.08.70-FR-029211

E17 H08 (11.12.79) *BE-771-038 C07c-143/02 + C07b-13

Sepn. of sulphonic acids in an untreated paraffin sulphonic soln. also contg. H_2SO_4 , H_2O and non-sulphonated paraffins is claimed. Process comprises (a) mixing with the soln. ≥ 1 slightly polar solvent selected from alkanones, cycloalkanones, (cyclo)aliphatic ethers, (cyclo)alkyl alkanoates, alkylcycloalkanoates, and aliphatic ketoesters contg. $\geq 5C$, having a solubility in H_2O of < 7 wt.%, which forms an azeotrope with H_2O , thus producing a mixt. of an organic phase (contg. paraffin sulphonic acids) and an aq. phase (contg. H_2SO_4); (b) sepg. the 2 phases; (c) neutralising organic phase with alkali(ne earth) metal hydroxides or carbonates or alkaline earth oxides to give sulphonates, the ratio amt. of H_2O to slightly polar solvent in neutralised phase being at most equal to the corresp. ratio for the azeotrope which forms between them; (d) removing the volatiles from neutralised phase to recover sulphonates under temp. and pressure such that they are in molten state.

Useful in detergent mfr. 12.4.78 as 895549 (+4.8.71; 18.9.74; 29.12.75; 13.10.76-US-169145; 507246; 645092; 732120) (5pp963)

DEGS D25 33354B/18 = US 4178-35
Stabilisation of sodium percarbonate particles against moisture - b
adding water mixing with silicic acid and drying

DEUTSCHE GOLD & SILBER 31.10.77-DT-748783

E34 (11.12.79) *BE-871-633 C01b-15/10

Process for stabilising sodium percarbonate particles to moisture comprises mixing particles, having a water content of 1-10% with dry highly dispersed silica and drying to give particles having a surrounding protective jacket of sodium silicate. The silica is pref. pyrogenic silica, in amt. 0.05-5 (esp. 10) wt.% with an average particle size of 2-100 (7-20) μ .

The method is simple and effective, resulting in efficient coating of the particles. This would not result if the sodium percarbonate was dry, since in the drying stage of the present process, water evaporates from the particle surfaces depositing sodium silicate. 16.10.78 as 951461 (3pp977)

CPI INDEXES

ALERTING PATENTEE INDEX (III)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

In Country Alerting Bulletin only

M22
*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502-292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or ≠ sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U A97D15M14
*645 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
*654 49862X A88H01Q4
*655 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A-M cumulations of from a quarter up to 5 years are available as COM.

CALI
Nitrile rubber smooth rolled sleeve for well impression packer - also contg natural rubber, hydrated 49862X/26 *US 3963-654
CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01
Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying earth in dams 49433X/26 *DT 2554-327
CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02
CANA
Emulsifying agents of microbial origin - used esp. for oil spills, are made by cultivating a species of 48076X/26 *CA -990-668
CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180
Europe	150
France	740
Germany, W. unexamined	1050
Japan unexamined	845*
Netherlands unexamined	240
PCT	40
Research Disclosure	20
South Africa	100
Sweden	260
United Kingdom unexamined	600
	<u>3325</u>

Slow publishing

Canada	450
Germany, E.	100
Germany, W. examined	465
Japan examined	340*
Netherlands examined	60
Soviet Union	1200
Switzerland	260
United Kingdom examined	300
United States	1200
	<u>4375</u>

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140
Denmark	120
Finland	60
Norway	80
Portugal	30
	<u>430</u>

Slow publishing

Austria	125
Czechoslovakia	180
Hungary	35
Israel	40
Italy	155
Rumania	25
	<u>560</u>

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MW
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
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Europe	EP	Portugal	PT
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France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
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Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

- ABET-06.03.78 A-BETONG AB D15 E17 =FR 2419-322
Large scale mfr. of methane from organic waste e.g. manure - 66325B/37
- AGEN 04.07.75 AGENCY OF IND SCI TECH D16 E13 (D17) =J7 9039-475
Highly pure maltose prodn. from starch - 15553Y/09
- AGEN 24.02.77 AGENCY OF IND SCI TECH D15 H03 =US 4178-265
Oil solidifying agent prepn. - 75175A/42
- AGEN 04.05.78 AGENCY OF IND SCI TECH D15 J01 *J5 4145-389
Adsorbent for anions present in waste water - 91969B/51
- AGRI-22.12.76 AGRIMEL LTD C03 D13 (D16) *CA 1067-334
Feed additive to increase milk yield of dairy cows - 91173B/51
- AIRW-31.01.78 AIRWICK INDS INC A97 D22 E12 (E17) =US 4178-264
Gel compsn. for sterilising and deodorising air - 84719B/47
- AJIN 25.06.71 AJINOMOTO KK B05 C03 D22 E19 #IT 1034-025
Antimicrobial n-acyl basic amino acid derivs - 01567U/02
- AJIN 09.05.73 AJINOMOTO KK B05 D16 E16 =J7 9039-476
L-serine prodn. - 24981W/15
- AJIN 26.00.74 AJINOMOTO KK D16 (D13) =IT 1034-078
Growing methylomonas bacteria in aq. medium with methane - 48044W/29
- AJIN 04.05.78 AJINOMOTO KK A97 D13 (A11) *J5 4145-246
Protein food prodn. from soy bean milk - 91919B/51
- AJIN 08.05.78 AJINOMOTO KK D25 E19 *J5 4145-608
N-acylamino acid derivs. for cation surface activators - 91996B/51
- AJIN 08.05.78 AJINOMOTO KK D25 E16 *J5 4145-613
N-Acylamino acid amino:alkylamide cationic surfactant mfr. - 91999B/51
- ALBO/26.04.78 ALBORTA E G A96 D21 *BR 7802-625
Dental resin injector - B/51
- ALBR 16.03.78 BUSH BOAKE ALLEN LT D13 #SF 7800-834
Flavouring agent pepper cinnamon or turmeric emulsion prepn. - 70165B/39
- ALEX/02.01.78 ALEXANDERSON S D12 *SW 7800-013
Cooling animal carcass - 92522B/51
- ALLI-16.06.76 ALLIANCE SMURFIT CA D22 E14 F09 *GB 1558-273
Bacteriostatic compsn. for paper, cardboard, etc. - 91485B/51
- ALPI-30.05.78 ALPI MILCHINDUSTRI D13 =NL 7904-261
Preparing whey products equiv. to skimmed milk in protein - 71817B/40
- ALWO=20.11.75 AS LATV WOOD CHEM INST C03 D13 *SU -655-379
Supplementary feed for ruminants - 92275B/51
- AMAN 02.05.78 AMANO PHARM KK D16 (D17) *J5 4145-282
Treating enzyme used to mfr. high maltose content syrup - 91923B/51
- AMAN 15.05.78 AMANO PHARM KK B04 D16 =GB 2022-593
Microbiological prodn. of acyl-coenzyme/A synthetase LCF-18 prodn. - 87919B/49
- AMCA 28.04.78 AMERICAN CAN CO D14 E24 G02 =J5 4143-562
Jet printing ink for foods and food packaging - 73412B/40
- AMMA 02.06.78 AMF INC D11 =DT 2918-941
Packaged hamburger buns with opposed slits - 89912B/50
- AMMI-10.11.75 AMERICAN MINECHEM D15 J01 =CA 1067-628
Dehydrating an aq. suspension of fine solids - 36675Y/21
- AMMI-10.11.75 AMERICAN MINECHEM D15 J01 *US 4178-243
Dewatering aq. slurry of fine particles - 92622B/51
- AMPO=23.02.77 A MED POLIOMYEL VIR D15 *SU -654-684
Evaluation of water or food decontamination efficiency - 92242B/51
- ANHE 10.10.72 ANHEUSER BUSCH INC D16 (D17) =SU -655-327
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- ANVR 18.07.75 AGENCE NAT VALORISATION D15 J01 *FR 2419-096
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- APVC 06.03.78 APV CO LTD D13 *FR 2419-489
Recuperative heat exchange system for milk powder spray dryer - 91461B/51
- AQOR 07.08.70 ATO CHIMIE D25 E17 H08 =US 4178-307
Sepn of sulphonic acids - 11212T/07
- ASAE 19.05.75 ASAHI DENKA KOGYO D13 =J7 9039-005
Prodn. of hard butter - 02964Y/02
- *ASAH 17.11.65 ASAHI CHEMICAL IND KK A31 B05 D13 J04 *J7 9039-345
Improvement of flow property of pasty cpd. for extrusion. - 92169B/51
- ASAH 15.11.71 ASAHI KASEI KOGYO D12 F01 =J7 9039-458
Edible protein fibre prodn - 21473U/16
- *ASAH 01.05.78 ASAHI CHEMICAL IND KK D15 *J5 4144-761
Biological treatment of oil-contg. waste water - 91868B/51
- *ASAH 02.05.78 ASAHI CHEMICAL IND KK B07 D22 *J5 4145-208
Poultrice compsn. - 91909B/51
- ASHL 09.05.77 ASHLAND OIL INC A96 D25 E17 (A25 A97) =DS 2820-035
Detergent compsn. partic. for shampoos - 82097A/46
- *ASPH=18.08.76 AS USSR PHYS CHEM INST A88 D15 J01 (A11) *SU -655-399
Cellulose acetate filter material for filtration of liquids - 92278B/51
- ASPR 31.05.78 NICHOLAS PROP LTD A96 B04 D21 (A11) =NL 7904-316
Inhibition of dental caries with cationic polysaccharide - 71825B/40
- *ATAF-03.01.75 INTR ATA SIFILATUR D15 *RU --66-777
Industrial water alkalinity reduction - B/51
- *AUCC=14.07.77 AS UKR COLLOID CHEM D15 J01 (J03) *SU -655-653
Demineralisation of mine water by electrolysis at reduced cost - 92309B/51
- *BADI 23.03.77 BASF WYANDOTTE CORP D25 E17 *US 4178-262
Spotting-agent compsn. for use in laundering garments - 92632B/51
- BADI 05.12.77 BASF WYANCOTTE CORP A35 D25 (A11 A23) =ZA 7806-828
Reclaiming stained cellulose contg. fabrics - 78105A/43
- BADI 28.04.78 BASF AG A97 D22 (A14) =J5 4143-495
Polyvinyl pyrrolidone-iodine prodn. by direct reaction - 56356B/31
- BADI 03.06.78 BASF AG D25 E17 =DT 2824-443
Stabiliser and flow enhancer for zeolite slurry used in detergent mfr. - 89726B/50
- *BALA/10.11.75 BALANDIN E M D15 *SU -656-572
Electrical flotation equipment for purifying animal manure - 92431B/51
- BEAF 14.10.75 BEATRICE FOODS CO D13 #CA 1067-338
Morazella cheese extender compsn. - 78651W/47
- BEDR-18.02.78 BEDROSIAN & ASSOC A92 D13 (A11 A17) #GB 1558-324
Controlled atmosphere tomato package - 28703A/15
- BEHW 18.03.72 BEHRINGWERKE AG B03 D16 =IT 1034-034
Mycoplasma culture medium - 58483U/40
- BEHW 10.06.75 BEHRINGWERKE AG B04 D16 =SF 7901-145
Stable microbial clumping factor - 96508X/52
- *BELF-10.03.78 BEL FROMAGERIES D13 *FR 2419-030
Textured food products based on milk proteins - 91433B/51
- *BENS/07.06.78 BENSIMAN V D22 E34 *GB 2022-448
Brine prodn. by water injection into gravel bed below salt layer - 91499B/51
- BERP 25.11.74 BEROL KEMI AB A97 D25 E19 =SU -655-325
Aqueous liquid detergent composition - 30216X/17
- BERT-10.09.75 BERTIN AND CIE D13 =GB 1557-983
Extn. of cacao beans from pods - 42084Y/24
- BIKO-27.02.76 BIKOMA GMBH D22 F07 =US 4177-544
Tampon prodn. machine - 63263Y/36
- BILS 10.04.78 BILLERUD UDDEHOLM D18 F09 =BR 7902-192
Prodn. of cellulose fibres from wood, and paper made from them - 77635B/43
- BILS 10.04.78 BILLERUD UDDEHOLM D18 F09 =SF 7901-167
Prodn. of cellulose fibres from wood, and paper made from them - 77635B/43
- BILS 03.05.78 BILLERUD UDDEHOLM D18 F09 =SW 7805-087
Prodn. of cellulose fibres from wood, and paper made from them - 77635B/43
- BIOC 07.03.78 BIOCHEMIE GMBH B05 D16 #FR 2419-274
Pleuromutilin solvates with a halogenated aliphatic hydrocarbon - 49608A/27
- *BIOC-07.06.78 BIOCHEM GMBH D13 *DT 2824-977
Fat contg. milk protein tablets prodn. - 91263B/51
- BIWA-06.06.79 BIWATER SHELLABEAR D15 =GB 2022-437
Water treatment and storage unit - 84131B/46
- *BLAS/27.11.70 BLASZKOWSKI H D24 *US 4177-965
Soap bar and holder - 92571B/51
- *BMEA=08.07.77 BELO MEAT IND RES D12 *SU -656-609
Gripping device for meat carcasses on suspension track - 92432B/51
- BOEF 19.04.74 BOEHRINGER MANNHEIM GMBH B04 D16 (B01) =IT 1034-269
3-Keto-delta-5-steroids converted to delta-4 - 74307W/45
- *BOEF 12.06.78 BOEHRINGER MANNHEIM GMBH B04 D16 *DT 2825-650
Serum thyroxine binding index diagnostic determination - 91310B/51
- BOEH 03.06.78 BOEHRINGER SOHN C H B04 C03 D16 =DT 2824-411
Antiviral compsn. contg. eucaryotic transfer-RNA - 87609B/49
- BOEH 03.06.78 BOEHRINGER INGELHEIM B04 C03 D16 =GB 2022-412
Antiviral compsn. contg. eucaryotic transfer-RNA - 87609B/49
- BOEH 03.06.78 BOEHRINGER C H SOHN B04 C03 D16 =NL 7904-340
Antiviral compsn. contg. eucaryotic transfer-RNA - 87609B/49
- BOHN/15.04.78 BOHNKE B D15 =BR 7902-239
Waste water activated sludge plant with sec. activation tank - 59870B/33
- BOLI 03.05.78 BOLIDEN AB D15 E33 F09 J01 =SW 7805-135
Aluminium sulphate soln. contg. polynuclear complexes - 84603B/47
- BOUD/10.11.67 BOUDART R L B04 D16 =IT 1034-008
Product from processing pafaw latex - 46873R/26
- *BOUR/25.07.77 BOURGEOIS R D D14 *US 4177-753
Appts. for coating food articles e.g. onion rings - 92543B/51
- BRAX/28.04.78 BRAXTONE J B04 D16 =NO 7901-414
Adsorption to obtain trace constituents esp. urokinase from urine - 66356B/37
- *BRBL 08.06.78 BRAUNSCHWEIG MASCH D17 *DT 2825-080
Dust feed back system for beet cutting dryer - 91271B/51
- *BRIM 21.11.75 BRISTOL MYERS CO A96 D21 *CA 1067-411
Hair bleaching powder compsn. for mixing with aq. soln. - 91179B/51
- BRPE 22.03.74 BRITISH PETROLEUM LTD A89 D15 J04 =SU -656-552
Determn. of total carbon in aq. solns. contg. (in org. cpds. - 67654W/41
- *BRPE 08.12.77 BRITISH PETROLEUM LTD D15 E33 J01 (E11) *ZA 7800-489
Removal of actinide metals from soln. - 92751B/51
- BRPE 10.03.78 BRITISH PETROLEUM LTD D15 H05 #FR 2419-315
Oil removal from oily sludge - 63421A/36
- *BRTO 10.03.78 BOC LTD D23 E17 *GB 2022-587
Extracting fatty acids from tall oil heads - 91521B/51
- *BABE-23.04.74 BABES-BOLYAI UNIV D15 J03 *RU --65-220
Ion-selective electrolysis membrane prodn. - B/51

- *CANN- 19.09.77 CANNON LTD C04 D15 *US 4177-575
Drying and pelletising sewage - 92531B/51
- CANT- 02.09.76 CANTON TEXTILE MILL D15 J02 =GB 1558-224
Liquid aeration device with concentric tubes - 61001Y/34
- CARA/ 07.03.75 CARATTINIA D12 =IT 1034-097
Sewing device for boned meat prods. - 02422Y/02
- *CARL- 07.06.78 CARLE & MONTANARI S D13 *DT 2918-583
Automatic synchronisation of dispenser with mould boxes - 91331B/51
- *CARL- 07.06.78 CARLE & MONTANARI S D13 *DT 2922-167
Machine for caramel mfr. - 91373B/51
- CELA- 08.03.78 CELATOSE D22 =FR 2419-038
Throwaway baby's napkin - 77607B/43
- CGDA 02.07.70 CIE GEN AUTOMATISME D16 =DS 2132-970
Automatic photometric identification of bacteria - 02846T/02
- *CHCO= 07.12.76 CHEM CPDS BIOL TEST B04 D16 *SU -654-683
Flowline mutagenic activity tester for chemical cpds. - 92241B/51
- CHEM 10.03.78 CHEM WERKE HULS AG B05 D22 E15 =FR 2419-270
Tetra:chloro-cyclo:butenone prodn. from hexa:chloro-cyclobutene - 70150B/39
- CHIN 16.09.75 CHINOIN GYOGYSZER B02 C02 D21 E13 =SU -655-315
Antifungal subsid. benzimidazoles - 05755Y/04
- CHIR- 05.04.78 CHIRON SA D13 =SF 7901-114
Uncooked food prod. contg. meat or fish and cereals - 73612B/41
- *CHIY- 28.04.78 CHIYODA KAGAKU KOGY D12 *J5 4143-546
Removing excess sulphite from frozen crustacea - 91649B/51
- CIBA 17.06.75 CIBA GEIGY AG A88 D15 F06 =SU -655-302
Purificn. of industrial waste water contg. organic impurities - 00007Y/01
- CIBA 14.11.75 CIBA GEIGY AG A91 D15 F09 (A11 F06) =US 4178-438
Purification of waste water with cellulose derivs. - 34475Y/20
- *CIBA 07.06.78 CIBA GEIGY AG A97 D25 (A26) *DT 2909-757
Washing powder contg. silicone oil foam regulator - 91326B/51
- *CIBA 12.06.78 CIBA GEIGY AG C03 D22 E14 F06 *DT 2923-217
Protection of keratin-contg. materials against attack by insects - 91412B/51
- *CIBA 20.11.79 CIBA-GEIGY UK LTD B07 D21 E19 *RD -188-031
Storage stable cosmetic compsn. for treating skin, etc. - 92222B/51
- CNRS 11.07.77 INST NAT SANTE RECH MED B04 C03 D16 #US 4178-365
Antischistosomal immunological agent - 75958Y/43
- COKE 13.09.74 COCA-COLA CO A88 D15 J01 (D13) =SU -656-473
Combined ultrafiltration-dialysis cell - 65377W/39
- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) =US 4178-255
Detergent compsn. for washing powder contg. meta-kaolin - 69975B/39
- COLG 25.05.78 COLGATE PALMOLIVE CO D25 E19 F06 =GB 2022-641
Liq. bleach and fabric softening compsn. - 68037B/37
- COLG 25.05.78 COLGATE PALMOLIVE CO A84 D25 E16 F06 (A25 E13) =GB 2022-642
Polyurethane foam dispenser - 71792B/40
- COLG 30.05.78 COLGATE PALMOLIVE CO D21 E33 =DT 2918-133
Extrudable opaque dentifrice paste - 71814B/40
- COLG 30.05.78 COLGATE PALMOLIVE CO D21 E33 =NL 7903-744
Extrudable opaque dentifrice paste - 71814B/40
- *COMB= 21.02.77 COMBINE FODDER IND C03 D13 *SU -655-966
Animal feed urea content determination - 92426B/51
- CONN- 29.11.76 CONNAUGHT LABS LTD B04 D16 =CA 1067-406
Anti:poliomyelitis vaccine contg. attenuated viruses - 25288A/14
- CONS/ 22.03.78 CONSTANCER J D14 =ZA 7801-681
Spit roasting appts. - 72242B/40
- COOR- 22.12.77 COORS FOOD PROD CO D13 (D16) =ZA 7806-952
Edible yeast product used as cocoa substitute - 47147B/26
- CORP 18.03.75 CPC INTERNATIONAL INC D17 (D16) #IT 1034-393
Conversion of starch to levulose from aq suspension - 24155W/15
- CORP 12.01.78 CPC INTERNATIONAL INC D17 E13 (D16) =J5 4145-292
Preparing high purity maltose crystals from starch hydrolysate - 52537B/29
- CORP 27.04.78 CPC INTERNATIONAL INC B07 D16 F06 H01 (B04 D13 D17 D21) #BR 7802-635
High-viscosity acidic polysaccharide(s) obtd. by *Bacillus lentus* cultu - 67001A 38
- COST/ 07.03.78 COSTA R D11 =FR 2419-102
Kneading machine for food e.g. bread dough - 29985B/16
- *COUR 12.04.78 COURTAULDS LTD A11 D22 F01 (A96) *GB 2022-505
Highly absorbent regenerated cellulose fibres - 91512B/51
- CTCH- 26.04.67 CONTINENTAL CHEM CO A11 D21 L02 (A96) =DS 1771-224
Fast setting plaster of paris bandgages - 56171R/32
- CULV 24.04.70 CULVER A CO A96 D21 (A25) =IT 1034-024
Low abrasion tooth-paste - 74159S/47
- CUPR- 05.05.78 CUPRINOL LTD C01 D22 E12 F06 (F09) =DK 7901-869
Antifungal compsn. esp. for preserving wood - 84573B/47
- DAIC 09.11.76 DAINICHISEIKA COLOR CHEM D25 E13 =J7 9039-007
Cleaning compsn. contg. pH indicator - 48422A/27
- *DAIL 28.04.78 DAICEL KK C03 D22 E19 F09 (E36) *J5 4143-501
Insect control in wood - 91632B/51
- *DAIL 02.05.78 DAICEL KK D21 E17 *J5 4145-224
Base material for cosmetics - 91916B/51
- *DAIR= 18.08.76 DAIRY IND RES INST A88 D15 J01 (A11) *SU -655-399
Cellulose acetate filter material for filtration of liquids - 92278B/51
- DANO- 08.03.78 DANOCHMO A/S B05 C03 D13 (D16) =FR 2419-031
Animal feed additive for normalising intestinal microflora - 68372B/38
- *DASU- 27.09.77 DANSKE SUKKERFAB A/ D17 *ZA 7805-165
Feeding sugar cane to disintegrator - 92771B/51
- DAVY- 12.04.78 DAVY INT OIL CHEM D15 E31 K07 M25 =BR 7902-197
Recovery of uranium values from organic extractant - 84556B/47
- DEGS 26.02.75 DEUTSCHE GOLD & SILBER D13 E17 =DS 2508-228
Pure racemic- and meso-tartaric acids prepd from alkali maleate - 70688W/43
- DEGS 31.10.77 DEUTSCHE GOLD & SILBER D25 E34 =US 4178-351
Stabilisation of sodium percarbonate particles against moisture - 33354B/18
- DEGS 10.03.78 DEUTSCHE GOLD & SILBER D25 E34 =FR 2419-252
Sodium percarbonate particles coated with dehydrated sodium perborate - 66331B/37
- DENH/ 18.03.74 DENHOLM A D11 =IT 1034-280
Baking oven with circulating hot gases - 65901W/40
- *DENY 14.03.64 DENRYOKU CHUO LAB D16 *J7 9039-314
Laver culture with accelerated growth and increased yield - 92165B/51
- *DEUT/ 30.05.78 DEUTSCH D H D16 J01 *NL 7904-243
Microporous element with tapered penetrations in each layer - 92201B/51
- DIDI 05.06.78 DIDIER-WERKE AG A88 D15 =NL 7904-264
Air inlet pipe for gas distribution in liq. - 73639B/41
- DIVE 04.06.79 DIVERSEY CORP A88 D13 J01 (D15 D16) =GB 2022-435
Multielement pipe filter for milk, wine effluent etc. - 73649B/41
- DOWC 31.05.78 DOW CHEMICAL CO C03 D13 #NL 7805-942
Feed compsns. contg. malic acid as ruminant feedstuff - 86136A/48
- *DOWC 08.06.78 DOW CHEMICAL CO D15 E37 J04 M11 (J03) *DT 2923-050
Determn. of acid or basic cpds. in aq. soln. of salts - 91403B/51
- DRAG- 22.02.69 DRAGOCO SPEZIALFAB D13 =IT 1034-013
Flavour concentrate with the bouquet and - 61181R/34
- DRES 21.04.72 DRESSER INDUSTRIES INC D15 J01 #DS 2220-328
Reverse osmosis appts - 41900T/26
- *DSAN/ 05.05.78 DOS SANTOS A N D16 *BR 7802-872
Refrigeration unit for plants for prodn. of alcohol from manioc - B/51
- DYNL 22.12.77 DYNAPOL B05 D13 E14 (E12) =ZA 7807-073
4-3-Sulpho-4,5-di:hydroxy-hexyl:oxy 4'-alkoxy di:hydro-chalcone(s) - 31634B/17
- DYNN 29.04.78 DYNAMIT NOBEL AG D15 E33 F09 L02 =SW 7903-690
Directly usable alkaline aluminate prodn. in high yield - 66375B/37
- *ECOL- 08.06.78 ECOLOGICAL CONSULT B04 C03 D13 (D16 D21) *GB 2022-459
Comminution of algae material - 91502B/51
- *EIRI/ 01.06.78 EIRICH H D16 *DT 2823-959
Refuse conversion to compost - 91234B/51
- ELEC- 24.08.70 ELECTRO-FOOD AB D13 =SU -655-347
Cooking potatoes - 16149T/10
- *ELEC- 19.07.71 ELECTROMETAL INTR D15 *RU --63-520
Carbon dioxide source for autosiphons - B/51
- ELLN/ 12.06.78 ELLNERS D15 (D22) #DT 2825-672
Ultraviolet liquid purification system - 79920A/44
- *ENCL- 25.04.78 ENCLER BUSINESS KK A97 D22 E17 *J5 4143-531
Semi-solid aromatiser compsn. prepn. - 91645B/51
- *EPID= 06.09.77 EPIDEMOLOGY MICROBI B04 D16 *SU -656-099
Cell hypersensitivity reaction simulation - 92429B/51
- ERAP 08.03.78 ELF AQUITAINE A28 C03 D15 F06 (A87 A91) =FR 2419-302
Addition polymer with lateral beta-hydroxy poly:sulphonium gps. - 66337B/37
- ESSO 14.04.78 EXXON RES & ENG CO C03 D16 (D13) =J5 4143-583
Microbial cells prodn. from methylotropic microorganism strains - 77805B/43
- *ETHY 03.03.77 ETHYL CORP B05 D16 E17 *US 4178-211
Citric acid prodn. by cultivation of *Candida lipolytica* - 92611B/51
- EXCE 16.05.78 EX-CELL-O CORP D22 (D13) =WP 7901-074
Prefilling sterilisation of milk containers with bactericidal aerosol - 71732B/40
- EXER- 05.04.78 EXERGIE D15 E33 M11 =BR 7902-114
Antipollution treatment of conc. waste waters from anodisation plant - 75757B/42
- *EXPE= 07.06.78 EXPER VETERINARY B04 C03 D16 *DT 2923-144
Trichophytosis vaccine - 91409B/51
- *FAME- 05.06.78 FAMECCANICA SPA A96 D22 *DT 2921-876
Baby's disposable napkin pants - 91366B/51
- FARB 28.12.70 BAYER AG B04 D16 =RU --63-065
Glucosidehydrolase inhibitors - 44842T/28
- FARB 15.04.71 BAYER AG D18 E16 =DS 2118-363
Chloroparaffin sulphonic acid prodn - 69993T/44

- FARB 25.06.77 BAYER AG A96 D21 (A14) =US 4177-563
Two/part dental filling paste compsn. - 87799A/49
- FARB 24.12.77 BAYER AG C03 D13 =J5 4145-293
Plant protectant cpd. prepd. by Actinoplanes culture - 52922B/29
- FARB 21.02.78 BAYER AG A97 B05 D16 (A14) =J5 4145-286
Phenyl-glycine derivs. enzymatic optical resolution - 63329B/35
- FARB 26.04.78 BAYER AG B02 C02 D13 E13 (D22) =J5 4145-694
Imino-acetamido beta-lactam antibiotic derivs. - 79405B/44
- FARB 27.04.78 BAYER AG D15 E14 =J5 4143-771
Purifying waste waters contg. nitro-hydroxy aromatic cpds. - 81028B/45
- FARB 13.05.78 BAYER AG A60 D25 E23 F06 =BR 7902-917
Benzofuranyl-benzimidazole(s) - 84359B/47
- *FARB 03.08.78 BAYER AG A97 D18 (A26) *DS 2834-121
Condensation product for tanning leather - 91194B/51
- *FARE/ 09.05.78 FARES N F D22 *BR 7802-900
Insect repellent and air disinfectant - B/51
- FARH 29.10.77 HOECHST AG D15 =ZA 7806-067
Treatment of waste water contg. toxic materials etc. - 37247B/20
- FARH 02.11.77 HOECHST AG A14 D21 G03 (A81 A96) =ZA 7806-147
Preparing vinyl ester-crotonic acid copolymer - 37255B/20
- FARH 31.03.78 HOECHST AG A92 D12 =SF 7901-053
Tubular package sheath - 73767B/41
- FARH 06.04.78 HOECHST AG A97 D12 =SF 7901-111
Protective sheath for corrugated sausage skin stack - 75663B/42
- FARH 07.04.78 HOECHST AG B04 D16 =BR 7902-147
Coagulating fermented biomass suspensions - 75297B/42
- FARH 11.04.78 HOECHST AG B04 D16 #SF 7801-104
Alpha-amylase inhibitor for treating diabetes and obesity - 53463A/30
- FARH 06.06.78 HOECHST AG A82 D25 G02 (A17 A97) =DT 2824-716
Anionically emulsified wax emulsion contg. cationic germicide - 89744B/50
- *FARM/ 22.12.77 FARMER RES D14 *ZA 7806-987
Machine for end cutting and sizing pineapples - B/51
- *FERR/ 17.12.74 FERRARIA D13 *IT 1034-077
Hyper-proteinaceous food paste - B/51
- FIRM 09.11.67 FIRMENICH SA D23 E15 =IT 1034-409
Cycloaliphatic unsatd ketones-new perfum- - 60190R/34
- FIRM 21.03.74 FIRMENICH SA D23 E15 =IT 1034-009
Cycloaliphatic unsatd ketones-new perfum- - 60190R/34
- FIRS- 06.08.75 FIRST PATENT DEV CO D22 =CA 1067-408
Surgical dressing comprising film forming protein - 09379Y/06
- FMCC 08.04.74 FMC CORP D25 E34 =DS 2515-141
Granulated sodium tripolyphosphate with medium heaping weight - 71121W/43
- *FOOD- 11.04.77 FOOD TECH PROD C03 D13 *US 4178-369
Improving feed efficiency in turkeys - 92681B/51
- *FOOD- 18.07.77 FOOD TECHN PROD C03 D13 *US 4178-370
Improving feed efficiency in pigs - 92682B/51
- FRRR 26.10.72 FERRERO P & CIA SPA D13 =SU -656-468
Chocolate liqueur centres prodn - 17375V/10
- FUJI 19.11.75 FUJISAWA PHARM KK B03 D16 =CA 1067-435
Microbial prodn. of Nocardicine A antibiotic - 36211Y/21
- FUKO 15.02.73 FUJI OIL KK D13 =J4 9102-873
High foaming, low fat content cream prepn. - 92182B/51
- *FUKO 15.02.73 FUJI OIL KK D13 *J7 9039-459
High foaming, low fat content cream prepn. - 92182B/51
- GALL- 15.02.73 E & J GALLO WINERY A11 D13 F01 J01 (A88 A97 D16) =J7 9038-747
Cellulose acetate fibres resembling asbestos - 64919V/37
- GBFB- 11.02.78 GBF GES BIOTECH FOR D16 E13 H01 =DS 2805-823
Oil extn. by flooding with water - 61639B/34
- GEBE/ 25.06.74 GEBEFUGII D15 #IT 1034-063
Activating silicates for water purifcn - 05928W/04
- *GENA 22.11.66 GAF CORP A60 D21 E14 *DS 1643-400
3-benzoyl-4-hydroxy-6-methoxy benzenesulphonic acid - 91184B/51
- GENE- 08.11.77 GENENTECH INO B04 D16 =J5 4145-289
Recombining plasmid for transformation of bacteria - 35257B/19
- *GENF 12.06.78 GENERAL FOAM PROD LTD D13 *GB 2022-394
Soluble coffee prodn. from chilled extract - 91490B/51
- GENO 30.03.71 GENERAL FOODS CORP D13 E17 =J4 7035-173
Food flavouring - 28517T/18
- GENO 30.03.71 GENERAL FOODS CORP D13 E17 =J7 9039-463
Food flavouring - 28517T/18
- *GENO 07.06.78 GENERAL FOODS CORP D13 *DT 2922-787
Fruit juice powder easily soluble in cold water - 91393B/51
- GENO 07.06.78 GEN FOODS CORP D13 =GB 2022-393
Fruit juice powder easily soluble in cold water - 91393B/51
- GIDE- 24.02.72 FA GIDECO D11 =DS 2309-068
Pancake-making machine - 53133U/37
- *GILL 31.05.78 GILLETTE CO A96 D21 (A18) *NL 7904-061
Self lubricating safety razor head - 92199B/51
- GIVA 10.09.69 GIVAUDAN L & CIE SA D23 E15 (D13 D21 D25 E17) =IT 1034-017
New mercapto-or alkylthio terpnoids - 18899S/10
- GIVA 06.10.69 GIVAUDAN L & CIE SA D23 E15 =IT 1034-018
Norbornyl derivs used in perfumery - 23100S/13
- GIVA 09.01.70 GIVAUDAN L & CIE SA D23 E13 =DS 2063-166
Dioxolanes for perfumery use prepd fromglycols - 47974S/29
- *GNZE 28.04.78 GUNZE KK D15 *J5 4144-037
Biological denitrification of waste water - 91732B/51
- *GPOL= 03.06.77 GEOR POLY D14 *SU -656-652
Emulsifier for margarine prodn. - 92458B/51
- GRAC 24.05.78 GRACE W R CO D21 E36 =GB 2022-410
Dentifrice contg. hydrated silica gel polishing agent - 71785B/40
- GRAI 04.04.78 GRAIN PROCESSING CORP A11 D17 E16 F06 =J5 4143-534
Cationic starch pastes prepn. - 75729B/42
- GRIF/ 06.06.79 GRIFFITHS M W A96 B04 D16 =GB 2022-595
Bacterial beta-galactosidase of high thermal stability - 89839B/50
- GRIN 03.05.76 GRINDSTED VAERKET A/S D11 =US 4178-393
Monoglyceride phosphate powder additive for bread etc. - 63105Y/36
- GRUB- 04.08.75 GRUBB PARSONS SIRH D13 J04 =CA 1067-310
Quantitative analysis of dispersions - 16724Y/10
- GUBE/ 07.06.78 GUBERNATOROVA V D15 E36 #DT 2825-007
Removal of nitrate(s) nitrite(s) and organic cpds. from waste water - 77373B/43
- HARN 11.03.78 HARTMANN P AG A83 D22 F07 =FR 2419-039
Disposable napkin folding into breeches - 52577B/29
- HARS- 08.07.75 HARSCO CORP D15 =CA 1067-419
Sludge scraping blade - 66702Y/37
- HAUN 22.04.70 HAUNI-WERKE KORBER KG D18 =DS 2019-369
Tobacco drying plant - 72646S/46
- HAYA/ 14.01.71 HAYASHIT D11 =DS 2201-490
Dough conveyor - 63001T/40
- HAYA/ 27.01.76 HAYASHIT D11 =US 4178-147
Continuous dough roller for pastry and bread - 54417Y/31
- HAYB 24.02.70 HAYASHIBARA KEN D17 E13 (D11) =DS 2108-748
Oligosylfructose prepn - 59309S/37
- HAYB 09.03.78 HAYASHIBARA SEITBUT B04 D13 (D16 D21) =FR 2419-032
Syrup contg. oligosaccharide(s) with fructose terminal gps. - 70259B/39
- *HEAT= 05.07.77 HEAT MASS TRANSF A97 D16 *SU -654-828
Hydrodynamic resistance reduction - 92258B/51
- HENK 03.09.71 HENKEL KG AUF AKTIEN A60 D23 E17 =DS 2144-117
Ketones from vicinal diols - 15994U/12
- HENK 23.03.78 HENKEL KG AUF AKTIEN D21 E23 =SF 7900-748
Hair dyeing compsns. - 72134B/40
- HENK 25.03.78 HENKEL KG AUF AKTIEN D21 E13 =SF 7900-749
Hair dyeing compsns. - 72133B/40
- HENK 14.04.78 HENKEL KG AUF AKTIEN D21 E16 =BR 7902-210
Amphoteric surfactant amino-ether cpds. for shampoo use - 86248B/48
- HENK 17.04.78 HENKEL KG AUF AKTIEN B01 D16 =J5 4145-287
17-C-Steroid alpha-propionic acid derivs. prodn. - 79388B/44
- HENK 26.04.78 HENKEL KG AUF AKTIEN D23 E13 (D21 D25) =J5 4143-533
Tri:methyl-tetra:hydro-pyranone isomer perfumes - 79417B/44
- HENK 20.05.78 HENKEL KG AUF AKTIEN D18 E17 (E33) =BR 7903-084
Replacing waste water polluting auxiliaries in leather mfr. - 86279B/48
- HENK 20.05.78 HENKEL KG AUF AKTIEN D18 E36 =BR 7903-085
Water-insoluble partly acid-soluble aluminium silicate - 86132B/48
- HENK 20.05.78 HENKEL KG AUF AKTIEN D18 E33 =BR 7903-086
Use of water-insoluble aluminosilicate cpds. in leather mfr. - 87805B/49
- HENK 01.06.78 HENKEL KG AUF AKTIEN D21 E36 =DT 2823-968
Cosmetic hair treating compsn. contg. boric acid - 89732B/50
- HENK 01.06.78 HENKEL KG AUF AKTIEN A97 D25 E19 F06 (A25) =DT 2824-024
Liq. cleaner contg. quat. ammonium textile softener - 89752B/50
- HETO 20.03.75 HETEROORG CPDS AS USSR A14 D22 G03 (A96) #DS 2512-288
Cyanacrylate ester adhesive - 44257X/24
- *HIEJ 28.04.78 HITACHI PLANT ENG CONST D15 J01 L03 *J5 4144-036
Purifcn. of metal-contg. waste water e.g. from semiconductor mfr. - 91731B/51
- *HIEJ 02.05.78 HITACHI PLANT ENG CONST D15 E34 *J5 4144-763
Treating borofluoride-contg. waste water - 91869B/51
- *HIEJ 02.05.78 HITACHI PLANT ENG CONST D15 *J5 4144-764
Removal of borofluoride from waste water - 91870B/51
- *HIRA/ 04.05.78 HIRAI H B04 D16 *J5 4145-209
Detecting antigenic substance - 91910B/51
- *HISM 28.04.78 HISAMITSU PHARM KK A96 B07 D22 *J5 4143-517
Cataplast of good softness and adherence - 91635B/51
- HITA 12.10.73 HITACHI KK D15 J01 =US 4178-245
Continuous filtration appts for sewage - 48130W/29
- HITB 16.07.75 HITACHI CHEMICAL KK D23 E15 =J7 9039-451
Perfume compsn. contg. ethylidene -norbornene opt. with tricyclodecane - 17256Y/10
- *HOFF 12.10.76 HOFFMANN-LA ROCHE INC B04 D16 K08 *US 4178-359
Immunoassay for antibodies to microbial organisms - 92676B/51
- HOFF 25.03.77 HOFFMANN-LA ROCHE AG B05 C03 D13 E15 =GB 1558-338
Microcrystalline vitamin/A prodn. - 71147A/40
- HOFF 09.12.77 HOFFMANN-LA ROCHE AG D21 E13 =ZA 7806-760
Cosmetic prods. contg. pyridine thiol cpds. and acetyl cysteine - 44049B/24

- HOFF 24.01.78 HOFFMANN-LA ROCHE AG B05 D16 E17 (D13) = J5 4145-284
 Dextro-arabitol sweetener prepn. - 61795B/34
- *HOFF 15.03.78 HOFFMANN-LA ROCHE INC B04 D16 K08 *US 4178-360
 Rubella virus labelled with iodine-125 - 92677B/51
- *HOKU- 04.05.78 HOKUETSU TANSO KOGY D15 J01 *J5 4145-389
 Adsorbent for anions present in waste water - 91969B/51
- *HOSH- 28.04.78 HOSHIZAKI DENKI D15 J07 *J5 4143-775
 Ice and pure water prodn. appts. - 91698B/51
- HOTA- 13.04.78 HOTACO A/S D15 = SF 7901-140
 Appts. for biological purification of waste water - 79396B/44
- ICIL 11.03.74 IMPERIAL CHEM INDS LTD D15 H03 J01 = IT 1034-185
 Oil removal from oil-in-water emulsions - 64017W/39
- ICIL 11.03.74 IMPERIAL CHEM INDS LTD D15 H03 J01 = J7 9039-066
 Oil removal from oil-in-water emulsions - 64017W/39
- ICIL 04.12.74 IMPERIAL CHEM INDS LTD D16 J01 = CA 1067-395
 Aerobic fermentator for liquid/gas separation - 46447X/25
- ICIL 17.06.75 IMPERIAL CHEM INDS LTD D17 E13 = CA 1067-437
 Aldose conversion to ketose - 02368Y/02
- ICIL 13.01.77 IMPERIAL CHEM INDS LTD B03 D16 = US 4178-213
 Tetra:hydro:furyl-acetic acid deriv. prodn. - 49712A/28
- *IDEK 02.05.78 IDEMITSU KOSAN KK B05 C03 D16 *J5 4145-285
 Biological prepn. of phenacyl alcohol - 91924B/51
- IFFA 22.06.67 INST FRANCAIS FIEVRE APH B04 C03 D16 = IT 1034-006
 Rabies vaccine - 06774H/00
- IMMA- 31.05.78 IMMAFRO SA NV D11 = NL 7900-296
 Speed control for industrial bread slicing machine - 70879A/40
- *INCH- 01.06.74 INST IND CHIM ALIME D17 *RU --67-255
 Continuous sugar extractor for sugar beet - B/51
- INDA- 31.08.76 IN DA TE AG D14 = GB 1558-013
 Food sterilisation and preservation - 18148A/10
- *INFL 19.04.78 INT FLAVORS & FRAGR INC D23 E13 *US 4178-311
 Acyl-benzene intermediates for perfumery - 92650B/51
- INFL 30.05.78 INT FLAVORS & FRAGR INC D23 E19 = J5 4145-230
 Diluted liq. perfume compsn. - 68152B/38
- *INGR- 03.08.76 COMB INGRASAMINTE D15 E16 *RU --65-071
 Purificn. of waste water contg. urea - B/51
- INMR 15.02.67 INST MERIEUX B04 C03 D16 = IT 1034-007
 Brucellosis vaccine - 03330H/00
- INRG 07.06.77 INST NAT RECH AGRON C03 D13 (D16) = J5 4145-288
 Nutritional protein prodn. from Trichoderma album - 89622A/50
- INSP 13.04.78 INST PASTEUR B04 D16 J04 = J5 4143-297
 Identification of nucleic acid fragments - 77171B/43
- *INSP 08.06.78 INST PASTEUR D16 *DT 2923-297
 Plasmid(s) contg. DNA fragment attached to operon - 91414B/51
- INTE- 23.03.78 INTEROX CHEM LTD D16 M25 = SF 7900-857
 Bacterial leaching of ores, esp. ferrous sulphide ores - 72162B/40
- ISHI- 20.12.77 ISHIGAKI KIKO D15 = US 4178-251
 Sewage sludge dewatering filter press - 47396B/26
- ITIL- 08.03.77 ITI LIMITED D15 = US 4177-748
 Propulsion unit anchoring plate - 67326A/38
- *IVAN/ 10.08.76 IVANCHENKO AI D14 *SU -656-612
 Animal feed extruder - 92435B/51
- JOHJ 18.05.76 JOHNSON & JOHNSON A81 D22 G03 = GB 1558-220
 Adhesive bonding agent - 03086A/02
- JOHJ 30.03.78 JOHNSON & JOHNSON D21 M26 = SF 7901-048
 Non-precious metal dental alloy - 79432B/44
- JOHJ 11.04.78 DEVRO INC A97 D12 (A11) = J5 4143-549
 Stabilising collagen films esp. sausage skins against fungi - 77664B/43
- *KAEL/ 12.06.78 KAELIN JR D15 *DT 2923-375
 Centrifugal ring for aerating sewage tank surfaces - 91420B/51
- KAKE 05.09.69 KAKEN KAGAKU KK B03 D16 = DS 2043-946
 Antibiotic minimycin preparation using - 22154S/13
- *KALI= 03.02.76 KALININ PEAT IND C03 D16 (D13) *SU -655-372
 Liquid agricultural growth stimulant - 92270B/51
- *KAMM/ 10.06.78 KAMMER M A97 D21 *DT 2825-529
 Mfg. pieces of floating soap - 91296B/51
- *KANE 28.04.78 KANEBO KK D25 E16 *J5 4144-308
 N-(3-oleyloxy-2-hydroxypropyl) amine derivs. - 91749B/51
- KANE- 12.03.77 KANESA MISO KK D13 = US 4177-574
 Granulating moist foodstuffs under vacuum - 80729A/45
- *KAOS 05.10.65 KAO SOAP KK D11 *J7 9039-460
 Liq. shortening compsn. mfr. - 92183B/51
- KAOS 11.12.73 KAO SOAP KK A97 D25 E17 = J7 9038-603
 Detergent surfactant - 41373W/25
- KAOS 07.06.74 KAO SOAP KK A97 D25 E15 = J7 9038-605
 Coloured liquid cleaning compsn - 00458X/01
- KAOS 06.03.78 KAO SOAP KK A96 D21 E16 (A14 E17) = FR 2419-319
 Shampoo contg. anionic surfactant, alkanol:amide and polyacrylic acid - 66687B/37

- KAOS 28.04.78 KAO SOAP KK D25 E34 = J5 4143-799
 Stabilising sodium percarbonate - 81188B/45
- *KAOS 28.04.78 KAO SOAP KK D23 E15 (D21) *J5 4144-353
 8-Exo-formyl-endo-tri:cyclo(5.2.1.0) decane - 91777B/51
- KAOS 28.04.78 KAO SOAP KK D23 E15 = J5 4144-354
 8-Exo-hydroxymethyl-endo-tri:cyclo(5.2.1.0,2,6) decane(s) - 81193B/45
- *KAOS 02.05.78 KAO SOAP KK D23 E15 (D21) *J5 4144-352
 Acetal derivs. for perfumes, cosmetics, shampoos, soaps etc. - 91776B/
- KAOS 04.05.78 KAO SOAP KK D23 E15 = J5 4145-646
 Tri:cyclo-alpha,beta-unsatd. aldehyde perfume - 82849B/46
- KAOS 05.06.78 KAO SOAP KK A97 D25 E19 (E34 E36) = DT 2922-345
 Liquid detergent compsns. for bathrooms etc. - 89939B/50
- KAOS 05.06.78 KAO SOAP KK A97 D25 E19 = GB 2022-608
 Liq. cleaner for oily kitchen soil - 89604B/50
- KATA- 05.04.78 KATAYAMA CHEM WORKS A97 C03 D22 F09 (A25 D15) = GB 2022-416
 Microbicide for industrial cooling water and paper pulp - 77643B/43
- KATA- 05.04.78 KATAYAMA CHEM WORK A97 C03 D22 F09 (A25 D15) = SF 7901-091
 Microbicide for industrial cooling water and paper pulp - 77643B/43
- KAWA- 24.05.74 KAWAKEN FINE CHEM K D25 E12 (E34) = J7 9038-604
 Highly clear liquid detergent compsns. - 20142A/11
- KELL 01.07.77 KELLOGG CO D13 = US 4178-392
 Ready-to-eat breakfast cereal - 02457B/02
- KEMA 11.03.75 KEMANORD AB A97 D15 F09 = DS 2610-277
 Removing colloidal impurities from aq. dispersions - 74363X/40
- *KEMP/ 07.06.78 KEMP FW D25 *GB 2022-609
 Additive for soap or detergent compsns. - 91524B/51
- *KIBL/ 17.05.78 KIBLEUR PPM D14 *BR 7903-042
 Continuous thermal treatment of food products - B/51
- KIKK 28.02.72 KIKKOMAN SHOYU KK D11 = J4 8088-241
 Prepn. of bread contg. rice powder - 92181B/51
- *KIKK 28.02.72 KIKKOMAN SHOYU KK D11 *J7 9039-456
 Prepn. of bread contg. rice powder - 92181B/51
- *KIKK 27.04.78 KIKKOMAN SHOYU KK D16 *J5 4143-596
 High quality wine prodn. - 91660B/51
- *KIKK 27.04.78 KIKKOMAN SHOYU KK D13 *J5 4143-597
 Prodn. of sweetener-seasoning contg. alcohol - 91661B/51
- KIMB 06.03.78 KIMBERLY CLARK CORP D18 = FR 2419-034
 Denitrated reconstituted tobacco prepn. - 68333B/38
- KIRI- 27.03.78 KIRIN SEAGRAM LTD D16 E17 J01 = GB 2022-446
 Preventing alcohol pollution - 81683B/45
- *KKAZ= 28.04.78 KAZA KAZNIIGIPROFOS C04 D13 E36 *J5 4143-795
 Pure orthophosphoric acid prodn. from low quality phosphoric acid - 91713B/51
- KOHR- 25.02.75 KOHRYU KOGYO KK A97 D25 M12 = J7 9039-178
 Emulsion based cleaning compsn - 76741X/41
- KONN 05.06.78 GIST-BROCADES NV B04 D13 = NL 7806-086
 Test unit for simplified testing of biological fluids - 89770B/50
- *KOWA 01.05.78 KOWA KK A96 B04 D16 (A11) *J5 4145-205
 Thrombus-dissolving agent contg. urokinase and sodiur dextran-sulphate - 91906B/51
- KROY/ 10.06.68 KROYER KCK D17 = IT 1034-010
 Production of free flowing grainy glucose product - 08977R/06
- *KUFU= 12.07.77 KAUN FUR PROD ASSOC D18 E12 *SU -654-686
 Treatment of pelts with agent which strengthens hair-skin linkage - 92243B/51
- *KUPO= 12.07.77 KAUN POLY D18 E12 *SU -654-686
 Treatment of pelts with agent which strengthens hair-skin linkage - 92243B/51
- *KURI- 02.05.78 KURI KAGAKU SOCHI D23 J01 *J5 4145-368
 Solvent extraction of perfume from plants, spices, etc. - 91953B/51
- *KURO- 02.05.78 KUROSE KOSAKUSHO KK D15 *J5 4145-377
 Desalting water - 91959B/51
- KURS 12.11.76 KURARAY KK D13 = GB 1558-291
 Protein-contg. fibrous foodstuff prepn. - 36844A/21
- *KURS 25.04.78 KURARAY KK D13 *J5 4143-550
 Fibrous high protein food prepn. - 91650B/51
- *KURS 02.05.78 KURARAY KK D15 J01 *J5 4145-380
 Fluid treating device using hollow yarn membranes - 91961B/51
- KUST 05.01.78 KUSTERSE D15 J01 = DS 2800-425
 Filter for reverse osmosis or ultrafiltration - 52733B/29
- KYOW 19.04.76 KYOWA HAKKO KOGYO D21 E16 = DS 2717-002
 Permanent wave compsn. - 79787Y/45
- *KYOW 26.04.78 KYOWA HAKKO KOGYO KK D11 *J5 4143-539
 Bread prodn. - 91646B/51
- *KYOW 28.04.78 KYOWA HAKKO KOGYO KK D16 (D11) *J5 4143-585
 Culturing and preserving Lactobacillus sanfrancisco - 91653B/51
- KYOY 05.09.74 KYORITSU YUKI KOGYO D15 J04 = J5 1029-737
 Regeneration of active carbon - 77294W/47
- KYOY 05.09.74 KYORITSU YUKI KOGYO D15 J04 = J7 9038-998
 Regeneration of active carbon - 77294W/47
- KYOY 13.11.74 KYORITSU YUKI KOGYO D15 J04 = J5 1056-039
 Regeneration of active carbon - /47
- KYOY 13.11.74 KYORITSU YUKI KOGYO D15 J04 = J7 9038-999
 Regeneration of active carbon - /47

- *KYUS- 27.04.78 KYUSHU SHOKURYOHIN D13 *J5 4143-542
Prepn. of canned fruit - 91648B/51
- LABA 17.04.78 LABATT J LTD D17 =J5 4145-243
Dry, odourless, tasteless vital gluten prepn. - 79336B/44
- *LANG/ 30.05.78 LANGENEGGER G C03 D16 (D13) *DT 2823-491
Yeasts prodn. from fluid animal dung mixts. - 91224B/51
- LESI 31.05.78 LESIEUR COTELLE SA D13 (D23) =NL 7904-298
Treating fats, esp. palm oil - 71796B/40
- LEWI- 06.10.77 LEWIS REFRIGERATION D14 =US 4177-647
Freezer for food prods. in trays - 31961B/17
- LICL- 31.03.78 LIC LANDSTINGEN INKOPS A96 D21 (D22) =SF 7802-524
Disinfecting skin ointment based on alcohol - 14251B/08
- LICN 15.11.73 LICENTIA PATENT GMBH D14 =DS 2357-041
Automatically controlled roasting oven for meat joints - 36115W/22
- LIFE- 05.05.78 LIFE SAVERS INC A97 D13 =DK 7803-777
Chewing gum with long lasting sweetness - 04517B/03
- *LIFO= 05.01.77 LITH FOOD IND DES D14 J02 *SU -656-651
Vibrating mixer for viscous materials - 92457B/51
- *LIGG- 26.03.73 LIGGETT GROUP INC D18 E31 *US 4177-822
Tobacco compsns. contg. palladium salts - 92553B/51
- LINO- 05.04.78 LINOTEK OY D24 E12 F09 =J5 4145-710
Purification of crude soap from sulphate cellulose prodn. - B/47
- *LIOC 26.04.78 LION DENTIFRICE KK A96 B05 D21 *J5 4143-530
Oral compsn. for preventing tooth decay - 91644B/51
- LIOY 26.06.74 LION FAT & OIL KK A97 D25 E12 =J7 9038-606
Granular detergents of improved hygroscopicity and stability - 13823X/08
- *LIPE= 05.05.74 LIPETSK TSENTROLIT D14 *SU -656-611
Animal fodder concentrate prodn. scalding unit - 92434B/51
- LISH/ 21.03.78 LISHMAN P D18 F07 =SF 7900-963
Fabric made of twisted fur strip - 72169B/40
- *LIVE= 03.02.77 LIVESTOCK RES INST B04 C03 D16 *SU -655-371
Selection of heifers according to milk yield - 92269B/51
- LKBP 31.05.78 LKB PRODUKTER AB B02 D16 J04 =NL 7904-308
Adenine triphosphate determ. by bio-luminescence - 71832B/40
- LOTT 22.11.77 LOTTE KK D13 =ZA 7806-589
Chewing gum compsn. contg. liq. centre - 42693B/23
- MANS 16.05.77 MANNESMANN AG D15 M24 =GB 1558-316
Steelworks cooling water purificn. - 86369A/48
- *MASI 07.03.77 MASSACHUSETTS INST TECH B02 D16 *US 4178-210
Cephalosporin preparation from penicillin(s) - 92610B/51
- *MASW 00.00.72 MASCH BUCKAU R WOLF D17 *DT 2825-504
Enlarged capacity diffusion column esp. for sugar beet - 91294B/51
- *MATE= 07.09.77 MAT TEC PROC PHYS A93 D18 L02 (A21 D15) *SU -655-675
Frost-resistant concrete mixt. - 92324B/51
- *MATU 06.05.78 MATSUSHITA ELEC IND KK D22 J01 *J5 4145-370
Exhaust gas treating appts. - 91955B/51
- MAYC 11.03.75 MAYER O & CO INC D12 M14 =CA 1067-456
Laminated anode to protect metal meat mould from corrosion - 23571Y/13
- MECC- 31.05.78 MECCANICHE MODERNE D24 =DT 2922-196
Press for moulding cakes of soap and similar materials - 71842B/40
- *MEGG 06.06.78 MEGGLE MILCHIND GMB D13 *GB 2022-392
Casein-contg. milk substitute of reduced lactose content - 91489B/51
- MEIJ 28.08.72 MEIJI CONFECTIONARY B04 D16 =J7 9039-479
A novel antibiotic SF-1346 - 60595V/34
- MERI 28.03.77 MERCK & CO INC A60 B02 C02 D22 =ZA 7801-711
Imidazo-(1,2-a)-pyridyl-carbamate derivs. - 74685A/42
- *MERI 14.12.77 MERCK & CO INC A97 D13 *US 4178-390
Stabilisation of soft serve and hard frozen yogurt - 92694B/51
- MERI 10.03.78 MERCK & CO INC A97 D16 =FR 2419-321
Pretreating Sephadex (RTM) granules used for cell culture - 66344B/37
- MERI 12.04.78 MERCK & CO INC B04 D16 #ZA 7802-123
Preservatives for vaccines - 78323A/44
- MERI 02.05.78 MERCK & CO INC B02 C02 D22 (D13) #SW 7805-032
1-Aza-bis(cyclo(3,2,0)heptene carboxylic acid derivs. - 86053B/48
- METT 26.04.78 M & T CHEMICALS INC A41 D15 E11 F06 =J5 4144-344
Trialkoxy-silane cpds. - 75330B/42
- MILE 06.03.78 MILES LABORATORIES INC D13 =FR 2419-029
Preparing products analogous to cheese - 50906B/28
- MILE 01.05.78 MILES LABORATORIES INC A96 B04 D16 J04 (A11 A14) =J5 4145-596
Deoxyribonuclease determination device - 81227B/45
- MILE 01.05.78 MILES LABORATORIES INC A96 B04 D16 J04 (A11 A14) =SW 7903-639
Deoxyribonuclease determination device - 81227B/45
- *MILK= 01.06.78 MILK IND RES INST D14 J02 *DT 2922-531
Centrifugal liquid homogeniser - 91385B/51
- *MILL/ 09.05.78 MILLER T C B05 D21 E17 (E12) *US 4178-363
Reducing dental plaque and pellicle precursor - 92679B/51
- MINA- 15.02.74 MINAMI KYUSHU KAGAK D15 =J5 0110-862
Granulating fowl droppings - 92163B/51
- *MINA- 15.02.74 MINAMI KYUSHU KAGAK D15 *J7 9039-299
Granulating fowl droppings - 92163B/51
- *MINN 02.06.78 MINNESOTA MINING CO A96 D21 E11 (A14 A26) *DT 2922-932
Oligomeric methacrylated siloxane prepolymer used in dental filler - 91399B/51
- MINN 02.06.78 MINNESOTA MINING CO A96 D21 E11 (A14 A26) =NL 7904-256
Oligomeric methacrylated siloxane prepolymer used in dental filler - 91399B/51
- *MIPA 04.05.78 MISHIMA SEISHI KK D18 F09 *J5 4145-299
Coloured cigarette paper - 91925B/51
- *MIRA- 25.09.76 MIRAJ INTR COSMETIC A96 D21 *RU --68-401
Moisturising cosmetic cream - B/51
- MIRK- 05.05.78 MIRKOZ DIESEL ES HU D15 J01 =DK 7901-842
Flotation separator partic. to skim surface oil from sewage - 68156B/38
- *MITK 22.01.70 MITSUI TOATSU CHEM INC C03 D13 (D16) *J7 9039-307
Accelerating growth of domestic animals and fowls - 92164B/51
- MITK 10.03.78 MITSUI TOATSU CHEM INC B04 D16 =FR 2419-071
Bacterial cell extracts from Mycobacterium species - 68364B/38
- *MITK 02.05.78 MITSUI TOATSU CHEM INC D15 E17 (E14) *J5 4144-310
Highly conc. aq. soln. of hydroxy-acetone prodn. - 91750B/51
- *MITO 01.05.78 MITSUBISHI HEAVY IND KK D22 E37 J01 (E19) *J5 4143-765
Decomposition deodorisation of malodorous exhaust gas - 91691B/51
- MITU 26.06.74 MITSUBISHI CHEM IND KK A97 D17 E13 (D16) =J7 9039-472
Isomerisation of glucose to fructose - 04899X/03
- *MIYA/ 02.05.78 MIYAMOTO J D15 *J5 4145-375
Water purificn. appts. - 91958B/51
- MLEC- 15.04.76 INST PRZEM MLECZNIEG C03 D13 (D16) #SU -655-282
Biologically nisin-enriched milk-powder prepn. - 72604Y/41
- MNKN 12.11.76 MINAMI NIHON RAKUNO KYOD D13 =GB 1558-291
Protein-contg. fibrous foodstuff prepn. - 36844A/21
- *MNKN 25.04.78 MINAMI NIPPON RAKUNO D13 *J5 4143-550
Fibrous high protein food prepn. - 91650B/51
- *MOCH 28.04.78 MOCHIDA PHARM KK B04 D16 *J5 4143-589
Urokinase purificn. - 91657B/51
- *MOCH 28.04.78 MOCHIDA PHARM KK A96 B04 D16 *J5 4143-590
Purificn. of urokinase used for treating thrombosis - 91658B/51
- *MOMI 27.04.78 MORINAGA & CO LTD D13 (D16) *J5 4143-561
Enzymic browning of cacao and coffee beans - 91652B/51
- *MOMI 27.04.78 MORINAGA & CO LTD B05 D16 E16 *J5 4143-591
Enzymatic prepn. of aldehyde from amino acid and polyphenol - 91659B/51
- *MONS 14.11.77 MONSANTO CO D16 *US 4178-209
Appts. for continuous cell culture - 92609B/51
- *MOSK 25.04.77 MOSCOW CHEM EQUIP INST D15 J01 *SU -656-667
Hydrocyclone for clarification and condensation of suspensions - 92464B/51
- MULL/ 14.03.74 MULLER H C03 D16 =IT 1034-236
Utilisation of waste heat and products from fermentations - 64306W/39
- MULL/ 18.03.74 MULLER H D16 =IT 1034-235
Bioreactor cooling-aeration system - 65893W/40
- *MUTI/ 13.07.77 MUTIN FI D15 H01 *SU -655-657
Removal of emulsified petroleum residues from waste water - 92311B/51
- NAAR 11.08.71 NAARDEN CHEMISCHE FAB D23 E17 =J7 9039-450
Acetaldehyde ethyl linalyl acetal - 11835U/09
- *NAGA- 28.04.78 NAGATA SUIATSU KOGY D15 *J5 4143-774
Desalination appts. utilising solar energy - 91697B/51
- *NAKA- 04.05.78 NAKANO SU MISE KK D22 E19 (D13 E37) *J5 4145-234
Germicidal compsn. - 91918B/51
- *NAKA/ 28.04.78 NAKANO T D15 L02 *J5 4143-772
Treating waste industrial mud or liq. - 91696B/51
- NALC 02.05.75 NALCO CHEMICAL CO A97 D24 F09 =CA 1067-254
Kraft black liquor tall oil soaps recovery - 54021X/28
- NATR 09.07.75 NATIONAL RES DEV CORP A41 D21 E13 (A96) =GB 1558-175
Triazines contg. reactive halogen and amine bonded alkenyl - 09707Y/06
- *NATT 22.05.78 NAT STARCH & CHEM CORP D13 *GB 2022-390
Dispersible chocolate liquor in powder or flake form - 91488B/51
- *NAZA- 02.06.78 NAZARETH HOSPITAL D15 *GB 2022-428
Water distn. appts. producing pyrogen-free distillate - 91495B/51
- NEST 17.09.71 SOC PROD NESTLE SA D23 =IT 1034-033
Perfume and aroma extract from orange oil - 19069U/14
- NEST 02.04.75 SOC PROD NESTLE SA D13 =DS 2529-140
Milk chocolate prodn from milk, sugar and cocoa - 77828X/42
- NEST 10.03.78 SOC PROD NESTLE SA D13 =FR 2419-028
Granule coating machine for ice cream - 68344B/38
- *NEXU- 31.05.78 NEXUS APS D13 *DT 2922-317
Whippable and whipped cream prods. - 91376B/51
- NEXU- 31.05.78 NEXUS APS D13 =NL 7904-291
Whippable and whipped cream prods. - 91376B/51
- *NHYD= 29.02.72 N HYDROTECH MELIORA D15 *SU -656-666
Hydrocyclone for clarifying aq. effluents and sewage - 92463B/51
- NIAU- 28.04.78 NIHON AUTOMATIC MACH KK C04 D15 L02 =J5 4144-035
Treatment of waste water contg. (in)organic impurities - 82817B/46
- NIAU- 29.04.78 NIHON AUTOMATIC MACH KK C04 D15 L02 =J5 4143-766
Treatment of waste water contg. (in)organic impurities - 82817B/46
- NIHA/ 28.04.76 NIHAMAK D23 E13 =J7 9039-374
(3)-Methyl-(2)-methyl-butenyl furan prodn. for use as perfume - 00702A/01

- *NIIM= 07.09.77 NIIMOSSTROI GLAVMOSSTROY A93 D18 L02 (A21 D15)
*SU -655-675
Frost-resistant concrete mixt. - 92324B/51
- *NIKA- 27.04.78 NIPPON KAIYO SEIBUT C03 D16 (D13) *J5 4143-586
Culturing high carbohydrate chlorella of good preservative properties - 91654B/51
- *NIKA- 27.04.78 NIPPON KAIYO SEIBUT C03 D16 (D13) *J5 4143-587
Improving stability of chlorella - 91655B/51
- *NIRA 25.04.78 UNITIKA KK A96 B04 D16 *J5 4143-588
Prodn. of sterilised and fixed enzymes - 91656B/51
- *NISI- 02.05.78 NIPPON SILOSARM KK D15 *J5 4145-377
Desalting water - 91959B/51
- *NISS 01.05.78 NISSHIN FLOUR MILL KK B04 C03 D13 *J5 4145-204
Anticoccidium agent, pref. administered with feedstuff - 91905B/51
- *NITL 01.05.78 NITTO ELECTRIC IND KK A88 D15 J01 (A26) *J5 4143-778
Microporous permeable membrane of polyurea - 91701B/51
- NITT 28.04.78 NITTO CHEM IND KK A41 D16 E16 =J5 4143-592
(Meth)acrylamide prepn. by (meth)acrylonitrile hydrolysis - 75565B/42
- NITT 28.04.78 NITTO CHEM IND KK A41 D16 E16 =J5 4143-593
(Meth)acrylamide prepn. by (meth)acrylonitrile hydrolysis - 75565B/42
- NMHB 16.02.78 NORDISCH MASCH R BAADER D12 #GB 1557-952
Fish skinning machine - 35308B/19
- NMHB 07.03.78 NORDISCHER MASCHINE D12 #FR 2419-026
Fish skinning machine - 35308B/19
- NMHB 28.11.78 NORDISCH MASCH R BAADER D12 #ZA 7806-691
Fish fillet skinning machine - 47258B/26
- NNSH 27.04.71 NIPPON SHINYAKU KK D22 E11 =J4 7039-033
Antibacterial epoxy cpd. prodn. - 92173B/51
- *NNSH 27.04.71 NIPPON SHINYAKU KK D22 E11 *J7 9039-368
Antibacterial epoxy cpd. prodn. - 92173B/51
- NODA 28.10.74 NODA SANGYO KAGAKU D13 =J7 9039-462
Protein hydrolysate treatment - 49088X/26
- NODA 29.09.77 NODA INST SCI RES B05 D16 =US 4178-462
5-Isopropyl-8-methyl-bi:cyclo(5,3,0)-deca-2,8 diene-2-carbo-aldehyde - 78261B/43
- *NOLD/ 23.06.75 NOLD M C C03 D13 (D16) *CA 1067-335
Preserving freshly harvested high-moisture hay - 91174B/51
- *NONB= 03.12.76 NON-BLACK SOIL AGRI C03 D13 *SU -656-610
Highly nutritional animal fodder prodn. - 92433B/51
- *NOVA- 20.08.76 NOVA SCOTIA RES FOU D15 E32 *CA 1067-627
Removal of arsenic from drinking water - 91182B/51
- OAKE- 10.03.78 OAKES E T LTD A31 D14 J02 =FR 2419-101
Mixer having concentric rings of axial mixing elements - 52580B/29
- *ODFO= 20.11.75 ODESS FOOD IND TECH C03 D13 *SU -655-379
Supplementary feed for ruminants - 92275B/51
- *OLIN 17.05.78 OLIN CORP C04 D15 E36 *US 4178-347
Simultaneous prodn. of phosphoric acid and sodium silico-fluoride - 92669B/51
- Ooya/ 10.07.74 Ooyama N C03 D13 =J7 9039-311
Prepn. and storage of silkworm feed - 19395X/11
- ORIO- 07.03.77 ORION RESEARCH INC A89 D15 J04 =GB 1557-956
Regulating pH in a low ion concn. potentiometric measuring system - 90092A/50
- *OSOL 27.04.78 OSAKA AEROSOL KOGYO KK D21 E17 *J5 4143-529
Aerosol shaving foam compsn. - 91643B/51
- PALL 15.05.78 PALL CORP A23 D15 J01 (A88) =BR 7903-007
Skinless hydrophilic alcohol insoluble polyamide membrane - 86275B/48
- PALM- 10.09.75 SOC DEV EXPLOI PALM D13 =GB 1557-983
Extn. of cacao beans from pods - 42084Y/24
- PASE 02.06.78 PASSAVANTW MICHELbacher D15 J01 =NL 7904-078
Granular bed filter partic. for oil polluted water - 73632B/41
- PERM- 01.06.78 PERMO SA D15 =GB 2022-456
Sea water purification by reverse osmosis - 75180B/41
- PERM- 01.06.78 PERMO SA D15 =NL 7903-673
Sea water purification by reverse osmosis - 75180B/41
- PERS 28.04.78 PERSONAL PRODUCTS CO D22 =NO 7901-422
Catamenial tampon with increased absorptive capacity - 79123B/44
- *PERU/ 09.03.78 PERUFFO A D16 *FR 2419-033
Machine to size grade and trim dry mushrooms - 91434B/51
- PFAU 14.05.76 PFAUDLER-WERKE AG D22 =US 4177-524
Surgical prosthetic fixing with selfcutting screw threads - 63088Y/36
- PFIZ 15.11.77 PFIZER INC D16 H01 =J5 4145-290
Fermentative prodn. of pyruvate-free xanthan - 37168B/20
- PFIZ 18.11.77 PFIZER INC B05 D16 E17 =J5 4145-283
2,5-Di:keto-gluconic acid preparation - 38984B/21
- *PHIM 20.02.76 PHILIP MORRIS INC D18 E14 *US 4178-458
2,2-di:methyl-3-hydroxy-3-aryl-propionic acid ester cpds. - 92731B/51
- PHIM 29.03.78 PHILIP MORRIS INC D18 =BR 7901-898
Expanding tobacco to increase its filling capacity - 56315B/31
- PHIM 29.03.78 PHILIP MORRIS INC D18 =SF 7900-851
Expanding tobacco to increase its filling capacity - 56315B/31
- PIEC 10.03.78 PIERCE CHEMICAL CO B04 D16 #FR 2419-278
Peptide synthesis - 71082B/39
- *PILL/ 27.05.77 PILLA D P D16 *US 4178-389
Compsn. for domestic prepn. of alcoholic beverages - 92693B/51
- *PIME/ 27.04.78 PIMENTEL A P D12 *BR 7802-677
Moulding and cooking meat products without intestines - B/51
- *POKK 04.05.78 POLA KASEI KOGYO KK A96 D21 (A25) *J5 4145-225
Cosmetic with suppressed skin stimulation - 91917B/51
- POLH 03.04.78 POLYCHROME CORP A96 D21 E19 G02 (A11 A82) =GB 2022-603
Non-carcinogenic nail varnish compsn. - 75586B/42
- *PRDY 25.08.78 PRECISION DYNAMICS CORP D16 *ZA 7805-602
Culture collection and transportation device - 92772B/51
- PROC 15.03.74 PROCTER & GAMBLE EU A97 D25 =IT 1034-327
Universal household cleanser esp for hard surfaces - 65875W/40
- PROC 18.03.74 PROCTER & GAMBLE CO A96 D22 F07 =IT 1034-334
Absorbent fibrous web resin treated on one side - 60118W/36
- PROC 19.03.74 PROCTER & GAMBLE CO A97 D22 F09 =IT 1034-406
Absorbent tissue paper mfg process - 65919W/40
- PROC 21.03.74 PROCTER & GAMBLE CO A97 D25 E17 (A25) =IT 1034-453
Nonionic ethoxylated primary alcohol surfactant compsn. - 04442Y/03
- PROC 21.03.74 PROCTER & GAMBLE CO A97 D25 E19 =IT 1034-454
Liq detergent compsns for cold machine washing - 67303W/41
- PROC 06.06.75 PROCTER & GAMBLE CO A94 D22 F04 (A23 A96) =GB 1558-198
Continuous mfr. of composite non woven matting - 94323X/51
- PROC 06.06.75 PROCTER & GAMBLE CO A94 D22 F04 (A23 A96) =GB 1558-199
Continuous mfr. of composite non woven matting - 94323X/51
- PROC 11.01.78 PROCTER & GAMBLE CO A97 D25 E12 (E13) =J5 4145-712
Bleach compsn. contg. cationic cpd. and porphin photoactivator - 58446B/32
- PROC 13.03.78 PROCTER & GAMBLE CO D25 =US 4178-254
Fabric care compsn. - 68459B/38
- *PROC 06.06.78 PROCTER & GAMBLE CO D21 E37 (E12) *GB 2022-415
Hair conditioning article contg. conditioner - 91492B/51
- PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 =FR 2419-324
Glucose prodn. by cellulose acid hydrolysis - 68608B/38
- PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 F09 =FR 2419-350
Solid or aq. solvent for extracting cellulose - 68397B/38
- PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 F09 =FR 2419-351
Recovering cellulose from waste materials - 73955B/41
- QPPP 28.07.75 Q.P. CORP D13 =J7 9039-457
Stabilising clear liq. foods, e.g. vinegar, fruit juice, beer - 19277Y/11
- *QPPP 28.04.78 Q.P. CORP D13 *J5 4143-551
Dried yolk compsn. prepn. - 91651B/51
- *QUAK 12.09.77 QUAKER OATS CO D12 *US 4178-394
Prepn. of simulated sausage products - 92696B/51
- RALS 11.12.75 RALSTON PURINA CO D13 =CA 1067-337
Modified protein filaments prodn. for aq. slurry - 29049Y/16
- RALS 01.05.78 RALSTON PURINA CO D13 =SW 7903-755
Eliminating foreign matter from vegetable protein esp. soya - 66381B/37
- RESE 26.04.78 RESEARCH CORP B04 D16 K08 =J5 4143-515
Protease free coenzyme/a-synthesising protein complex - 00008B/01
- RETO 20.10.76 REYNOLDS TOBACCO CO D16 (D17) =SF 7902-126
Glucose isomerase prepn. from Flavobacterium arborescens - 89794Y/50
- *REXO 31.05.78 REXOLIN CHEM AB C03 D15 E19 F09 *DT 2918-842
N-Aminomethyl-1,3-propane di:amine penta:acetic acid - 91333B/51
- *REZC/ 13.06.76 REZCHIKOV V G D15 J04 *SU -655-965
Organic carbon determination in water - 92425B/51
- RHON 14.03.74 RHONE-POULENC INDUSTRIES A82 D16 F09 (A11) =IT 1034-298
Paper coatings based on vinyl polymers - 64291W/39
- RHON 14.04.76 RHONE-POULENC INDUSTRIES A14 D15 (A97) =US 4178-221
Water soluble, high mol. wt. acrylic (co)polymers - 74153Y/42
- RHON 03.05.78 RHONE-POULENC INDUSTRIES A88 D15 J01 (A25) =J5 4144-456
Poly:aryl:ether:sulphone(s) mixt. compsns. - 80833B/45
- *RIHO= 20.12.77 RIGA HOSPITAL D21 M26 *SU -655-391
Tooth filling amalgam prepn. - 92276B/51
- *RITT- 29.05.78 RITTERSHAUS & BLECH D15 *DT 2823-409
Sieve band press for dewatering slurries - 91220B/51
- *ROEC= 06.10.76 ROST ECONOMICS ACAD D15 J01 *SU -656-641
Automatic electrical control of sump filters - 92447B/51
- ROMA/ 20.11.73 ROMANENKO V I D15 J01 (D16) =IT 1034-072
Biochemical redn of (bi)chromates - 36181W/22
- *RORE 21.08.78 RORER W H INC B05 D21 *US 4178-373
Coal tar gel topical compsns. for treating eczema and psoriasis - 92683B/51
- ROTH- 13.05.78 APPROTHEMUHLE BRAN D15 K07 =GB 2022-466
Decontaminating radioactive liq. effluent - 86069B/48
- ROTH/ 05.02.75 ROTHLSBERGER H D16 H09 =US 4178-154
Synthetic fuel for internal combustion engines - 92943X/50
- ROUS 17.10.77 ROUSSEL UCLAF D11 =ZA 7805-397
High protein cellular diet food, e.g. wafer - 31894B/17

- RTMN 04.05.76 ROTHMANS CANADA LTD D18 E15 =GB 1558-103
Fluid application to absorbent material - 83274Y/47
- *RUBE/ 23.09.66 RUBENS H E A96 D22 F07 *US 4178-407
Disposable towelling material - 92703B/51
- *RUCK/ 08.08.75 RUCKER J A96 D21 (A26) *US 4178-364
Hair shaving method reducing pseudofolliculitis barbae - 92680B/51
- SAGA- 13.11.75 SAGAPHA AG A97 D25 (A82) =GB 1557-976
Conditioning deformable gelatin microcapsules contg. stain remover - 18218Y/11
- SALA- 31.03.78 SALA INT AB D15 J02 =SF 7901-073
Apparatus for dissolving gases in liquid - 82521B/45
- SANO 08.03.74 SANDOZ AG D18 E14 =IT 1034-110
Phenyl sulphones derived from phenol mixt. - 62531W/38
- *SANO 08.06.78 SANDOZ-PATENT-GMBH B04 C03 D16 (D13) *DT 2921-148
S 54832/A-type antibiotics produced by fermentation - 91346B/51
- *SANO 08.06.78 SANDOZ LTD B04 C03 D16 *GB 2022-573
Antibiotics S 54832 from *Micromonospora globosa* NRRL 11299 - 91518B/51
- *SANT- 17.12.74 SANTIERUL NAVAL D15 J01 *RU --65-070
Separation of hydrocarbons from dyke water - B/51
- *SANT- 26.08.77 SANTAL EQUIP COM SA D17 *US 4177-953
Chopping, raising and cleaning machine for sugar cane harvester - 92567B/51
- *SANT- 06.05.78 SANTEN ARAGAN KK C03 D22 E19 *J5 4145-711
Fungicidal steriliser for contact lens - 92033B/51
- SARS 13.04.78 SARTORIUS GMBH A88 D15 E36 J01 (A11) =J5 4145-381
Asymmetric cellulose hydrate ultrafiltration membranes - 77583B/43
- SCHC 23.03.64 SCHERICO LTD B04 D16 =IT 1034-003
Antibiotic no 467 - 32765F/00
- SCHD 25.01.78 SCHERING AG B01 D16 =J5 4145-649
17-Alpha-alkoxyalkoxy-pregn-4-ene-3,20-di:one derivs. - 56511B/31
- *SCHE 15.02.74 SCHERING CORP B02 D16 *US 4178-453
6,7-Diaza-2,4-di:hydroxy-bi:cyclo(3.2.1)octane - 92729B/51
- SCHM/ 20.03.74 SCHMIDT J P D15 =IT 1034-276
Mechanical aerator for biological purifn of polluted effluent - 02359X/02
- *SCHN/ 29.05.78 SCHNEIDER U D16 (D13) *DT 2823-320
Champagne lollipop - 91212B/51
- SCHO/ 08.05.78 SCHONERT K D13 =J5 4145-607
Stable, aromatised carbohydrate food flavouring material prepn. - 84266B/47
- SCMZ 30.05.75 SCM CORP B05 D23 E17 (D13) =CA 1067-505
Oppenauer oxidn. of allyl and benzyl alcohols - 95554X/51
- SEAR 08.12.75 SEARLE G D & CO B02 D16 =CA 1067-436
Microbiological prepn. of oxazepine derivs. - 97856X/52
- SEKI 18.10.74 SEKISUI CHEMI IND KK A97 C04 D15 (A21) =J7 9039-301
Fertiliser of slow acting type - 46902X/25
- *SEMP 17.03.75 SEMPERIT AG A92 D15 *IT 1034-329
Stagnant water tank - B/51
- SHEL 22.03.74 SHELL INT RES MIJ BV D13 E14 =IT 1034-452
Beta-aryl substd. ketones prepn - 65967W/40
- *SHIK- 28.04.78 SHIKISHIMA SEI PAN KK D16 (D11) *J5 4143-585
Culturing and preserving *Lactobacillus sanfrancisco* - 91653B/51
- *SHIM- 12.06.78 SHIMOSE SHOKUHIN CO D12 *DT 2841-121
Fish meal prodn. with recovery of all usable constituents - 91320B/51
- SHIO 07.03.78 SHIONOGI KK B02 D16 =FR 2419-323
Antibacterial antibiotic cephamycin C microbiological prodn. - 68393B/38
- *SHIO 11.08.78 SHIONOGI KK B04 C03 D16 *BE -878-149
Antibiotic K-41 for treatment of coccidiosis - 91140B/51
- *SHIS 08.05.78 SHISEIDO KK B05 D21 E17 (D16) *J5 4145-603
Rapid ageing of alcohol solns. - 91993B/51
- *SHIS 08.06.78 SHISEIDO KK A96 D21 E17 G02 (A11 A25 A82) *DT 2854-109
Thixotropic nail varnish with stable viscosity - 91322B/51
- SHIS/ 08.09.77 SHISHKOVA Z P C03 D16 (D13) #US 4178-214
Culture media contg. vegetable matter and peat hydrolysates - 26539B/14
- *SHOW- 02.05.78 SHOWA KOJI KK D15 *J5 4144-765
Treating fluorine-contg. waste water - 91871B/51
- *SIDA= 26.09.77 SIBE DAIRY IND RES D13 *SU -655-377
Sterilised condensed milk prodn. - 92273B/51
- *SIDO/ 01.11.77 SIDOROV A I C03 D22 *SU -655-374
Pyrotechnical pesticidal compsn. for insect etc. control - 92272B/51
- SMHL 25.05.78 SIMON HARTLEY LTD D15 =BR 7901-677
Thickening activated sludge - 40664B/22
- SNAM 22.09.70 SNAMPROGETTI SPA A18 D16 F01 (A97 D17) =IT 1034-019
Glucose by enzymatic scission - 21076T/13
- SNAM 17.10.70 SNAMPROGETTI SPA A96 C03 D13 (A11 A14 A23) =IT 1034-020
Enzymatic scission of lactose in milk - 27026T/17
- SNAM 22.03.73 SNAMPROGETTI SPA A96 B04 D16 F01 =J7 9038-657
Enzyme-contg. cellulosic fibres - 58455V/33
- SNAM 23.05.78 SNAMPROGETTI SPA B05 D16 E19 =GB 2022-581
Prepn. of D-aminoacids - 85938B/48
- SNAM 02.06.78 SNAMPROGETTI SPA D13 =NL 7904-411
Prod. of protein isolate esp. from sunflower seeds - 89690B/50
- SOLB 23.12.77 SOLCO BASEL AG B04 D16 =ZA 7806-978
Hetero-vaccine for treatment of trichomonas syndrome - 47144B/26
- SOLL- 03.06.77 SOLLICH SPEZIALM KG D13 =US 4178-105
Chocolate paste structure control - 91516A/51
- *SOLL- 22.06.78 SOLLICH SPEZIALM KG D13 *DT 2827-404
Sweetmeats in rod-or bar-form from bands - 91317B/51
- *SORG/ 07.06.78 SORGE E D13 *DT 2824-911
Whipped food products mfr. - 91259B/51
- SOUZ- 12.05.78 CIA SOUZA CRUZ IND D18 =BR 7903-030
Aroma-improving tobacco additive from *Nicotinia* plant gum - 84665B/47
- SOUZ- 16.05.78 CIA SOUZA CRUZ IND D18 =BR 7903-061
Tobacco smoke filter pref. for cigarettes - 71731B/40
- SPEY- 30.05.78 SPEYWOOD LAB LTD A96 B04 D11 (A97) =GB 2022-391
Oral admin. of large doses of anticholesterolaemi carbohydrate gums - 89808B/50
- SQUI 22.06.70 SQUIBB E R & SONS INC B05 D15 E14 (B03 E13) =DT 2167-224
Tetrahydronaphthoxypropanolamines - 01836T/02
- SQUI 09.03.78 SQUIBB E R & SONS INC B04 D16 #FR 2419-298
Antibiotic polymyxin F - 51561A/28
- *STAD 01.06.76 STANDARD OIL CO (IND) D13 (D16) *US 4178-391
Protein-contg. materials treated at specified temp. and pH conditions - 92695B/51
- STAH 14.02.78 STANDARD OIL CO (OHIO) A13 B07 D21 G02 (A14 A82 A96 A97) #GB 1558-328
Crosslinked maleic anhydride-indene copolymer - 49747A/28
- STAH/ 22.05.78 STAHLER T D15 =WP 7901-095
Aerobic sewage treatment - 86284B/48
- *STAN- 03.06.78 STANZTECHNIK R GMBH D18 *DT 2824-488
Punching machine - 91245B/51
- STER 22.09.75 STERLING DRUG INC B03 D16 =DK 7901-771
Aminocyclitol antibiotics of the streptamine type - 67317X/36
- STER 22.09.75 STERLING DRUG INC B03 D16 =DK 7901-772
Aminocyclitol antibiotics of the streptamine type - 67317X/36
- STER 06.08.76 STERLING DRUG INC B03 D22 E13 G02 (B07 D15 D21 G03) =US 4178-375
Heterocyclic methylene-bis-aza-oxo- and -aza-thio cpds. - 12498A/07
- STER 23.12.77 STERLING DRUG INC D22 L02 =ZA 7806-889
Beta whitlockite prepn. in solid or porous form - 47146B/26
- STER 05.06.78 STERLING DRUG INC B05 C01 D22 =GB 2022-589
Aralkyl and aryloxy-alkyl di:alkyl phosphonate(s) - 87592B/49
- STER 05.06.78 STERLING DRUG INC B05 C01 D22 =NL 7904-265
Aralkyl and aryloxy-alkyl di:alkyl phosphonate(s) - 87592B/49
- STOR- 08.03.74 STORCK A KG D13 =IT 1034-082
Filled centre sweet moulding and wrapping machine - 44427W/27
- *STRK 31.05.78 STORK BEPAK BV D17 *NL 7805-914
Moist sugar block drying system - 92193B/51
- SUMO 04.10.72 SUMITOMO CHEMICAL KK A97 D18 =J7 9039-441
Leather treating compn - 73261U/48
- SUMO 15.05.75 SUMITOMO CHEMICAL KK C03 D22 E14 F06 =J7 9039-446
Mothproofing agent for wool - 01199Y/01
- *SUMO 30.01.78 SUMITOMO CHEMICAL KK A96 B04 D16 *GB 1557-944
Enzyme immobilisation carrier - 91464B/51
- SUMO 06.03.78 SUMITOMO CHEMICAL KK A91 D15 J01 (A11) =FR 2419-104
Cellulose fibre-based ion exchanger filter material - 68362B/38
- *SUMO 04.05.78 SUMITOMO CHEMICAL KK A91 B04 D16 *J5 4145-281
Urokinase extn. from e.g. urine or crude soln. - 91922B/51
- SUMO 25.05.78 SUMITOMO CHEMICAL KK D16 (D17) =GB 2022-594
Glucose isomerase extraction from cells - 87995B/49
- *SUMO 01.06.78 SUMITOMO CHEMICAL KK C02 D22 *NL 7904-329
Prepn. of antimicrobial N-trityl-imidazole cpds. - 92203B/51
- SUNZ 25.09.75 SYN STAR DENTIFRICE A97 D25 G02 (A25 A82 A96) =J7 9039-006
Liq. detergent compsn. keeping its viscosity over wide temp. range - 33452Y/19
- SUPE- 07.06.78 SUPER IRIDE SPA D22 J04 =GB 2022-423
Hygienic clothing, e.g. sanitary towel, absorbent wad or undergarment - 71761B/40
- SVSO 25.04.75 SVENSKA SOCKERFAB AB D15 =CA 1067-626
Purifying biological effluent rich in carbon hydrates or protein - 68790X/37
- *TAKA- 02.05.78 TAKADA SHOTEN KK D13 *J5 4145-255
Preserving meat in miso - 91920B/51
- TAKE 26.11.74 TAKEDA CHEMICAL IND KK A11 B04 D16 J01 =J7 9039-473
Water-insoluble beta-1,3-glucan derivs - 44040X/24
- TAKS 29.00.72 TAKASAGO PERFUMERY KK B02 C01 D22 E12 =J7 9039-410
Discolouring concentrated soln using a pyrenetrisulphonic acid - 23673V/13
- *TANA 28.04.78 TANABE SEIYAKU KK B05 D16 E16 *J5 4144-315
D,L-Serine prodn. in high yield - 91755B/51
- TATL 11.05.73 TATE & LYLE LTD A91 D17 =SU -656-535
Continuous sugar recovery - 84825V/49
- TATL 16.11.77 TATE & LYLE LTD D16 (D13 D17 D21) =J5 4145-291
Polysaccharide prepn. from *Xanthomonas* - 39365B/21
- TECD 15.03.76 TECHNICON INSTRUMEN A96 B04 D16 =CA 1067-434
Immobilisation of proteins by in situ polymerisation of protein - 14442Y/08

- TEEP 18.04.78 TEE PAK INC A32 D12 (A11 A97) = BR 7901-873
Forming fibrous tube for sausages - 64645B/35
- TELE- 03.06.69 TELE SA D21 = US 4178-362
Toothpaste contg a hydrogen-peroxide - 90119R/48
- *TENN/ 08.06.78 TENNINGER A D12 *DT 2825-084
Meat roll press - 91272B/51
- *TETR 05.01.78 TETRA PAK INT AB D13 *SW 7800-137
Sterilisation of lactase enzyme - 92524B/51
- TETR- 05.05.78 TETRA W U BAENSCH D15 = DK 7901-868
Treating water for aquariums using cation exchanger - 66384B/37
- *TEXC 28.04.78 DEUTSCHE TEXACO AG D15 J01 *BR 7802-656
Application of acid ion exchangers - B/51
- TITG 12.03.77 KRONOS TITAN-GMBH D15 E31 (E32) = DS 2710-969
Aq. ferric chloride sulphate soln. prepn. - 67290A/38
- *TOBA- 29.04.78 TOBATA TEKKO KK D15 *J5 4144-759
Decolourising dyestuff-contg. waste water - 91867B/51
- *TOKU 02.05.78 TOKUYAMA SODA KK B05 D15 E19 J03 *J5 4145-382
Purificn. of crude aq. solns. contg. ammonium chloride - 91962B/51
- *TOWA- 28.04.78 TOWA MOKUZAI KK C03 D22 E19 F09 (E36) *J5 4143-501
Insect control in wood - 91632B/51
- TOXF 27.03.78 TOHO BESLON KK D16 E17 J01 = GB 2022-446
Preventing alcohol pollution - 81683B/45
- *TOXF 04.05.78 TOHO BESLON KK D16 (D13) *J5 4145-280
Photosynthesis mycelium prodn. - 91921B/51
- *TRIO- 30.05.78 TRIO ENG LTD A/S D12 *DT 2921-847
Gutting and cleaning tool for fish - 91364B/51
- *TROI/ 04.11.77 TROITSKII I A97 D15 *SU -655-650
Flocculant for decolourising natural waters - 92306B/51
- TRYC 11.07.73 TROY CHEMICAL CORP C03 D22 G02 = NO 7903-304
Iodo alkynyl urethanes useful as fungicides - 07439W/05
- *TSPO= 09.11.77 TASHK POLY A97 D15 *SU -655-651
Removing suspended impurities from water by flocculation - 92307B/51
- UBEN 12.03.74 UNCLE BENS AUSTRALIA LTD C03 D13 = IT 1034-146
Animal foodstuff with moist and soft texture - 49397W/30
- UENO 08.03.78 UENO SEIYAKU OYOKE D12 = FR 2419-027
Preparing ground frozen fish used for fish pastes - 47240B/26
- UGIN 14.12.77 UGINE KUHLMANN A91 D15 E36 J01 = ZA 7806-986
Iodine removal from gaseous mixts. or aq. solns. - 47541B/26
- *ULTD 13.03.78 ULTRA DYNAMICS CORP D15 *GB 2022-979
Water dispenser - 91562B/51
- UMAS/ 31.07.78 UMASE N A91 D15 E34 (A14 E33) = DT 2921-329
Compsn. for flocculating hydrophilic colloidal particles - 88090B/49
- *UMEA= 12.09.77 UKR MEAT DAIRY RES D13 *SU -655-378
High quality cheese prepn. - 92274B/51
- UNIC 10.05.73 UNION CARBIDE CORP D15 J01 = CA 1067-416
Ultra filtration using porous tubes - 83108V/48
- UNIC 13.11.74 UNION CARBIDE CORP D15 = US 4178-239
Sewage water treatment - 58980X/31
- UNIC 28.04.75 UNION CARBIDE CORP D12 = CA 1067-336
Collagen food casings with good antiblocking props - 39883X/21
- UNIC 28.10.75 UNION CARBIDE CORP D15 = J7 9038-823
Removing phosphates from effluent by the activated sludge process - 30923Y/18
- UNIC 23.12.77 UNION CARBIDE CORP C04 D15 M28 = ZA 7806-791
Removing heavy metals from waste activated sludge - 47205B/26
- UNIC 09.03.78 UNION CARBIDE CORP D12 = FR 2419-454
Inserting sizing disc into casing esp. for viscous meat emulsion - 56110B/30
- UNIL 10.06.69 UNILEVER NV D23 E13 = DS 2028-097
Alkoxyalkylpyrazines in perfumery prodn - 92989R/50
- UNIL 01.08.74 UNILEVER LTD A97 D25 E12 = CA 1067-275
Agglomerating chloro-cyanurates for use in detergents - 47769X/25
- UNIL 25.03.77 UNILEVER LTD D13 = ZA 7801-701
Ice cream confection - 69156A/39
- UNIL 22.04.77 UNILEVER LTD D13 E17 = ZA 7802-290
Tea bag material esp. paper, impregnated with acid substance - 76337A/43
- UNIL 06.03.78 UNILEVER NV D21 E19 = FR 2419-320
Aq. liq. soap contg. sulphonated ester or amide - 66686B/37
- UNIL 20.03.78 UNILEVER NV D21 E19 = SF 7900-920
Deodorant non-germicidal toilet soap tablet - 69929B/39
- UNIL 31.05.78 UNILEVER NV D12 = DT 2921-504
Preparing coherent flesh product from pieces of flesh - 87597B/49
- UNIL 31.05.78 UNILEVER NV D13 = DT 2921-851
Fat mixt. for low temp.-spreadable margarines, etc. - 87596B/49
- UNIL 31.05.78 UNILEVER NV A97 C03 D13 = NL 7904-044
Stable liquid animal feed, e.g. milk substitute for calves - 87598B/49
- *UNIL 05.06.78 UNILEVER NV D12 *NL 7806-080
Coherent solid meat prods. - 92198B/51
- UNIL 25.05.79 UNILEVER NV D13 = NL 7904-116
Fat mixt. for low temp.-spreadable margarines, etc. - 87596B/49
- *UNSY 12.12.78 UNIV OF SYDNEY D13 *ZA 7806-962
Organic waste or cellulosic material treatment - B/51
- UNTC 30.05.78 ECODYNE CORP A97 D17 = DT 2921-617
Colour purificn. of polyhydric alcohol liquids esp. sugar syr
89940B/50
- *UPRI= 24.02.77 UKR PRINT IND RES D15 G05 *SU -655-656
Treatment of zinc oxalate-contg. printing process effluents - 92310B/51
- USDC 17.05.78 US SEC OF COMMERCE D15 J01 K06 = WP 7901-083
Flow through counter current chromatography appts. - 36982B/19
- USRU 16.07.74 UNIROYAL INC A11 D13 = DS 2529-086
Alkylene glycol alginate prepn - 09550X/06
- *UUKR= 15.06.71 UKR UKRORGSTANKINPR A88 D14 J04 *SU -656-654
Die for pelleting animal feedstuffs - 92459B/51
- *VOLG= 14.04.77 VOLGODONSK BR SURFA D15 E17 *SU -655-658
Purificn. of wastes from prodn. of synthetic fatty acids - 92312B/51
- *VONK- 03.09.76 VONKS KAASMIJ D13 *GB 1557-982
Casting cheese - 91469B/51
- WACK 02.05.78 WACKER CHEMIE GMBH D15 E32 J03 = J5 4144-766
Mercury and its cpds. removal from waste industrial water - 84527B/47
- WARN 07.03.75 WARNER-LAMBERT CO A96 B04 D16 = CA 1067-379
Cells of Staphylococcus aureus contg. a dye - 57866X/31
- *WASU 28.06.77 WATER SUPPLY HYDROGEOL D15 J01 *SU -655-652
Hydrogen sulphide removal from drainage or underground water
92308B/51
- *WEBE- 05.06.78 WEBER FAB ELEKTR AG A96 D21 *DT 2922-824
Tooth-cleaning dental floss - 91397B/51
- WELL 27.01.75 WELLCOME FOUNDATION LTD A97 B04 D16 = SF 7901-481
Compsn. for determining antifolate sensitivity of bacteria - 60229X/32
- WELL 27.01.75 BURROUGHS WELLCOME A97 B04 D16 = US 4178-212
Compsn. for determining antifolate sensitivity of bacteria - 60229X/32
- WELL 04.05.78 WELLCOME FOUNDATION LTD A96 B04 D16 = DK 7901-822
Determn. of biological substances esp. antigens and haptens - 84531B/47
- *WESC/ 05.05.78 WESCHOLLER O K W D13 *BR 7802-829
Cereal dryer - B/51
- WESS 05.01.78 WESTFALIA SEPARATOR AG D13 #US 4177-722
Appts. for sepg. fruit pulp from seed kernel and skin - 17994B/09
- WESS- 24.05.78 WESSANEN UK LTD D17 = WP 7901-112
Washing particulate feedstock esp. starch in hydrocyclones - 86325B/48
- WEST/ 13.05.77 WEST C W D14 = GB 1558-287
Closed-circuit smoke generator for smoking food - 84349A/47
- *WHIT/ 20.11.79 WHITE W W D15 J01 *RD -188-028
Treating waste water contg. sequestered heavy metal ions - 92220B/51
- WIST- 28.04.78 WISTAR INST B04 D16 = J5 4143-513
Producing antibodies specific for malignant tumours - 80773B/44
- *YAMA- 28.04.78 YAMASEN KOGYO KK C03 D22 E19 F09 (E36) *J5 4143-501
Insect control in wood - 91632B/51
- YELO 24.09.75 YELLOW SPRINGS INST INC A89 D16 J04 = CA 1067-457
Polarographic analytical cell - 25491Y/15
- YOSH 05.04.78 YOSHITOMI PHARMACEUTICAL A97 C03 D22 F09 (A25 D15) = GB 2022-416
Microbicide for industrial cooling water and paper pulp - 77643B/43
- *YOSH- 27.04.78 YOSHIKAWA SHOJI KK D13 *J5 4143-541
Coagulation of bean milk to give soft curd - 91647B/51
- ZAID 01.07.74 ZH BISEIBUTSU KAGAKU KEN B05 D16 = J7 9039-477
Peptidase-inhibitor bestatin - 09548X/06
- ZAVP 29.04.76 ZAV A ZAPOTOCKEHO D18 E31 (E33) = DS 2618-924
Tanning animal hides - 83095Y/47

32765-F BD CA -893-707 T10 01836-T BDE DS 2220-328 B51+ SW 7509-136 X22 BE -814-799 V48 CH -578-308 X39 CH -571-804 X12
DT 1271-896 Q00 GB 1302-554 U02 DT 2130-393 T02 44842-T BD CA -998-632 X45 NO 7401-681 W01 BR 7501-304 X51 OE 7501-931 Y01
IT 1034-003 B51 CH -551-425 V36 NL 7108-564 T02 DS 2213-240 Y29 DK 7402-521 W03 US 4014-156 Y14 US 4003-160 Y05+
03330-H BCD NL 7001-573 T06 NE 7117-893 T28 IT 1034-034 B51 FR 2228-518 W09 IL --46-643 Y30 GB 1489-000 Y42+
NL 6802-042 Q00 18899-S DE DT 2100-811 T26 BE -777-387 T30 DS 2422-777 X35 GB 1485-188 Y36 IT 1034-236 B51+
GB 1206-718 R38 BE -755-504 S10 CH -548-978 V26 DT 2064-092 T31 73261-U AD NL 7306-402 U48+ GB 1468-928 Y13 CA 1018-007 Y41 65377-W ADJ
NL -145-600 W20 DT 2043-341 S11 GB 1358-721 V27 NL 7306-402 U48+ GB 1468-928 Y13 IT 1034-082 B51 US 3905-886 W39
BE -710-796 Q01 DT 2043-366 S11 CH -550-770 V30 FR 2120-073 T48 DT 2323-164 U49 J5 0015-788 B19 48044-W D NL 7506-603 X14
AU 6833-623 Q01 NL 7012-644 S12 CA -979-912 X01 DL --99-395 U43 FR 2183-949 V07+ J7 9008-471 B19 DT 2461-189 W29 DT 2525-334 X14
IT 1034-007 B51 NL 7012-643 S12 J7 5038-101 X02 GB 1374-751 V47 J4 9055-802 V48 OE 7702-025 B22 FR 2256-242 W42 J5 1043-380 X22
06774-H BCD ZA 7005-808 S19 NL 7811-648 B19 US 3876-766 W16 DS 2323-164 X23+ OE 7702-027 B22 US 3930-947 X03 DK 7502-526 X24
FR 1567-869 Q00 ZA 7005-807 S19 DT 2167-224 B51 OE 7111-115 W41 GB 1438-505 X24+ OE 7702-028 B22 J5 0095-490 X07 FR 2284-355 X26
DL --70-344 R11 FR 2061-158 S38 02846-T D CA 979-833 X01 CA 1013-508 Y30+ CA 1067-416 B51 GB 1472-008 Y17 DL -120-360 X32
GB 1212-363 R45 FR 2061-637 S39 BE -769-112 T02+ CS 7108-961 W48 IT 1021-511 A21+ J7 7021-591 Y27 BR 7503-551 X34
DT 1617-549 T39 CH -524-581 T37 US 8493-463 X14 J7 9039-441 B51 84825-V AD DT 2422-889 V49 IT 1034-078 B51 CA 1042-837 A49
IT 1034-006 B51 CH -525-198 T37 US 3951-745 X18 FR 2228-840 W09 DT 2422-889 V49 SU -656-473 B51
CH -529-829 U04 FR 2097-329 T21 J5 0029-759 W21 FR 2247-270 W29 48130-W DJ NL 7506-603 X14
CH -529-517 U04 FR 2127-071 U04 HU T011-605 X26 PT --61-887 W24 GB 1487-251 Y39 DT 2525-334 X14
CH -530-459 U04 GB 1327-339 U34 US 4013-510 Y13 ZA 7402-821 W27 US 4178-245 B51 J5 1043-380 X22
SU -345-677 U21 DS 2132-970 B51+ RU --61-400 Y17 FR 2204-362 V35+ US 3909-287 W41 DK 7502-526 X24
GB 1323-167 U28 GB 1323-467 U29 CH -594-051 A02 DL -107-584 V42+ GB 1417-344 W50 GB 1497-090 A01 FR 2284-355 X26
GB 1323-467 U29 SU -379-087 U52 RU --63-064 A39 CA 1009-651 Y20 DS 2422-889 A13 IT 1034-146 B51 DL -120-360 X32
US 3819-712 V27 11212-T DEH BE -771-038 T07+ SW 7314-523 W25+ IT 1020-606 A15 DK 7501-003 W50 BR 7503-551 X34
US 3895-073 W30 NL 7110-917 T08 DT 2201-490 T40 CH -563-121 W30+ SU -656-535 B51 FR 2263-708 X01 GB 1510-374 A19
J7 5031-144 W44 NL -148-596 X11 FR 2121-819 T50 GB 1405-813 W37+ IT 1034-063 B51+ CA 1042-837 A49
FR 1591-368 R35 J7 6009-015 X16 GB 1369-476 V41 CA -989-244 X23+ 05928-W D DT 2332-512 W04 SU -656-468 B51+ 65875-W AD
US 3694-315 T41 US 3950-429 X17 US 3844-402 V45 US 3962-473 X25+ DT 2332-512 W04 DT 2510-245 W40
CA -911-352 T42 US 3952-062 X18 CA -971-587 W32 SU -656-468 B51+ IT 1034-063 B51+ BE -826-687 W40
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56171-R ADL CS 7105-701 X14 69993-T DE DT 2118-363 T44 NL 7409-404 W05 DT 2433-410 W06 FR 2264-085 X01
US 3523-806 R32 CA 1040-654 A44 DS 2118-363 B51 30755-V D BE -805-852 V17 NL 7409-404 W05 DT 2433-410 W06 J5 0157-404 X04
GB 1220-859 S04 IT 1034-017 B51 US 4177-208 B50+ 01567-U BCDE DT 2131-404 U02 FR 2143-557 U16 NL 7313-561 V17 SW 7409-065 W10 US 3901-238 W36
DS 1771-224 B51 US 4178-307 B51 DT 2131-404 U02 FR 2143-557 U16 NL 7313-561 V17 SW 7409-065 W10 US 3901-238 W36
60190-R DE 22154-S BD DT 2043-946 S13 16149-T D BE -771-718 T10+ NL 7313-561 V17 SW 7409-065 W10 US 3901-238 W36
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GB 1240-310 S28 GB 1313-149 U15 US 3755-293 U37 NL 7111-644 T11 FR 2143-557 U16 NL 7313-561 V17 SW 7409-065 W10 US 3901-238 W36
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CH -509-399 S37 J7 4044-348 V51 DT 2143-557 U16 NL 7313-561 V17 SW 7409-065 W10 US 3901-238 W36
CH -520-479 T26 DS 2043-946 B51 FR 2105-985 T30 NL 7111-071 U09 DT 2240-206 U10 FR 2236-846 W17 J5 0031-036 W21 SW 7502-985 W45
CH -524-560 T37 GB 1367-612 V38 DT 2240-206 U10 FR 2236-846 W17 J5 0031-036 W21 SW 7502-985 W45
CH -524-320 T37 CA -969-588 W27+ US 3996-385 X51 J4 8026-940 U23 SF 7601-540 X44 OE 7409-980 X46 CH -584-289 Y09 SW 7703-863 Y37 FR 2272-833 X12
DT 1817-884 U15 BE -756-583 S13 J4 8026-940 U23 SF 7601-540 X44 OE 7409-980 X46 CH -584-289 Y09 SW 7703-863 Y37 FR 2272-833 X12
J7 3028-428 U36 NL 7014-660 S15 GB 1371-727 V43 OE 7409-980 X46 CH -584-289 Y09 SW 7703-863 Y37 FR 2272-833 X12
J7 3029-215 U37 DT 2048-970 S22 CH -571-052 X07 SW 7611-239 Y13 CA 1046-935 B06 CA 1047-046 B06 CH -594-374 A09 GB 1494-525 Y49
J7 3029-217 U37 FR 2064-990 S41 US 3996-385 X51 CH -571-052 X07 SW 7611-239 Y13 CA 1046-935 B06 CA 1047-046 B06 CH -594-374 A09 GB 1494-525 Y49
J7 3029-216 U37 CA -893-143 T09 SU -655-347 B51 15994-U ADE DT 2144-117 U12 DS 2144-117 B51 19069-U D NL 7212-407 U14 BE -812-571 V33 NL 7503-239 X41+
J7 3031-105 U39 GB 1286-169 T34 NL 7212-407 U14 BE -812-571 V33 NL 7503-239 X41+ DL -116-854 X10
DS 1807-568 W16+ J7 4030-105 V36 CH -555-887 V52 US 3860-635 W04 DL -116-854 X10 US 3953-163 X19 HU T012-255 X43 IT 1034-334 B51
NL 7502-981 W29+ CH -555-887 V52 US 3860-635 W04 DL -116-854 X10 US 3953-163 X19 HU T012-255 X43 IT 1034-334 B51
NL -146-801 W39+ US 3860-635 W04 DL -116-854 X10 US 3953-163 X19 HU T012-255 X43 IT 1034-334 B51
DS 1817-884 X47+ DS 2048-970 W25 FR 2108-377 T33 DL --91-005 T33 CH -535-282 U25 GB 1333-647 U41 CS 7106-685 W43 IT 1034-110 B51
NL -158-160 A45+ J7 5035-074 W51 CH -535-282 U25 GB 1333-647 U41 CS 7106-685 W43 IT 1034-110 B51
NL -158-159 A45+ IT 1034-018 B51 GB 1333-647 U41 CS 7106-685 W43 IT 1034-110 B51
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61181-R D BE -746-308 R34 DT 1908-900 R40 FR 2035-504 S08 GB 1230-056 S16 CH -525-207 T37 GB 1296-014 T46 CH -530-460 U04 CA -929-947 U30 US 3801-600 V15 DS 2063-166 B51
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SU -335-800 U01 DS 2063-166 B51 59309-S DE DT 2108-748 S37 FR 2079-003 T05 US 3701-714 T46 GB 1352-633 V19 CA -947-217 V22 IT 1032-009 B39 DS 2108-748 B51
CA -919-497 U06 NL -141-768 V18 J7 4020-511 V25 CH -562-570 W30 IT 1034-013 B51 72646-S D DT 2019-369 S46 CA -947-607 V23 DS 2019-369 B51
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90119-R D BE -751-390 R48 NL 6908-779 R49 DT 2027-019 R50 ZA 7003-487 S09 FR 2045-815 S19 GB 1309-282 U10 CH -531-885 U12 CA -926-777 U23 J7 3038-863 U47 NL -150-332 X38 DS 2027-019 Y15 US 4150-113 B18 US 4178-362 B51
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US 4178-362 B51
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FR 2052-495 S30 ZA 7003-858 T06
ZA 7003-858 T06

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CA 1058-634 B32	30216-X ADE	US 3990-947 X47	DT 2625-236 Y01	DL -127-405 Y51	SF 7603-060 Y30	63263-Y DF	18148-A D
DS 2508-228 B51	BE -835-803 X17	J5 1117-095 X48	BR 7603-640 Y06	US 4136-189 B05	US 4042-493 Y34	DT 2607-975 Y36	DT 2738-953 A
	NL 7513-646 X24	DK 7600-956 X48	DK 7602-500 Y08	SU -655-315 B51	BR 7607-195 Y40	NL 7702-047 Y37	BE -858-313 A
71121-W DE	SW 7414-792 X28	FR 2303-291 Y02	SW 7606-367 Y11		ZA 7605-966 Y43	SW 7702-122 Y40	FR 2363-288 A
DT 2515-141 W43	NO 7503-929 X29	GB 1490-466 Y44	J5 2021-479 Y13	09379-Y D	DS 2648-797 A14	FR 2342-055 Y50	US 4148-933 B
J5 0133-999 W51	J5 1076-306 X33	CA 1061-229 B37	CH -600-017 A28	BE -844-904 Y06	GB 1540-469 B07	ZA 7700-922 A04	GB 1558-013 B
US 3932-590 X04	DK 7505-248 X34	CA 1067-379 B51	FR 2382-535 A49	DT 2635-508 Y07	IL -50-781 B48	GB 1539-714 B05	
GB 1484-223 Y35	DT 2552-353 X34		US 4107-364 B08	NL 7608-809 Y08	J7 9038-823 B51	US 4177-544 B51	20142-A DE
CA 1046-243 B05	SF 7503-281 X35	58980-X D	FR 2401-253 B22	DK 7603-547 Y16			J5 0150-701 A
DS 2515-141 B51	FR 2292-037 X39	J5 1070-965 X31	GB 1558-198 B51	SW 7608-812 Y16	33452-Y ADG	66702-Y D	J7 9038-604 B
	ZA 7507-318 Y01	CA 1056-965 B27	GB 1558-199 B51	J5 2034-916 Y17	J5 2039-706 Y19	US 4046-700 Y37	
74307-W BD	DS 2552-353 Y16	US 4178-239 B51		FR 2320-110 Y20	J7 9039-006 B51	GB 1539-103 B04	25288-A BD
DT 2418-978 W45	US 4018-696 Y17			US 4035-483 Y29+		CA 1067-419 B51	BE -861-265 A
NL 7503-467 W45	OE 7508-888 Y44	60229-X ABD	NL 7514-890 X51+	ZA 7604-715 Y35	34475-Y ADF		DT 2747-662 A
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SF 7500-749 X07	GB 1531-496 A45	NL 7600-802 X33	FR 2312-484 Y11+	CA 1067-408 B51	NL 7612-547 Y22	FR 2348-656 A06+	SW 7712-473 A
US 3948-728 X16	CH -614-463 B50	SW 7600-819 X37	GB 1479-228 Y27+		SW 7612-651 Y25	SU -655-282 B51+	NO 7703-378 A
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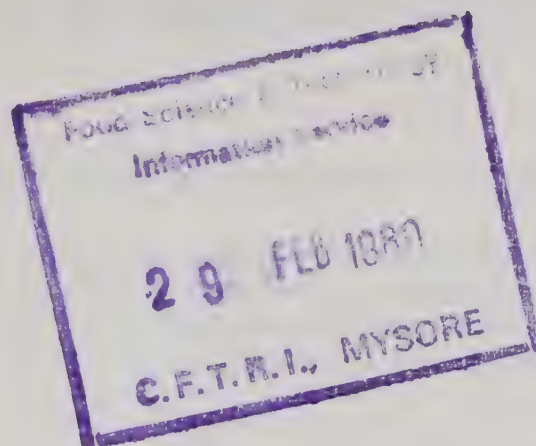
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ABSTRACTS

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NETHERLANDS	17 DEC 79	162,291 - 162,537
	10 DEC 79 - 16 DEC 79	7,806,121 - 7,904,616
NORWAY	3 DEC 79	7,801,557 - 7,903,433
PORTUGAL	6 DEC 79	60,617 - 69,567
SOVIET UNION	—	655,453 - 658,265
SWEDEN	10 DEC 79	7,804,671 - 7,908,799
UNITED STATES		
-Reissues	18 DEC 79	Re30,167 - Re30,174
-Patents	18 DEC 79	4,178,637 - 4,179,751
PCT	27 DEC 79	7,901,116 - 7,901,170

*Printed patents actually published early - mid December, 1979

Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating,
AE	Polymer & General Chemistry		Photographic Chemistry
B	Pharmaceuticals	H	Petroleum
C	Agricultural Chemistry	J	Chemical Engineering
D	Food, Disinfectants, Detergents	K	Nucleonics, Explosives, Protection
E	General Chemistry	L	Refractories, Ceramics
E+	General Chemistry Applns.	M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Other Classes	Publication Date	Main CPI Class for Section	Latest Priority	Earliest Disclosure Basic Patent	Accession No	Earliest Priority	Patent No	IPC
MEDA-				A89			69369W/42	=US 3964-992		
Chamber and process for 2-way electrophoresis - for seph. of very small samples of body fluids (SW28.7.75)										
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)										
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26										

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

FRAR- ★ D11 C/01 ★ BR 7803-117
Bread dough dividing machine
FRARUVI IND E COM 15.05.78-BR-003117
(11.12.79) A21c-05

UJEC/ ★ D11 C/01 ★ CS 7808-139
Baking oven air recirculation system - reducing overall heat losses
UJEC J 08.12.78-CS-008139
(31.07.79) A21b-01/40

DRAU/ ★ D11 00088C/01 ★ DT 2825-772
Pretzel steeping machine - with fixed loading and liquor application
and detachable oven charging screen belts
DRAUTZ R 13.06.78-DT-825772
(20.12.79) A21b-05/06 A21c-09/04

Steeping machine consists of three endless nylon screen belts of equal width in series. The first is a loading belt, and the second is a transport belt above which an overflow trough for the liquor is mounted. These two are fixed to the machine but the third which is used to charge the oven is detachable.

This subdivision prevents liquor vapours from entering the oven. The screen structure causes the pretzels to be wetted on the underside as well. The machine is simple to manufacture and to operate. 13.6.78 as 825772(31pp39)

REVI- ★ D11 00282C/01 ★ FR 2419-677
Bakery oven loading conveyor with easily removable rollers - is freely rotatable on spindles which can be dropped out of support frame
USINA REVISIONS MEC 13.03.78-FR-007140
(16.11.79) A21b-03/07

The loader is of the type comprising a rectangular frame with the longer side members carry-frame with the longer side members carrying transverse, freely-rotatable, parallel, end rollers. An endless conveyor band passes around the end rollers to carry the loaves. An intermediate, support roller to carry the frame along the oven floor is also fitted between the longer side members.

At least one of the three rollers is a tube rotating freely on a coaxial spindle extending between the side members. A coaxial bore in each end of the spindle has a dia. equal to that of an opposed bore in the adjacent side member so that a gudgeon pin can simultaneously engage both bores with an interference fit. The length of the gudgeon pin is such that it can be pushed into the spindle bore, pref. completely in, to an extent that its outer end is clear of the bore in the side-member. This allows the roller to be dropped out of the frame.

Rollers and/or roller supports can be exchanged easily and rapidly with minimum loss of prodn. time. The design is hygienic and the assembly easily cleaned. 13.3.78 as 007140 (13pp448)

CHAR/ ★ D11 00283C/01 ★ FR 2419-678
Industrial feeder for slices of bread into toasting oven - transfers prod. from slicer in formation retained through oven conveyor
CHARPENTIER Y LG 17.03.78-FR-007854
(16.11.79) A21b-03/07

The installation is of the type in which loaves are passed through a slicer to produce regular slices in rows which are arranged alongside each other on an accumula-

ting table. The rows are then advanced longitudinally into the oven. The improvement is that advancing of the rows into the oven is effected via a feeder comprising a dead-plate rising at 5-30° to the oven entry an overheated paddle conveyor pushes the stacks up the feeder dead-plate.

The feeder conveyor pref. comprises pivoted paddles fitted on endless chains and actuated by cam guides. The accumulating table is pref. horizontally aligned with the slicer discharge to receive rows of slices delivered transversely. The filled, accumulating table then pref. tilts to align its surface with the feeder dead-plate. A push-bar conveyor is pref. used to transfer all rows simultaneously longitudinally from the accumulating table on to the feeder dead plate.

The rows of slicers are maintained scrupulously in distinct rows from which individual slices are peeled off successively on to the oven conveyor. Slices are correctly spaced without side overlap or doubles, so satisfactory toasting is assured with minimum waste. 17.3.78 as 007854 (18pp448)

AUPL= ★ D11 01376C/01 ★ SU -657-342
Wheat gluten quality determination - by weighing sample, placing it in magnetic field and passing high-frequency emission to determine spin-lattice relaxation time
AS UKR PLANT PHYSIO 21.11.77-SU-546568
R16 (20.04.79) G01n-33/10

Method for determining the quality of wheat gluten, for use in verifying the technological properties of wheat in the flour-milling and bread-baking industries, etc., by measuring the physical characteristics.

The analysis is speeded up, while retaining the wholeness and germinating power of the wheat, by placing the grain into a magnetic field and passing pulses of high-frequency emission through. The spin-lattice relaxation time is used as the physical characteristic.

Grodzinskii, D.M., Lutsishina, E.G., Kostromina, N.A. Bul. 14/15.4.79. 21.1.77 as 546568 (2pp29)

NATY D11 82918B/46 = US 4179-527
Prod. of whole wheat food esp. breakfast cereal - includes a chilling step to reduce tempering period required
NABISCO INC 03.05.78-US-902448
(18.12.79) *GB2020-160 A23I-01/16

A whole wheat food prod. is mfd. by cooking a mixt. of water and whole wheat to provide a coated whole wheat contg. 28-55 wt. % of moisture; and holding the cooked prod. for 0-12 hrs. at ambient temp. and pressure.

The cooked whole wheat is then chilled to 1-12°C to temper the wheat, the temp. chosen such that as the duration of the holding step is increased from 0-12 hrs., the chilling temp. is proportionately increased from 1-12°C. The chilled tempered whole wheat is shaped to its desired configuration, then baked or toasted.

The reduction of the time in the tempering process permits a corresp. reduction of storage capacity and associated equipment, resulting in a simpler, more manageable and efficient mfg. sequence. 3.5.78 as 902448 (3pp931)

See Also

D16 SU 657060

D12: MEAT; FISH PROCESSING

DEUT- ★ D12 C/01 ★ BR 7903-295
Tube clamp
DEUTSCHER W A PTY 01.09.78-AU-005785 (29.05.78-AU-004529)
Q61 (11.12.79) A22b-05/14 F16b-02/10 28.5.79. as 003295

SATT/ ★ D12 00004C/01 ★ CA 1067-806
Measuring meat tenderness by determining trace element concn. - e.g. iron and zinc in muscle of beef carcass
SATTERLEE LD 21.02.77-CA-272177
R16 (11.12.79) G01n-23/22

Meat tenderness is evaluated by measuring the concentration of at least two trace elements in the meat. These concentrations are introduced into a formula which yields the meat tenderness. Preferably the trace elements are iron and zinc and their concentrations are measured in a muscle of a beef carcass.

The formula for tenderness is determined by applying multiple regression analysis to determine the appropriate coeffs for known values of tenderness determined by subjective tasting. Pref. the formula includes a term which is the ratio of concn of iron to zinc. 21.2.77 as 272177 (38pp285)

CORO/ ★ D12 00173C/01 ★DT 2918-253
Chopped beef discs possessing high cohesion for roasting - are prepared from mixed lean and fat meat then firmly pressed
CORONEOS JH 19.06.78-US-917077
P28 (20.12.79) A22c-07 A47j-37/04

A method of preparing beef meatballs or discs for roasting on a vertical spit is described. A mixt. of very lean and partly fat meat is chosen, some of the fat is then removed; the meat is then chopped fine, ground fine and reground. The meat is then spread out and a prepared mixture of additives (spices etc.) is thoroughly mixed with it.

A mould is then prepared, from a base, a cardboard disc and a plastic or waxed paper sheet for subsequent wrapping of the meat; a cylindrical side wall is placed on the base and the inside of the mould is lubricated with edible oil; the meat is then packed in to fill the mould and a pressing disc is applied, using considerable pressure on a level mechanism; the underside of this disc has a convex curvature.

A square-section tube is then passed down through a guide on the top of the disc and penetrates fully through the meat slab to reach the bottom of the mould; a square-section bar is used for this purpose, then subsequently withdrawn.

After pressing, the pressing plate is removed, the cylindrical wall is lifted off by the handles, and the waxed paper or plastic sheet is wrapped around the slab of meat. The slab is then lifted off on the cardboard disc and taken to a freezing plant. 5.5.79 as 918253 (23pp236)

CABU/ ★ D12 00284C/01 ★FR 2419-679
Butchers powered cleaver to split animal carcass partic. pig - projects cleaving blade by release of motor loaded spring
CABUT A 14.03.78-FR-008067
(16.11.79) A22b-05/20

The cleaver a hand-held housing from which a cleaving blade projects through a slot in which the blade can reciprocate. Inside the housing, the blade extends from a block mounted to slide up and down on guide pillars. A retractable catch on the block engages a motor-driven continuous chain which lifts the block from its lowest position. The block is lifted against the resistance of a compression spring. As the block nears the top of its stroke the catch is automatically released from the chain. The block is then projected down by the loaded spring to provide a cutting stroke of the blade.

The housing pref. has a pistol grip handle with trigger switch to actuates the chain motor. Displacement of the trigger pref. also adjusts the force with which the block is returned to its lowest position by advancing or delaying the release of the catch. The housing is pref. suspended from a counterbalancing hoist to facilitate manipulation of the cleaver.

The reduction of manual effort greatly increases the productive capacity of a single worker. 14.3.78 as 008067 (12pp448)

NITT- ★ D12 00772C/01 ★J5 4147-968
Prepn. of edible collagen casings e.g. for sausages - by extruding acid-swelled collagen dispersion in alkaline conc. salt soln. for forming tube, and hardening in the soln.
NITTA GELATIN KK 13.05.78-JA-056802
(19.11.79) A22c-13

The method comprises extruding acid-swelled collagen dispersion in an alkaline concd. salt soln. contg. aldehyde for forming collagen tube and immersing the tube successively in the soln. for hardening.

The formation of collagen tube, its coagulation and its hardening can be practiced in the same soln. and collagen (sausage) casings excellent in water resisting property, heat resistance and processing property, can be prepared by a simple process.

The alkaline conc. salt soln. pref. contains a salt showing dehydrating and coagulating activity on collagen (e.g. sodium chloride, ammonium sulphate, sodium sulphate etc.) having pH 9-11. As aldehyde an aldehyde which is reactive with collagen (e.g. formalin, glyoxal, glutaraldehyde, etc.) can be used. Directly after the formation of tube, the tube is in acidic condition and the salt is little adhered to the tube. Thus aldehyde can be absorbed well on the tube and during the immersion collagen and aldehyde react gradually with pH rise and proceeding of dehydration. As the result water resistible tube can be obtained. 13.5.78 as 056802 (2pp5)

MEYN/ D12 07735A/04 =NL-162-296
Extractor for the cloac(s) of fowl carcasses - has rotary cylindrical knife enclosing centralising spindle and spiral hook

MEYN P 29.06.76-NL-007089

(17.12.79) *NL7607-089 A22c-21/06

A rotary cutter is used to cut around the anus of a slaughtered fowl prior to the removal of the innards. The cutter is equipped with a centring pin which is inserted into the anus and has a spiral thread. After insertion, the pin is rotated through a limited angle which then holds the anus still against the rotation of the cutter. After the cut, the pin is then rotated in the opposite direction whilst the anus is prevented from rotating with it by a spring loaded frictional element.

The use of this centering pin and spiral grip is more hygienic than the traditional vacuum grip device which could cause damage to the wall of the duct. The cutter is also preferably equipped with a spacer bar which ensures that, regardless of the size of the bird, the pin is inserted to the correct depth. 29.6.76 as 007089 (7pp1370)

STRK ★ D12 01504C/01 ★US 4178-659
Transfer turntable for poultry carcasses - removing carcasses from one linear conveyor and delivering to another
STORK GAMCO INC 31.10.77-US-847086
(18.12.79) A22b-05

Poultry carcasses are carried by shackles suspended from a first linear conveyor which passes a transfer station. At this station a stationary camming bar displaces the carcasses from the shackles onto radially projecting receivers projecting from a turntable. The turntable carries the carcasses through 180°. A second set of camming bars dislodge the carcasses from the turntable onto shackles suspended from a second conveyor.

Shackles of the first conveyor are slightly above the receivers and these in turn are slightly higher than the shackles of the second conveyor. The shackles of the conveyors include a pair of bars having a right angle and attached to the conveyor by pins which permit horizontal pivoting.

Appts. transfers carcasses from one conveyor to a second. 31.10.77 as 847086 (6pp295)

OLNE/ ★ D12 01505C/01 ★US 4178-660
Meat additives injection tube - with piston and pointed plug for leading end for initial insertion through meat
OLNEY A A 27.03.78-US-890040
(18.12.79) A22c-17

A rigid tube is of 3/16-7/16 inch dia. and long enough to extend through a body of meat, and has a tube end plug with a section fitting sealingly in the tube end, a larger cylindrical outer section and a pointed tip for penetrating the meat and a length of 1.5-3.5 tube dia.

A piston fits in the other tube end and displaces the tube contents when the tube is moved about the piston after insertion through the meat. The tube discharge end is pref. bevelled and there is a pair of finger rings on the tube other end and a finger ring on the piston. 27.3.78 as 890040 (7pp1358)

BETT- ★ D12 01506C/01 ★ US 4178-683
 and held meat knife with rotating annular blade - in housing
 releasably attached to body including meat guide
 BETTCHER IND INC 15.11.78-US-960966 (17.07.78-US-924914)
 (18.12.79) A22c-17/04

and knife comprises a body and a removable housing
 which is attached to its distal end. The housing encloses
 ring knife with one sharpened end and the other end not-
 shed to form a gear. A pinion gear extends from a motor
 within the body and engages the gear on the knife to rotate
 within the housing.

The housing is removably attached to the body by screws
 which are received in slots within the housing. A meat
 support guide is also attached to the screws and is located
 within the housing to prevent cut meat from being rotated
 by the knife.

Knife is used in a packing house. The blade housing
 can be removed by loosening but not removing the attach-
 ment screws. The meat guide supports meat severed by
 the knife. 15.11.78 as 960966 (6pp295)

INTT ★ D12 01546C/01 ★ US 4179-021
 Animal carcass back fat thickness measurement - using
 hydraulically operated lift to raise and lower operator to take
 readings at three locations
 INT TELEPH & TELEG CORP 24.03.78-US-889713
 Q35 (18.12.79) B65g-42

This arrangement is employed to measure the back fat
 thickness at three selected locations on an animal carcass
 conveyed on an overhead conveyor. It includes a hydraul-
 ically operated lift device to raise and lower a single op-
 erator to enable the operator to make measurements of
 the back fat thickness at the first rib, the last rib and the
 last lumbar of the carcasses.

A circuit is coupled to the lift device and synchronised
 to the movement of the conveyor to automatically control
 the movement of the lift. 24.3.78 as 889713 (8pp947)

See Also

D13 DS 2641333

D13: OTHER FOODSTUFFS

ANTA/ ★ D13 C/01 ★ CS 7406-234
 Balanced feedstuff for calves
 ANTAL J 11.09.74-CS-006234
 C03 (31.07.79) A23k-01/18

BURI/ ★ D13 C/01 ★ CS 7802-525
 Cpd. derived from glycidic and urea
 BURIANEK J 19.04.78-CS-002525
 (31.07.79) A23k-01/02

KASC/ ★ D13 C/01 ★ CS 7803-483
 Shaped feedstuffs binder prepn.
 KASCAK J 30.05.78-CS-003483
 C03 (31.07.79) A23k-01/02

KRKO/ ★ D13 C/01 ★ CS 7805-193
 Milk fat fractions prepn.
 KRKOSKOVA B 09.08.78-CS-005193
 (31.07.79) A23c-07

PRIB/ ★ D13 C/01 ★ CS 7708-074
 Fine, edible coating for food products
 PRIBIK I 05.12.77-CS-008074
 (31.07.79) A22c-13

PELZ/ ★ D13 C/01 ★ CS 7808-284
 Tryptophan prepn. for use in feedstuffs
 PELZBAUER J 13.12.78-CS-008284
 B02 C02 E13 (31.07.79) A23k-01/16

MARG- D13 35667S/21 = DS 2055-036
 Pourable margarine
 MARGARINBOLAGET AB (MAR-) 14.11.69-LU-059821
 (D23) (20.12.79) *DT2055-036 A23d-03 A23l-01/34

A pourable margarine with improved stability to phase
 sepn. is prepd. A melted fat phase of a vegetable oil,
 pourable at 0-25°C and contg. 1-5% of crystalline hard fat
 components (particle size 0.1-5 µm) is dispersed in an aq.
 phase to form a water-in-oil emulsion.

In this emulsion is dispersed 1-10 vol. % of an inert gas
 to form gas bubbles, ≥ 90% of which have a dia. of 2-10
 µm. After packing the margarine is pref. stored ≥ 5 hrs.
 at 5-18°C. 9.11.70 as 055036 (6pp068)

AJIN D13 29561T/19 = DS 2152-111
 Purificn of alpha-L-aspartyl-L-phenylalanine methyl ester - for use as
 sweetener by pptn with hydrogen halide
 AJINOMOTO KK 26.10.70-JA-094076
 B05 E14 (20.12.79) *DT2152-111 C07c-103/52

Purificn. of α-L-aspartyl-L-phenylalanine methyl ester
 (I) from crude starting material contg. corresp. β-isomer,
 asparaginic acid, phenylalanine methyl ester, aspartylasp-
 -araginic acid, α- or β-aspartyl phenylalanine inorganic
 salt and/or organic colourants of indefinite compsn. is de-
 scribed.

Process comprises (a) reacting crude prod. in water

and opt. water-miscible organic solvent with ≥ 1 mole
 HCl and/or HBr per mole (I) at ≤ 50°C to give a concn.
 of HCl and/or HBr of ≥ 0.3 N and ≤ 6.0 N (pref. > 0.5 N)
 (b) removing hydrochloride and/or hydrobromide from
 soln.; and (c) decomposing the salt and sepg. purified (I)
 from the decomposition prod.

(I) is useful as a sweetener. Bitter-tasting β-isomer
 is removed. 19.10.71 as 152111 (4pp936)

MERS- D13 21235U/16 = DS 2216-921
 Liquid foodstuff preservation - esp for prodn of flavour essences
 from fruit juices

VEB APP MERSEBURG (JAH /) 22.10.71-DL-158505
 (20.12.79) *DL-95-970 A23l-02/30

Beverages, such as fruit and vegetable juice which had
 SO₂ added as a preservative must be freed from it before
 issue for consumption. The liquid is charged to the top of
 the distn. column in an aroma recovery installation. The
 SO₂ is stripped from the beverage by the vapour which has
 been produced from the juice itself in an evaporator.

This prevents the destruction of vitamins or enzymes
 and the detrimental effect of steam or boiling on the test.
 Oil which may be contained in steam is also kept away.
 8.4.72 as 216921 (3pp39)

FRRR D13 17375V/10 = DS 2353-582
 Chocolate liqueur centres prodn - using sugar soln supersatd by
 chilling in scraped surface heat exchanger

FERRERO P & CIA SPA (FERR-) 27.12.72-IT-071089 (26.10.72-IT-
 070375)

+ Q78 (20.12.79) *BE-806-463 A23g-03

Crusty pralines are prepd. A hot aq. sugar soln. is prepd.
 pref. contg. flavouring such as coffee or cognac. The
 soln. is cooled to below the m. pt. of chocolate to 5 to -10°
 C using a cylindrical heat exchanger with coaxial rotor and
 blades.

The cold soln. is poured into previously prepd. chocolate
 cases and the cases closed with a chocolate lid. The sugar
 soln. is cooled without granulation and is strongly super-
 satd. when poured into the cases. 25.10.73 as 353582
 (7pp068)

MONS D13 32880W/20 = DS 2452-285
 Alpha-L-aspartyl-L-phenylalanine alkyl ester prepn. - from N-
 protected L-aspartic anhydride and L-phenylalanine

MONSANTO CO 05.11.73-US-412928

B05 E14 (20.12.79) *DT2452-285 C07c-103/52

The cpd. N-formyl-α, L-aspartyl-L-phenylalanine (I) is
 new. Also claimed is the prodn. of α-L-aspartyl-L-
 phenylalanine methyl ester (II) in which (a) N-formyl-L-
 aspartic acid anhydride is reacted with L-phenylalanine in
 glacial acetic acid at < 80°C; (b) the formyl gp. in (I) obtd.
 in step (a) is removed by acid hydrolysis in known manner;
 and (c) the prod. α-L-aspartyl-L-phenylalanine from step
 (b) is esterified with methanol in acid medium at -20°C to

the b. pt. of the medium, to produce (II).

(II) is a known sweetener. Typical yields for steps (a) and (b) are 67% and 85%. 4.11.74 as 452285 (7pp997)

MILE D13 00037Y/01 = DS 2641-333
Textured protein concentrate as meat substitute - prepd. by aq. extrn. of extruded protein to improve flavour and texture
MILES LABORATORIES INC 15.09.75-US-613090
(D12) (20.12.79) *BE-845-331 A23j-03

A structural protein concentrate is prepd. with extensive meatlike texture and mild neutral taste and smell. A protein extrudate of density 85-150 g/L on a dry wt. basis is treated with an aq. solvent to extract the water soluble portion. The extraction is carried out at pH 5.5-6.0, at $> 65^{\circ}\text{C}$ and a solvent-solid ratio of at least 8:1. A soya bean protein concentrate may be so treated. 14.9.76 as 641333 (6pp068)

CARL-★ D13 00181C/01 ★DT 2920-814
Revolving caramel mould with inner eccentric - has locating pins to align eccentric with outer revolving drum
CARLE & MONTANARI 07.06.78-IT-024297
P71 (20.12.79) A23g-03/12 B30b-11/08

A revolving drum-like pressing mould esp. for the prodn. of caramels comprises two outer half-drums and an inner eccentric. The two half-drums each carry a number of plungers which can be driven into a series of aligned moulds each formed of an outer half-mould on the inner circumference of a ring and a second half-mould on the outer circumference of an eccentric.

The two half-moulds are detachably connected together by bolts, a sleeve and an intermediate disc which carries a number of apertures aligned with the plungers. On one half-drum there is a series of pins, equal to the number of plungers; these pins co-operate with a flange on the eccentric wheel so that as the drums revolve the pins successively engage with seatings at the rim of the eccentric wheel in the region where the rim of the eccentric and the ring come closest together, thus aligning the two halves of the moulds. 23.5.79 as 920814 (19pp236)

REIB/★ D13 00197C/01 ★DT 2922-745
Coating apparatus for pharmaceuticals or foodstuffs - has solvent evaporated from coating under vacuum while inside coating chamber

REIBENSPIES U 05.06.78-OE-004049

B07 P42 (20.12.79) A23g-03 A61k-09 B05b-17/04 B05d-01/02 B05d-05 B05d-07

A method of coating small objects with solvent-containing substances consists of drying the objects in a vacuum stage inside the coating plant. More specifically, air, protective gas or other medium can be supplied to and removed from the coating chamber. The solvent may be recovered and re-used, solids being removed by filtration.

Used for the production of sweets, chocolates, medicaments and the like. By carrying out the drying process in a vacuum region which forms part of the coating plant itself and drying process is greatly speeded up and the solvent is removed without being wasted. For heat-sensitive particles such as medicaments, a lower drying temperature can be used. 5.6.79 as 922745 (9pp236)

FIRM★ D13 00240C/01 ★DT 2924-031
Alpha-di:hydro-ionone used as aroma for foods and pharmaceuticals - with fruit, esp. raspberry or strawberry flavour NL 18.12.79)

FIRMENICH SA 15.06.78-CH-006527

B05 E15 (B07) (20.12.79) A23l-01/22 A23l-02/26 A61k-47

Use of alpha-dihydro-ionone (I) or a mixt. of (I) in combination with alpha- and beta-ionone as aroma ingredients for the prodn. of synthetic or artificial aromas and for the aromatisation of foodstuffs, beverages and pharmaceutical preps. is new.

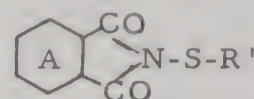
Used for improvement and augmentation of the aroma of fruity foodstuffs and beverages, partic. those having a red berry (raspberry or, esp., strawberry) aroma. (I) and its combinations with alpha- and beta-ionone impart a natural berry flavour, and impart or augment fruity, woody, green and even floral or amber flavour notes. 13.6.79 as 924031 (10pp280)

CALI★ D13 00245C/01 ★DT 2924-076
Acceleration of cellulose fermentation - by adding (N)-halo:alkylthio-phthalimide derivs.

CHEVRON RESEARCH CO 19.06.78-US-916435

C02 E13 (D16) (20.12.79) A23k-01/14

The rate of cellulose fermentation by cellulose-digesting microorganisms is increased by effecting fermentation in the presence of phthalimide derivs. of formula (I):



(I)

(where ring A contains 0-3 double bonds and R' is a 1-2C haloalkyl gp. contg. 1-5Cl or Br atoms).

Cpds. (I) can be used to promote cellulose fermentation in vivo (e.g. in the stomachs of ruminants, by oral administration or addn. to cellulose-contg. feeds) or in vitro (e.g. during microbiological degradation of cellulosic wastes or conversion of cellulose to sugar or monocellular proteins). 15.6.79 as 924076 (15pp367)

LEGR/★ D13 00275C/01 ★DT 2924-425
Enrichment of foodstuffs in polyvalent minerals esp. calcium - using protein-free milk products relatively enriched in polyvalent ions

LEGRAND C G R 16.06.78-FR-018117

(20.12.79) A23c-09/14 A23g-03 A23l-01/30 A61k-09

In a new process for enriching foodstuffs with minerals, complexes obtd. by physicochemical treatment of deproteinated milk products are added to the foodstuffs. The physicochemical treatment is carried out in such a way that adequate exclusion of monovalent minerals and enrichment with polyvalent ions and oligo-elements is achieved, the ratio of enrichment being 40:1 to 50:1.

The process permits foods to be enriched both with minerals and with calcium. The lactose component of the complexes promotes the assimilation of minerals, and is involved in the deposition of calcium in bones. 16.6.79 as 924425 (18pp280)

SHOW★ D13 00276C/01 ★DT 2924-663
Stable aq. polymer dispersion prepn. - by polymerising monomer forming water-soluble polymer in aq. soln. contg. different water-soluble polymer

SHOWA DENKO KK 19.06.78-JA-073232

A14 B04 C03 (B07 D15 D21 D25) (20.12.79) C08f-02/10 C08f-120/02

A stable, flowable aq. dispersion is prepd. from a water-soluble polymer compsn. by polymerising ≥ 1 ethylenically unsaturated monomer, (A), capable of forming a water-soluble polymer, (P), in an aq. soln. of ≥ 1 water-soluble polymer (B) which is different from (P). The aq. soln. contains 3-150 (5-125) esp. 10-100 pts. wt. (B)/100 pts. wt. water. The quantity of (A) is 10-150 (10-100) pts.wt./100 pts.wt. water. Wt. ratio (A):(B) is 1:5 to 5:1 (1:2.5 to 2.5:1).

The aq. dispersion can be used as flocculant, thickener, soil conditioner, adhesive, dispersant, detergent, additive for foods, pharmaceuticals or cosmetics. Viscosity increase is prevented. The conc. prod. is stable and fluid and can be diluted with water. 19.6.79 as 924663 (43pp200)

MCM/★ D13 00279C/01 ★FR 2419-673
Retention of colour in dried biological matter - by coating with egg white, powdering the coated surface and drying

MCMILLAN I 13.03.78-FR-007160

(16.11.79) A01n-01 A01n-03

Method of conservation of biological matter comprise coating the outer surface of the material with raw white of egg, then powdering the whole of the coated surface with a powdered material and drying the treated material.

The process is for conservation of material such as flowers and butterflies, e.g. for use in decorating confectionery. 13.3.78 as 007160 (3pp288)

PETL D13 40310Y/23 = GB 1558-384
Electrofilter for cleaning edible oils - having packing material of dielectric constant less than 7 (NL 1.6.77)

PETROLITE CORP 28.11.75-US-636261

+P41 (28.12.79) *DT2653-319 B03c-05

Hydrogenation catalyst and other solids are removed from non-petroleum edible oil by passing the stream, which is at a temp. sufficient to ensure organic solids are dissolved through an inert bed of hard granules having a dielectric

constant of at most 7; and establishing a d. c. field in the bed to induce adhesion of undissolved solids on the granules. The stream temp. is pref. at least 150°F and the cream is passed at a rate of 12 ins/min. The granules pref. have a hardness of at least 7 Mohs, a specific gravity of 2.5 to 2.9 and a size (Tyler screen) of 1 to 13 mm. The granules are pref. of flint, garnet, granite, fused quartz or crystalline SiO₂. 15.11.76 as 047500 (13pp1376)

ETL **D13** **40310Y/23 =GB 1558-385**
Electrofilter for cleaning edible oils - having packing material of electric constant less than 7 (NL 1.6.77)
PETROLITE CORP 28.11.75-US-636261
+P41 (28.12.79) *DT2653-319 B03c-05
An electrofilter for removing solids from an organic liq. of high resistivity includes a vessel through which the liq. flows and which contains a bed of inert, hard granules of dielectric constant of ≥ 7 . There is a device to establish a d. c. field in the bed to induce adhesion of undissolved solids on the granules. There is a cleaner to selectively clean the granules by interrupting the electrical field and passing a cleaning fluid through the bed to dislodge solids. There is also a monitor to activate the cleaner when the solids content of the purified liq. reaches a specific level. The granules are pref. of flint, garnet, granite, fused quartz or crystallised SiO₂. 15.11.76 as 029208
Div. ex. 1558384 (12pp1376)

BLUE- **D13** **52220Y/30 =GB 1558-590**
Dominant feed contg. albumin and other proteins - can also be used as a fertiliser or human food additive
BLUE WING CORP 08.03.76-US-665006
C03 (C04) (03.01.80) *BE-852-208 +C07g-07
Nutrient compsn. is produced by adjusting the pH of an aq. medium contg. ≥ 6 wt. % of albumin to a level of 9.6-12.5; heating to a temp. effective to form an albumin-contg. gel; and recovering the gel.
Pref. the gel is dried to form a particulate nutrient compsn. contg. albumin. In the process, the aq. medium is heated to 40-100°C, and the pH is adjusted by admixing an alkali(ne earth) metal hydroxide with the medium. The albumin is animal blood or milk whey or their mixts.
Blood is processed by this method into a usable and saleable commodity, without undue expenditure of energy or environmental pollution. 8.3.77 as 009701 (5pp931)

OLAV- ★ **D13** **00333C/01 ★GB 2022-986**
Curing, storing and transporting wrapped cheese - on pallet with vertical sides and internal partitions
OLAVI RASANEN OY 22.06.78-SF-002019
Q32 (28.12.79) A23c-19 B65d-19/44
Cheese is pressed into a mould and then packed into blocks before packaging in plastic film. The wrapped cheeses are placed in rectangular compartments of equal height provided in a pallet. Vertical side walls of the pallet extend over several layers of cheeses which are separated by horizontal sheets.

The length and width of each compartment is equal to the cheese dimensions but the cheese height is less than the height of the compartment to accommodate changes in the cheese during curing. Pref. the pallet side walls are hinged so that the assembly can be collapsed and stored flat after use.

Cheeses, esp. cheddar, are cured, stored and transported in the compartments of the pallet. 18.6.79 as 021186 (5pp295)

PHRI/ ★ **D13** **00348C/01 ★GB 2023-119**
Treatment of sauerkraut mfr. effluent - to reduce acidity, by fermentation using suitable yeast
CHRIST C 14.06.78-FR-017753
(D15) (28.12.79) C02c-05/10
Residual brine from sauerkraut mfr. is treated to give a waste suitable for disposal in standard urban sewers by the action of a microorganism which degrades lactic acid and reduces (sic; raises) the pH to a value close to neutral. Suitable organisms include Candida tropicalis, C. utilis, Saccharomyces exiguus, S. urevisiae, or Hansenula anomala.
The appts. required comprises at least one vat, fitted with a perforated pipe inside near the bottom, through

which air is fed. The brine is seeded with yeast, Liq. contg. yeast rising to the top of the vat is drawn off, and led to a decantation tank. The supernatant from this is drawn off for disposal and the yeast slurry which collects at the bottom is returned to the vat.

The process can be carried out on a small scale, requires little capital investment, and is suitable for small sauerkraut factories. 25.4.79 as 014443 (4pp955)

SAKU/ ★ **D13** **00767C/01 ★J5 4147-940**
Preventing oxidn. and microbial growth in processed food - by supplementing the minor nutrients using basic calcium hydroxide orthophosphate obtd. by heating steamed, powdered mammal bone
SAKURAIT 09.05.78-JA-054044
(19.11.79) A231-03/34

The supplementing of minor nutrients, to prevent oxidn. and suppress growth of microbes in processed foods prepared from drinking water, animal protein and/or vegetable protein, is achieved using basic calcium hydroxide orthophosphate.

Ca₅(PO₄)₃(OH) contains various elements which enrich the processed food, make it alkaline and protect it from oxidn. and contamination by microbes. It is obtd. by igniting bone char at 1000-1400°C. 9.5.78 as 054044 (3pp5)

HOSH- ★ **D13** **00768C/01 ★J5 4147-946**
Prepn. of mixed powder for prodn. of rice noodles - involves mixing rice powder with amylose and other starch
HOSHINO BUSSAN KK 09.05.78-JA-054693
(19.11.79) A231-01/16

Method comprises mixing (a) 65-75 wt. % of the rice powder obtd. by mixing amylose starch of which amylose content is already known, in rice powder so that the amylose content in the mixt. is 20-30% and (b) 35-25 wt. % of starch having B-type granular structure through X-ray diffraction analysis. Rice noodle is prepd. by adding water at $\geq 95^\circ\text{C}$ to the mixed powder prepd. above, kneading the mixt, extending the dough with reduction roller, if necessary, with scattering starch on the dough to the prescribed thickness and cutting it with the cutting roller.

Rice powder having stable qualities and delicious rice noodle can be prepd. through simple method. 9.5.78 as 054693 (10pp5)

MATS/ ★ **D13** **00769C/01 ★J5 4147-952**
Preserving citrus fruits - by treating with aq. colloidal soln. of microcrystalline wax, drying, and storing at below 35 degrees celsius
MATSUSHITA R 12.05.78-JA-057018
A97 (19.11.79) A23b-07/16

Method comprises treating citrus fruits with an aq. colloid-al soln. of microcrystalline wax, drying and storing at $\leq 35^\circ\text{C}$. An extremely thin coating film contg. microcrystalline wax is formed on the surface of citrus fruits and the film is soft and hardly broken. Being extremely thin the film shows good gas permeability but suppresses vaporisation of water in the citrus fruits.

The soln. is made to have wax concn. 1-15% 2-7%. As the surfactant ionic surfactant for example, the organic salt (e.g. amine salt) of the acid having higher oleophilic gp. such as higher nonionic surfactant e.g., higher fatty acid ester of polyhydric alcohol or its partial anhydride, polyoxyalkylene-ether of higher aliphatic monohydric alcohol etc. can be used. 12.5.78 as 057018 (4pp5)

KIBU- ★ **D13** **00770C/01 ★J5 4147-957**
Hydrophilic seaweed prodn - by contacting seaweed with sodium citrate, tartrate and/or halate in water
KIBUN KK 09.05.78-JA-054116
C03 (19.11.79) A231-01/33

The method comprises contacting seaweed with Na citrate, tartrate, malate or their mixt. in the presence of water. The seaweed obtd. can be served directly as food and feed.

Chelating agent (e.g. Na citrate, tartrate etc.) is pref. used in the form of soln. and the amt. of required chelating agent and the amt. of water present depend on the chelating agent, the seaweed, the freshness of seaweed, the required property of obtd. hydrophilic prod. etc. They are desirably decided previously through the test. 9.5.78 as 054116 (5pp5)

KIBU- ★ D13 00771C/01 ★ J5 4147-958
Hydrophilic seaweed prepn. - by contacting seaweed with fruit or processed fruit in the presence of water

KIBUN KK 09.05.78-JA-054117

C03 (19.11.79) A23I-01/33

The method comprises contacting seaweed with (processed -d) fruit, of which pH is previously adjusted to acidic range or slightly alkaline with alkali hydroxide, alkali carbonate or alkali bicarbonate, in the presence of water.

The hydrophilic seaweed can be used as food, feed and fertiliser. Food having specific rheological property can be obtd. The seaweed is e.g. Phodophyta, Chlorophyta or Phaeophyta. 9.5.78 as 054117(5pp5)

MORI- ★ D13 00773C/01 ★ J5 4147-976
Improving solubility of refined stevia extract - by mixing with aminoacid soln.

MORITA KAGAKU KOGYO 12.05.78-JA-057003

B03 E13 (19.11.79) A23I-01/22

The method comprises using (a) stevioside or (b) refined stevia extract composed of 100 pt. wt. of stevioside and ≤ 5 pt. wt. of rebaudioside A together with (c) soln. contg. amino acid. By using stevioside with amino acid its bitterness can be mitigated. 12.5.78 as 057003(2pp5)

MORI- ★ D13 00774C/01 ★ J5 4147-977
Preventing decomposition of sweet stevia extracts - by adding soluble licorice extract contg. glycyrrhizin

MORITA KAGAKU KOGYO 12.05.78-JA-057004

B03 E13 (19.11.79) A23I-01/22

Method comprises combining the sol. licorice extract contg. glycyrrhizin as the major ingredient and obtd. by extracting or refining by decomposition reaction, ≥ 1 of the sweet substances in stevia selected from stevioside, rebaudioside A, rebaudioside B, rebaudioside C and steviolbioside. The licorice extract as glycyrrhizin is used in an amt. of 50 w/w% based on the sweet substances.

Stevioside, rebaudioside A, rebaudioside B, rebaudioside C and steviolbioside are the sweet substances contained in the plant of Compositae, Stevia rebaudiana Bertoni and are used as natural dietetic sweeteners. Their decomposition can be prevented by combining the licorice extract in them. 12.5.78 as 057004(2pp5)

NIUS ★ D13 01026C/01 ★ J5 4148-890
Low mol. wt. chitosan prodn. - by treating chitosan, obtd. by deacetylating natural chitin, with hydrogen peroxide soln. at pH 6-12

NIPPON SUISAN KAISHA 15.05.78-JA-057441

A11 B04 (21.11.79) C08b-37/08

Low mole. wt. chitosan is produced by treating chitosan obtd. by deacetylating natural chitin with 0.007-0.35% of H_2O_2 soln. adjusted to pH 6-12. Chitosan having selected mol. wt. is obtd. without side reactions such as colouring. The glucoside bond of high molecular chitosan is cleaved selectively without any effect on the amino gp. thereof. The desired mol. wt. is obtd. by controlling the reaction time.

Specifically chitosan is dispersed in water and adjusted to pH 6-12, pref. 9-11.5, and heated to desired temp. with stirring. The H_2O_2 soln. is added to the dispersion in one or several portions. The reaction time is 2-5 hrs. The reaction temp. is 20-90 (pref. 30-70)°C. After the reaction, the low mol. wt. chitosan is water-washed, dried and pulverised.

As the H_2O_2 soln. used is cheap and safe, the prod. can be used for intermediate treatment of foods or for cosmetics and medicines. 15.5.78 as 057441(5pp136)

BANS- D13 40930Y/23 = J7 9040-560
Stevioside extraction from dried and ground Stevia stalks and leaves - in very good yield, by using methanol-chloroform mixt. which is then treated with water to obtain stevioside in the aq. methanol layer

BANSHU CHOMIRYO KK 28.10.75-JA-130072

B03 E13 (04.12.79) *J52053-899 C07h-01/08 C07h-15/24

To dried and ground leaves and stalks of Stevia is added a mixt. of methanol and chloroform to extract stevioside as well as chlorophyll pigment and lipid. The insolubles are then removed. To the remaining soln. is added water, producing an aq. layer and a chloroform layer, stevioside is

transferred into the methanol water layer. This layer is then conc. and refined to obtain stevioside.

By the method of this invention stevioside (known as a sweetening agent) can be obtd. in refined form easily and with a remarkably high yield. 28.10.75 as 130072, C07h-15/25, 1/08 (4.12.79) BANSHU CHOMIRYO KK (6pp75) (J5 2053899)

MORG D13 66536V/38 = J7 9040-611
Vitamin B2 removal from whey - by absorption on petroleum-coal-derived active carbon

MORINAGA MILK KK 09.03.73-JA-027167 (00.00.76-JA-073127)

B02 E13 (B02 B04 B07) (04.12.79) *DT2402-272 C13k-05

Vitamin B₂ is removed from whey pref. contg. 6.2-25% total solids, by passing at $> 70^\circ\text{C}$ to room temp. through a column packed with petroleum- or coal-derived active C which $> 55\%$ of total pores have a pore dia. of 40-200 Å and pore vol. is 1.1 cc/g. After adsorption of vitamin B₂, the granular vitamin B₂-satd. active C is regenerated for reuse by alternately passing through aq. NaOH soln. and water.

Vitamin B₂-free whey may be electrodialysed with an ion-permeable selective membrane to remove $> 50\%$ of ash content. Whey is then opt. concd. and cooled, to recover crystallised lactose, which is white and suitable for use as pharmaceutical carrier. 9.3.73 as 73127/76, Div. ex. 27167/73, C13k-5/00 (4.12.79) MORINAGA MILK IND. CO LTD. (8pp) (J5 2117445)

NEST D13 69010X/37 = J7 9040-622
Highly nutritious proteinaceous fibres prodn. - by spinning an alkaline soln. of a mixt. of vegetable and milk proteins
SOC PROD NESTLE SA 12.02.75-CH-001705
F01 (04.12.79) *DT2604-234 A23j-03

Fibrous food products are made by forming a mixt. of > 50 wt % milk proteins and ≤ 50 wt % vegetable proteins in an alkaline medium and spinning it into a coagulating bath. The product may be used as a meat substitute. The prod. has high nutritional value and utilises milk proteins (which are relatively cheap, being by-prods.). 10.2.76 as 013834 (clg. 12.2.75-CH-001705) A23j-3/00 (4.12.79) SOC PROD NESTLE SA (4pp) (J5 1112550)

MNKN D13 44412Y/25 = J7 9040-626
High protein fibrous foodstuffs mfr. - by treating milk solids with proteinase and adding acid during formation of fibres

MINAMI NIPPON RAKUNO KYO 05.11.75-JA-133354

(D16) (04.12.79) *J52057-355 A23c-23 A23j-03

The high protein fibrous foodstuffs are prepd. by adjusting pH of (skimmed) milk concentrates to 5.0-6.5, treating them with proteinase for gelation, stressing them to form the oriented fibrous material and fixing them with acid after or during the stressing.

The amt. of enzyme used depends on the nature of protein contg. raw material and specific conditions, without using calcium casinate micelle as the starting material. By gelling e.g. skimmed milk with proteinase at pH 5.0-6.5 and stretching, fibrous compsns. contg. oriented fibrils can be obtd.

The products have excellent texture and are similar to animal meats. It is important to practice the gelation at pH 5.0-6.5, and it is desirable that P/N ratio in gel is 6.5-12.0 pref 7.0-10.0, 5.11.75 as 133354, A23j-3/00, A23c-23/00 (4.12.79) MINAMI NIPPON RAKUNO KYO (4pp5) (J5 2057355)

HAGI/ ★ D13 01140C/01 ★ J7 9040-628
Nutritious sheets - comprise ume and shiso extract mixed with starch syrup

HAGIWARA Y 25.05.77-JA-059940

(04.12.79) A23g-01 A23g-03 A23I-01/27

The sweets comprise ume (Japanese apricot) and extract of shiso with pH ≤ 4 , mixed with starch syrup. The sweets are nutritious and have excellent flavour and attractive colour. Shiso is an edible plant belonging to *Perilla frutescens crispa*. 25.5.77 as 059940, A23g-3/00, 1/00, A23I-1/275 (4.12.79) HAGIWARA, Y (5pp83) (J5 53145958)

KA- D13 64156Y/36 = J7 9040-629
 Synthetic cpd. having coffee- or curry-like flavour - prepd. by heating threonine, opt. mixed with organic acid, under strongly acidic conditions

TAX ADMIN AGENCY 24.01.76-JA-006375

E13 (04.12.79) *J52090-669 A231-01/23

Process involves heating threonine alone or mixed with organic acid such as fumaric acid maleic acid malic acid, lactic acid, gluconic acid, succinic acid etc. under acidic condition with sulphuric acid.

The matured flavour of 'sake' has been found to be caused by 3-hydroxy-4,5-dimethyl-2(5H)-furanone (HDMF) and that HDMF can be obtained easily with relatively high yield by simply heating threonine alone or with organic acid particularly fumaric acid under strongly acidic conditions. HDMF can be easily refined by extraction with chloroform. It shows little bitterness and has flavour like curry coffee with strong roast feeling. It has very low stimulative threshold of 76 ppb and its flavour is sensed strongly with a relatively low concentration than with a high concentration.

1.76 as 006375, A231-1/234 (4.12.79) TAX ADMIN. AGENCY (2pp5) (J5 2090669)

UIL D13 55592S/34 = NL-162-297
 Margarine compsn which spreads smoothly at low temps
 UNILEVER NV 10.02.70-US-010313
 (17.12.79) *BE-762-777 + A23d-03

Margarine with a high content of poly-unsaturated fatty acid residues is made by emulsifying an aqueous phase with a fat phase, comprising a mixture of hard fat (A) and a room temperature oil (B) which contains $\geq 65\%$ poly-unsaturated fatty acid residues. The oil used is $\geq$ (pref. 100) wt. % re-esterified before working into all the fat phase.

The margarine is smooth to spread even after prolonged cold storage. Typically the margarine contains 80-95 wt. % oil. 10.2.71 as 001787 (6pp913)

CHR- D13 54928R/31 = NL-162-334
 Wrapping individually sliced material
 L D SCHREIBER CHEES (SCH-) 10.02.67-US-615121
 + Q31 (17.12.79) *CA-847-652 + B65b-09/12

Slices of an extruded product such as cheese are sealed into a packing envelope so that individual, sealed slices of product are produced. The heated product is fed into a tube of the packing material which is then passed in a continuous length through two parallel conveying belts which press the tube into the desired flat form. The individual slices are formed by compressing together the two sides of the tube after each slice and then welding the sheets together.

To enable the consumer to separate the sheets readily, a thin layer of the product is left between the sheets between slices. The product is also deformed whilst still hot thus ensuring that all of the air is extruded from each packing envelope prior to sealing. 6.2.68 as 001671 (5pp1370)

KAYB D13 53764V/30 = NL-162-395
 Shaped solid bodies e.g. films and coatings - consisting of alkyl or hydroxy-alkyl ether of pullulan, and optionally small proportion of polyalcohol

HAYASHIBARA BIOCHEM 01.03.73-JA-023710
 A11 B04 + Q34 (A82 A94 A96 A97) (17.12.79) *BE-811-583
 C08b-37 C081-05 C09d-03/10

Shaped articles are produced from a melt or solution containing 3C (hydroxy) alkyl-ether of pullulan having a degree of substitution of 0.01-0.5, and opt. a plasticiser. The melt or solution is cast, pressed, extruded, spun or otherwise formed; the article is then dried, to cool it and/or remove the solvent.

Method is used for producing e.g. films, coatings etc. for protecting food, pharmaceuticals and metals from oxidation. The formation of adhesive layers on wood, paper, textiles, fibres etc. is specifically excluded. 1.3.74 as 002806 (4pp913)

HAGG D13 35820R/20 = NL-162-424
 Self-oxidation prevention of oil etc using green coffee - extraction
 HAG AG (HAG-) 17.11.69-BE-741806 (13.11.69-NL-017080)
 (17.12.79) *BE-741-806 + A23f-01/04 A231-03 C09k-15/34
 Antioxidant is produced by (a) extracting opt. comminuted green coffee beans with a coffee-solvent, separating the

residue and removing the solvent from the extract and dissolving the residue formed in water of $\geq 50^\circ\text{C}$, (b) cooling the hot aqueous phase and separating the crystallised coffee, (c) adjusting the aqueous phase to pH ≥ 12 , (d) removing the undissolved coffee wax after stage (a), (b) or (c), (e) extracting the aqueous alkali phase with a hydrogenated aliphatic hydrocarbon and separating the aqueous phase from the organic phase, (f) acidifying the aqueous phase with a mineral acid to pH ≥ 3 , and (g) extracting the aqueous acid phase in a water-immiscible solvent drying the extract and removing the solvent.

The antioxidant is used to prevent auto-oxidation of light or air-sensitive foodstuffs (esp. fats, aromatisers, dried milk), or of synthetic packaging material. Amounts used are 0.01-5 (0.1-2) wt. %. 13.11.69 as 017080 (4pp913)

RAIS D13 29049Y/16 = NL-162-436
 Modified protein filaments produced for aqueous slurry - by heat coagulation then modifying acidity at moment of discharge
 RALSTON PURINA CO 11.12.75-US-639721
 (17.12.79) *US4017-646 A23j-03 D01f-04

Protein fibres are continuously produced from an aqueous dispersion of proteinaceous material with a solids content of 0.5-35 wt. % and pH < 6.0 . The dispersion is passed under pressure of ≥ 3.5 atmos. and at $115-158^\circ\text{C}$ through a tubular heat exchanger for a sufficient time to form the fibres. The mass is then passed through a back-pressure creating orifice with one or more openings and the fibres separated.

The direction of exit of the fibre-containing dispersion from the orifice is confined to a conical zone of apex angle $4-90^\circ$, whose axis is perpendicular to the orifice. As the fibre-containing dispersion enters the conical zone, it is mixed with a basic aqueous solution so that the pH is adjusted to 6.0-7.0.

Process is used for producing meat-like products from vegetable proteins e.g. soya, suitable for extending meat. Max. fibre yield is achieved by controlling the pH. 10.12.76 as 013739 (5pp913)

NEST D13 21420V/12 = SU-656-456
 Continuous milk curd production
 SOC PROD NESTLE SA (CLAU-) 04.09.72-FR-031234
 + P13 (08.04.79) *DT2344-383 A01j-25

Continuous production of sour milk in a cheese factory by bringing the milk, already provided with rennet and/or acid medium into a pulsation zone of an apparatus, the walls of which deform as a result of the pulsations, and in which the sour milk is formed and is collected at the outlet thereof. Additional deformation of the walls of the apparatus is preferably brought about by externally applied mechanical forces.

Stenn, P. Bul.13/5.4.79. 6.2.74 as 954051 (2pp)

YALO= ★ D13 01292C/01 ★ SU-657-035
 Stabiliser for treating drinks prepared - by heating aqueous alkali solution of polyvinyl pyrrolidone using ammonium persulphate or hydrogen peroxide

YALOVENY AGR IND AS 12.03.76-SU-331696
 A97 (D16) (18.04.79) A231-03/34 C08f-126/10

Stabiliser for alcoholic and non-alcoholic drinks, preservatives etc. is made by simultaneously adding an alkali and either ammonium persulphate or H_2O_2 to an aqueous solution of a high molecular weight linear polyvinylpyrrolidone and polymerising.

The amount of alkali and persulphate or H_2O_2 used is respectively 1.0-4.0 to 14-16 wt. % and 0.1-0.5 to 3.0-5.0 wt. %. The method provides a high quality stabiliser in an intensified process and reduces losses of treated drinks. stirred at $60-65^\circ\text{C}$. and the alkali and persulphate or H_2O_2 are added over 30-35 mins. The temperature is then increased to $85-90^\circ\text{C}$ to initiate the reaction. The product is recovered by filtering and washing.

Shpritsman, E.M., Roitburd, G.V., Ermolaev, A.V. et al. Bul. 14/15.4.79. 12.3.76 as 331696 (2pp314)

WEAR- D13 60190B/33 = US 4178-843
 Portable popcorn appliance - with hot air blower and working chamber for maintaining fluidised bed of corn (NL 8.8.79)
 WEAR-EVER ALUMINUM 06.02.78-US-875339
 + P28 (18.12.79) *DT2904-587 A231-01/18

A popcorn manufacturing apparatus has a cylindrical popping chamber

the chamber being open-topped, vertical axied, and wider at the top than the bottom; a heater; a device to flow air around the outside of the chamber to heat the air which is introduced into the chamber to form a fluidised bed of corn moving in circular path. The popped corn is formed by controlled air-flow into a rising column which is discharged from the top of the chamber.

Pref. corn is metered into the chamber to produce a continuous flow of popped corn. 6.2.78 as 875339 (12pp)

UNIV ★ D13 01648C/01 ★US 4179-445
Prepn. of 5,6-isopropylidene-l-ascorbic acid 2 phosphate ester(s) - from the acid, pyridine, potassium hydroxide and phosphorus oxychloride

KANSAS STATE UNIV 01.06.78-US-911669 (06.05.76-US-683888)
B03 E13 (18.12.79) C07f-09/09

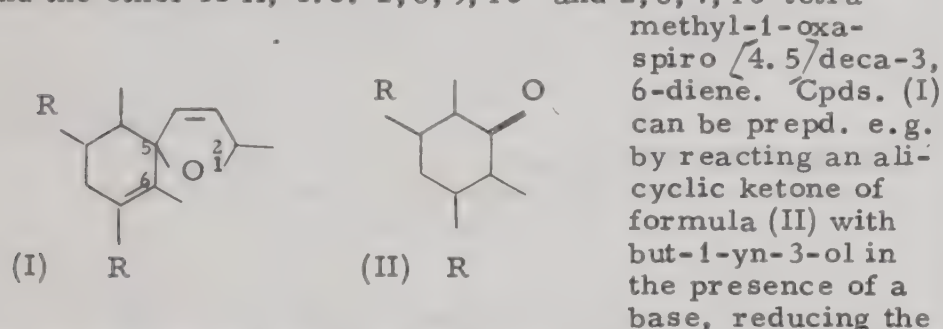
Prepn. of 5,6-isopropylidene-L-ascorbic acid 2-phosphate esters (I) involves mixing the free acid with pyridine and alkali metal hydroxide to pH 12-13 in aq. soln. The acid is at 0.3-0.6 M and pyridine at 1.5-3 M. Then POCl₃ is added at -10 to 10°C, and additional amts. of POCl₃ and hydroxide are added to maintain pH 12-13 throughout the reaction so that (I) is obtd.

(I) are obtd. in high yields and of analytical purity for use as vitamin C additives in food systems or vitamin pre-mixes without deactivation because of decompsn. in presence of oxygen or under high temp. conditions. 1.6.78 as 911669 (+21.7.77-US-817555) (9pp1248)

FIRM D13 34615B/18 #US 4179-448
Tetra:methyl-oxa-spiro-deca:diene cpds. - useful as perfumes and flavours

FIRMENICH SA 11.10.77-NL-011135 (11.10.77-US-841124)
B07 E13 + P15 (B03) (18.12.79) *NL7711-135 C07d-307/94

New spiran cpds. are of formula (I) where one R is methyl and the other is H, i.e. 2,6,9,10- and 2,6,7,10-tetra-



methyl-1-oxa-spiro[4.5]deca-3,6-diene. Cpds. (I) can be prepd. e.g. by reacting an alicyclic ketone of formula (II) with but-1-yn-3-ol in the presence of a base, reducing the

triple bond of the obtd. intermediate by hydrogenation in the presence of a partially deactivated catalyst and finally treating the resulting cpd. with an acidic reagent. Cpds. (I) are useful as odour- and flavour-modifiers for preparing perfumes, perfumed prods. or artificial flavours, and for flavouring foodstuffs, animal feeds, beverages, pharmaceutical preps. and tobacco prods. The cpds. have a fruity and fresh, green, flowery note. 11.10.77 as 841124 (5pp927)

CADB D13 60958B/33 #US 4179-455
Cocoa butter substitute - made by partial hydrogenation of a vegetable fat followed by pressing to remove liq. oil(s)

CADBURY INDIA LTD 01.02.78-NL-001144 (25.01.78-US-872145)
(18.12.79) *NL7801-144 A23g-01 C11c-03/12 + A23d-05

Modified vegetable fats are produced by partially hydrogenating a refined, bleached and deodorised vegetable fat in the presence of a conventional metal catalyst to obtain a hardened fat; allowing the hardened fat formed to remain for 3-4 days at 20-35°C; and then subjecting to a hydraulic pressure of 200-700 psi at 20-35°C to remove liq. oil.

The vegetable fat used is seed fat, Mowrah fat, phulwara fat or their mixts. the hardened fat formed in the first step has an iodine value of 35-38 and contains < 2% of trisaturated glycerides.

The fat prepd. has a high melting stearine fraction, and is capable of replacing > part of the cocoa butter present in chocolate and other confectionery prods. and of raising the m. pt. of such prods. 25.1.78 as 872145 (3pp931)

CADB D13 60958B/33 #US 4179-455
Cocoa butter substitute - made by partial hydrogenation of vegetable fat followed by thermal crystallisation to remove high melting glyceride(s)

CADBURY INDIA LTD 01.02.78-NL-001145 (25.01.78-US-872150)
(18.12.79) *NL7801-145 A23d-05 A23g-01 C11c-03/12

Modified vegetable fat is produced by partially hydrogenating a refined, bleached and deodorised vegetable fat at 100-180°C, in the presence of a conventional metal catalyst, to obtain a hardened fat; removing high melting glycerides from the hardened fat by thermal crystallisation at 30-40°C and recovering a low melting fat of iodine value 37-40.

The initial vegetable fat is sal seed fat, mowrah fat, phulwara fat or their mixts., contg. glycerides of 16C, 18C and 18C acids, the hardened fat obtd. having an iodine value of 33-36 contg. < 2% trisaturated glycerides.

The fats produced are capable of replacing > part of the cocoa butter present in chocolate and other confectionery prods. 25.1.78 as 872150 (3pp931)

BRPE D13 38085Y/22 =US 4179-52
Antimicrobial, antifungal aliphatic carboxylic acid compsns. or partially neutralised to form complexes with ammonium and/or metal ions and avoid odour and corrosion problems

BP CHEMICALS LTD 27.11.75-GB-048779

C03 E17 F09 + P34 (18.12.79) *BE-848-712 A01n-09

Preservation of substrates against degradation by micro-organisms comprises applying to the substrate a liq. compsn. consisting of in aq. soln. a complex salt of a cation of NH₄, Na, K, Ca or Mg and > 1 monocarboxylic acid. selected from propionic, isobutyric or butyric acid. The ratio of acid to cation in the salt is 2:1-4:1 on a chemical equivalent basis and the concn. of water in the aq. soln. is 15-75 wt.% of the total compsn.

The odour and corrosivity of the acids in the compsn. are minimised without significant loss of activity of the free acid. The complex exhibits negligible vapour loss relative to the free acid and hence retains the preservative activity on the substrate for a longer time. 26.10.76 as 735160 (4pp393)

SHOR- ★ D13 01684C/01 ★US 4179-52
Stable aq. dispersions of wheat gluten - prepd. by using protein-rich edible agglomeration inhibitors

SHORT J R MILLING C 15.06.78-US-915583 (16.07.76-US-705838)
(18.12.79) A21d-02/36 A23j-03

Stable aq. dispersions of particulate wheat gluten (I) are prepd. as follows: (a) finely divided (I) of average particle size > 350 μ is dispersed in the aq. medium; (b) a finely divided particulate agglomeration inhibiting additive (II) is also dispersed in the medium.

(II) is rich in protein, contains a substantial proportion of native globular protein in undenatured form, has average max. particle size > 350 μ, and amt. used is < 3% by wt. (of (I) and (II)) but is much less than the amt. of (I). Particles of (II) interpose between (I) particles, and the globular protein in (II) inhibits the H-bonding between (I) particles which is known to cause agglomeration.

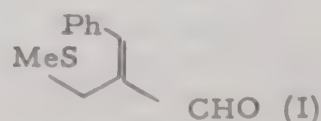
Simple, economical method effectively presents the agglomeration of (I) particles without the use of coating agent and is e.g. suitable for the prodn. of yeast-leavened baked goods contg. (I). 15.6.78 as 915583 (6pp478)

INFL ★ D13 01685C/01 ★US 4179-52
2-((Methylthio(methyl)-3-phenyl-2-propenal - for augmenting and enhancing foodstuff flavours

INT FLAVORS & FRAGR INC 24.08.77-US-827265 (22.12.76-US-753462)

E14 (18.12.79) A23l-01/22

The aroma or taste of foodstuffs is enhanced or augmented by addn. of 0.02-50 ppm of 2-[(methylthio)methyl]-3-phenyl-2-propenal (I)



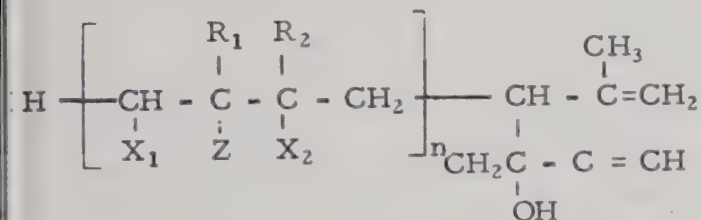
(I) is useful in augmenting or enhancing the flavour and aroma nuances of vegetable (including potato and cabbage) and chicken flavours. Thus

(I) has a green weedy, broccoli-like green bean-like aroma with a green weedy, broccoli-like and green bean-like

flavour at 20 ppm. 24.8.77 as 827265 Div. ex. 4064279 (15pp478)

URS D13 42033Y/24 = US 4179-579
terpenoid intermediate unsaturated alcohol and ketone derivs. -
repre. by ethynylating ketones, partially reducing and thermally
rearranging

KURARAY KK 16.02.76-JA-016611 (02.12.75-JA-144267)
B05 C03 E17 (18.12.79) *DT2653-646 C07c-33/02
intermediate (I) for the prodn. of an unsatd. ketone via
oxy-Cope rearrangement reaction by heating the corresp.
allylic alcohol obtd. by the hydrogenation of (I) at 100-400°
C, is of formula (I).



(I)

where X₁ and X₂ are each H or when one is H the other with Z represents a bond; Z with X₁ or X₂ represents a bond or separately is H; R₁ and R₂ are each H or lower alkyl; n = 1 or 2, and when n = 2, X₁, X₂, Z, R₁ and R₂ may be the same or different.

In the formula X₁ and X₂ are each H or when one is H the other with Z represents a bond; Z with X₁ or X₂ represents

a bond or separately is H; R₁ and R₂ are each H or lower alkyl; n = 1 or 2, and when n = 2, X₁, X₂, Z, R₁ and R₂ may be the same or different.

Specific (I) is 4-isopropenyl-3,7-dimethyl-1-octen-3-ol (I) and the unsatd. terpenoid ketones obtd. by their rearrangement are perfumes and intermediates for cosmetic bases, pharmaceuticals and agrochemicals. 25.7.77 as 818875 (+2.12.75; 30.12.75-JA-144268, 159584)(+2.12.76-US-746738)(21pp924)

USDC D13 82486B/45 = WP 7901-128
Stable coloured food and beverage compsn. - contg. anthocyanin derived from morning glory

US SEC OF COMMERCE (USDA) 26.05.78-US-910152
E23 (27.12.79) *US4172-902 A231-01/27 + C09b-61
D/S: N(JA) + E(CH, DT, FR, GB).

A food colorant, producing stable colours ranging from purplish-red to blue in food and beverage products at pH values ranging from 2.0 to 8.0, comprises the anthocyanin peonidin 3-(dicaffeoylsophoroside)-5-glucoside (I).

The colorant can be used as a substitute for artificial red dyes in beverages, gelatin desserts, toppings, icings and dairy products.

22.5.79 as US0348 (12pp367).

(E)ISR: US4118516; US4115595; 7 Journal References.

See Also

D16 DS 2633451	D16 DS 2740785	D16 DT 2923802
D16 SU 656527	D16 SU 657060	D16 US 4179335
D23 J7 9040083	D23 J7 9040084	

D14: FOODSTUFF MACHINERY

JATS/★ D14 C/01 ★CS 7603-780
Cheese and smoked products packing
JATS O 09.06.76-CS-003780
(31.07.79) A22c-13

BAYE-★ D14 00031C/01 ★DS 2918-519
Fodder mixing car - with regularly spaced cut-outs on periphery of
mixing screw ribs
BAYERISCHE PFLUGFAB 08.05.79-DT-918519
P14 (20.12.79) A01k-05 A23n-17

An animal fodder mixing car consists of a V-shaped storage tank with three horizontal mixing screws close to the walls of the tank. Each screw has on the periphery of its helical turns an L-shaped cut-out at a spacing of half a pitch.

This reduces the power required for mixing by 25% at the same speed. Clogging esp. by grass silage, is eliminated and the mixing time shortened. 8.5.79 as 918519 (5pp39)

FELD-★ D14 00143C/01 ★DT 2826-385
Potatoes sorting conveyor - with flights and inclination to roll potatoes down and move severed buds up
FELDMEIER & WIEWELH 16.06.78-DT-826385
P43 Q35 (20.12.79) A23n-15/02 B07b-13/10 B65g-47/12

The potatoes are charged halfway up an inclined conveyor belt which carries cross bars, coated with rubber or plastic. As the potatoes roll downward, they lose the buds which are light enough to be carried to the top pulley for discharge in a bunker.

The spacing of the cross bars is smaller than the average size of a potato. A blade mounted above the top discharge end prevents any accidental carry-over of potatoes.

This saves the manual labour for presorting the potatoes, removing the clusters and the buds. Clogging of screens is eliminated and the potatoes can be packaged automatically. 16.6.78 as 826385(9pp280)

TECN-★ D14 00258C/01 ★DT 2924-216
Feed regulator for liq. or pasty food or pharmaceutical prods. - has flexible diaphragm as propelling surface actuated by pressurised fluid

TECNAL SA 16.06.78-FR-018092
B07 J04 (20.12.79) B01j-04/02
A feed controller, esp. for machines used in processing liquid, viscous or pasty products in the foodstuffs, pharmaceutical and cosmetic industries, consists of a cylinder in which the volume of the chamber is varied by the move-

ment of a flexible diaphragm which divides the chamber containing the product to be processed from the space containing the control fluid. The diaphragm can move between two extreme positions, against opposite walls of the cylinder, more specifically in the manner of a fully reversible bag, the rim or mouth of which is clamped approximately halfway along the cylinder chamber.

For processing products in the foodstuffs, pharmaceutical, cosmetic and similar industries. 15.6.79 as 924216 (20pp236)

HOOP- D14 08747Y/05 = GB 1558-407
Rotating drum mixer and spreader for e.g. animal feed - for accurately dispensing mixtures which tend to bridge
HOOPMAN ONDERZOEK 21.10.75-DT-546975 (09.07.75-DT-530553)

J02 P14 + P12 (03.01.80) *NL7607-053 B01f-09/06
Mixing appts. comprises a rotating drum or cylinder having helical conveyor flights on its inner periphery and a discharge opening at >1 end having a cover which is opt. mounted for rotation with the drum. The spacing of at least the lower margin of the cover with the edge can be adjusted to control discharge of prpd. from the rotating drum. The contents are received by a conveyor or distributor.

The appts. may be used in (non-)stationary applications to mix feed constituents, but can also be used in the chemical industry, foodstuff industry and for brickwork. Regardless of the formation of bridges, rotation of the drum automatically results in a sufficient amt. being discharged. 2.7.76 as 027688 (14pp976)

ATLA D14 40372R/23 = NL-162-299
Fruits peeler

ATLAS PACIFIC ENGG CO (ATL-) 10.04.67-US-629600
(17.12.79) *FR1585-006 A23n-04/14 A23n-07/02

Fruit is peeled in a machine which grips the fruit along its stem-blossom axis and rotates it whilst a cutting element mounted on a swinging arm moves across the surface of the fruit removing the peel. The position of the cutting organ is continuously modified to suit irregularities in the contour of the fruit surface.

This traditional installation is modified by incorporating two cutters mounted on arms fixed in relation to each other at an angle of 90°. One cutter starts at the middle of the fruit moving through an arc of 90° to one end whilst the other cutter starts at the opposite end and moves towards the middle. The fruit is peeled in half the time taken by the traditional machine. 24.10.75 as 012480 Div.ex.

9.4.68-004999 (12pp1370)

AGRI= ★ D14 01387C/01 ★SU-657-800
Sorting agricultural products - using rapid temp. changes and radiation heat sensor to detect damaged prods.

AGRIC ELECTRIF (VEND) 19.09.77-SU-534272

P43 (25.04.79) A23n-15 B07c-05/34

The sorting biological objects, pref. agricultural prods. includes feeding them piecemeal through a device which measures their radiation heat compares the resulting signal with a given signal, and feeding the resulting signal into an executive mechanism.

The sorting effectiveness is increased, by carrying out

instantaneous cooling of the objects after the heat-treatment until a difference is achieved between the sound and defective objects of 4-10°C. The heat-treatment is carried out over a period of 1-10 mins.

The method is based on living cell adoptability to rapid temp. changes, with dead cells (i.e. damaged prod.) detected by rapid heat loss.

Kitlaev, B.N., Preobrazhenskaya, A.S., Prishchel, L.G. et al. Bul. 15/25.4.79. 19.9.77 as 534272 (2pp29)

See Also

D17 US 4179265

D15: WATER TREATMENT

FRAN/ ★ D15 C/01 ★BR 7803-152
Fountain with ozonised water

FRANCHINI J C 17.05.78-BR-003152

Q42 (11.12.79) C02b-01/38 E03b-09/20

TILL/ ★ D15 C/01 ★BR 7903-365
Treatment of surface layers of pollutants, esp. hydrocarbons - on sea, beaches, residual mud or effluent water

TILLIE E 18.05.79-FR-012702 (30.05.78-FR-016009)

H03 (11.12.79) C02b-09 C02c-01 29.5.79 as 003365

HART/ ★ D15 C/01 ★CS 7602-594
Aq. effluent biological purification appts.

HARTMAN P 21.04.76-CS-002594

(31.07.79) C02c-05/10

KOSA/ ★ D15 C/01 ★CS 7603-812
Poultry droppings processing appts.

KOSAR K 09.06.76-CS-003812

(31.07.79) C02c-03

SKLE/ ★ D15 C/01 ★CS 7706-076
Solid chemical metering in pool water treatment

SKLENAR J 20.09.77-CS-006076

(31.07.79) C02b-01

SIND/ ★ D15 C/01 ★CS 7706-866
Preliminary cleaning of aq. effluent in textile industry - to eliminate hexa valent chromium cpds.

SINDELAROVA E 24.10.77-CS-006866

E31 F06 (31.07.79) C02c-05/02

POLA/ ★ D15 C/01 ★CS 7800-192
Aq. effluent purification and even flow-off

POLASEK S 10.01.78-CS-000192

(31.07.79) C02c-01/06

FUCH/ ★ D15 C/01 ★CS 7800-928
Catalytic oxidn. of aq. effluents - to eliminate ammonia, hydrogen sulphide and organic cpds.

FUCHS P 14.02.78-CS-000928

(31.07.79) C02c-05/04

HERE/ ★ D15 C/01 ★CS 7803-274
Longitudinal settling vessel - with horizontal overflow

HEREIT F 19.05.78-CS-003274

(31.07.79) C02c-01/26

HERE/ ★ D15 C/01 ★CS 7803-275
Dispersion control

HEREIT F 19.05.78-CS-003275

(31.07.79) C02b-01/24

HERE/ ★ D15 C/01 ★CS 7803-276
Dispersion control

HEREIT F 19.05.78-CS-003276

(31.07.79) C02b-01 C02c-01/08

WALL/ ★ D15 00024C/01 ★DS 2847-229
Container for sewage treatment filter bed - has wall of prefabricated sandwich panels slotted between steel columns

WALLOSCHKE E 30.10.78-DT-847229

(20.12.79) C02c-01/04

Filter bed housing for a biological sewage treatment plant comprises a foundation slab with ventilation around its per-

iphery and a circumferential wall of lightweight construction. The wall is composed of vertical I-section columns with panels slotted between them, composed of a central thermally insulating layer and outer watertight layers.

The vertical columns are pref. contained by hoop beam and are mounted in pocket foundations. An inner cladding of plastics sheets may be mounted inside the sandwich wall construction, upper sheets being hooked onto the tops of those below.

Prefabrication of the components off-site permits simple site construction. Thermal insulation protects against all weathers. The container is esp. suited for a filter bed composed of plastics granulate, with its low density. 30.10.78 as 847229 (5pp236)

PASE ★ D15 00034C/01 ★DT 2820-692
Sewage aeration system - with cylindrical element revolving on vertical shaft above bubble releasing ring

PASSAVANTW MICHELbacher 11.05.78-DT-820692

(20.12.79) B01f-03/04 C02c-01/12

System is based on conducting ascending bubbles along a revolving vertical element which produces a thin laminar flow with a high radial velocity gradient. The laminar flow continues over the full height of the element.

A revolving cylinder on a vertical shaft has a cone at the bottom which guides the air bubbles along its surface. Its top can be closed or open. The bubbles are produced in perforations of a ring to which compressed air is supplied through a pipe.

The velocity gradient produces an inverse pressure gradient so that the bubbles adhere to the element as they rise to the surface. Their path is thereby lengthened and they are broken up into finer bubbles. 11.5.78 as 820692 (19pp39)

PASE ★ D15 00132C/01 ★DT 2826-281
Light liquid containing effluent purification - with changeover valve from gravity trap to emulsion separator

PASSAVANTW MICHELbacher 15.06.78-DT-826281

J01 Q42 (20.12.79) B01d-17/02 E03f-05/16

A system for the purification of waste water containing oil or petrol from garages or car repair shops includes a changeover valve which is operated jointly with a hot water or steam valve. The normal gravity settling trap is thereby replaced by an emulsion separation plant.

When hot water or steam has turned the effluent into an emulsion, the normal traps are unable to purify the effluent. The new system remedies this. 15.6.78 as 826281 (15pp)

MERE ★ D15 00150C/01 ★DT 2826-664
Poly:cyclic aromatic hydrocarbon(s), e.g. 3,4 benzpyrene, determ. - by thin layer chromatography on silicon dioxide hydrophobised silica gel plates

MERCK PATENT GMBH 19.06.78-DT-826664

E14 J04 R16 (20.12.79) G01n-31/08

In the semiquantitative determination of polycyclic aromatic hydrocarbons by thin-layer chromatographic (TLC) sep. of a soln. of the hydrocarbons on a coated carrier, (A) the specimen to be examined is applied to a carrier containing (1) a concn. zone consisting of a synthetically produced porous SiO₂ of medium pore vol. with a pore width of 2-15 μm and (2) a sepn. zone consisting of a silica gel layer

15: WATER TREATMENT	-p. 11	Week C01	D15
with a surface modified by reaction of the coated carrier with a methyl-alkyl-dichlorosilane (the alkyl group being -20°C), and (b) subsequently eluting with an organic solvent or solvent mixt. Used for detection/determination of polycyclic hydrocarbons such as the carcinogen 3,4-benzpyrene in e.g. waters such as waste waters, surface waters, ground water or drinking water. The hydrophobic nature of the epg. zone prevents absorption of water from the air and premature activation of the adsorbent. This improves the reproducibility of results. Flow-rate through the carrier is high, since the soln. experiences no resistance at the interface between the concn. and sepn. zones. 19.6.78 as 26664(18pp280)			organisms and chemicals and have high water permeability, e.g. $1-10^5$ l/hr. atmos m^2. 22.5.79 as 920762(30pp200)
JUDO- ★ D15 00151C/01 ★DT 2826-702 water softener with two ion exchange columns - one column becoming exhausted at full flow while other is regenerated JUDO WASSERAUFBER 19.06.78-DT-826702 (20.12.79) C02b-01/64 drinking water softener comprises two columns containing ion exchange resin, operated alternately, the column not in operation being flushed through and regenerated with salt solution. The valves for switching over from one column to the other are operated as a function of the measured water throughput or hardness level. The softened water is supplied to a blender, where it is mixed with untreated drinking water. The softener columns are so designed that, when the maximum flow rate passes through one column, its ion exchange resin becomes exhausted after approximately the same time required for the resin in the other column to be regenerated and sterilised. Typically, at this maximum flow rate, the distance traversed by the water through resin is insufficient for complete softening and the blending ratio at the blender may then be adjusted accordingly. A common multiple valve may be used for switching over between both columns. Quantity of resin required can be reduced by a factor of 10. 19.6.78 as 826702(24pp236)			CHEM- ★ D15 00221C/01 ★DT 2923-718 Organo-phosphonic acid scale inhibitors - contg. copolymer of styrene sulphonic acid and maleic acid or anhydride CHEMED CORP 15.06.78-US-915713 A97 E11 (20.12.79) C02b-05/06 Scale inhibitor additives for use in aq. media contain (a) a water-soluble organophosphonic acid or its water-soluble salt and (b) a copolymer of styrenesulphonic acid (SSA) and maleic acid or anhydride, or a water-soluble salt of this copolymer. The additives are esp. useful for inhibiting scale formation in steam boilers, esp. when the feed water contains scale-forming Fe salts. The effect of components (a) and (b) is synergistic. Component (a) is pref. of formula $\text{H}_2\text{O}_3\text{P}-(\text{CR}_1\text{R}_2)_m-\text{PO}_3\text{H}_2$, $\text{H}_2\text{O}_3\text{P}-\text{CR}_3(\text{NH}_2)-\text{PO}_3\text{H}_2$ or $(\text{H}_2\text{O}_3\text{PCH}_2)_2\text{N}-\text{R}'-\text{N}(\text{CH}_2\text{PO}_3\text{H}_2)_2$ (where $m=1-10$; each R_1 is independently H or 1-4C alkyl; each R_2 is independently H, OH or 1-4C alkyl; R_3 is 1-10C alkyl, PhCH_2 or Ph; R' is 1-10C alkylene), esp. 1-hydroxyethylidene-1,1-diphosphonic acid (HEDP). 12.6.79 as 923718(17pp367)
			CIBA ★ D15 00224C/01 ★DT 2923-794 Cyanuric acid removal from waste waters - by microbiological degradation with Sporothrix fungus CIBA GEIGY AG 15.06.78-CH-006532 C02 E13 (20.12.79) C02c-05/10 Microbiological degradation of cyanuric acid (I) in waste waters is effected by contacting under aerobic conditions with a fungus of the genus Sporothrix. The process is esp. useful for treating waste waters from the mfr. of triazine herbicides. The Sporothrix fungi are capable of degrading (I) at a rate of 20-30 mg/g.hr., which is much higher than the rates achievable with prior art microorganisms (≤ 2.5 mg/g.hr.). 12.6.79 as 923794(16pp367)
SOLS ★ D15 00161C/01 ★DT 2826-798 solar panel contg. desalination plant - has fan blowing steam from zigzag water collector chambers through condenser VOLKSWAGENWERK AG 19.06.78-DT-826798 J01 Q74 (20.12.79) F24j-03/02 The solar heating system which can be adopted to obtain drinking water from salt water, uses a pipe forming a coil through which the water travels along a zig-zag path. Alternatively the coil can be formed from two sheets joined together and shaped to give the zigzag path. The coil can be shaped for mounting on a sloping roof. Each leg of the coil can have a raised partition at the end region forming a weir behind which the water can collect or overflow into the next leg. Steam which forms above the water is blown through the coil by a fan to pass into a condenser coil, and circulate around a closer circuit. 19.6.78 as 826798(11pp349)			AGRO- ★ D15 00256C/01 ★DT 2924-169 Biological sewage treatment with sludge sepn. by fluid filtration - and bubbles collected from sepn. chamber to prevent flotation effect (NL 18.12.79) AGROTECHNIKA NP 15.06.78-CS-003924 (20.12.79) C02c-01/06 A biological sewage treatment plant operates by sepg. the activated sludge by fluid filtration, the sludge being automatically recycled into the activation chamber; the sepn. chamber is mounted above the activation chamber. Above the communicating opening through which the effluent from the activation chamber ascends into the separation chamber, there is a bubble collector in the form of a hollow chamber with an open bottom and a gas escape pipe leading upwards away from its closed top and outside the separation chamber. The projected area of the open bottom of the bubble collector is greater than that of the communicating opening. Pref. the bubble collector diverges downwards. The flotation effect, by which sludge tends to accumulate and float on the surface of the separation chamber, is prevented. Thus the efficiency of the plant is improved. 15.6.79 as 924169(12pp236)
KURS ★ D15 00179C/01 ★DT 2920-762 Microporous PVA (ultra) filtration membrane - opt. contg. support layer, is prepd. by extracting fine silicon dioxide particles during and/or after coagulation KURARAY KK 25.05.78-JA-063156 A88 J01 (A14) (20.12.79) B01d-13/04 B01d-39/14 Microporous PVA membrane contg. uniform micropores having average dia. $0.01-50 \mu$, is produced by preparing a PVA membrane contg. fine SiO_2 particles and extracting the SiO_2 particles from the membrane to form (a) a uniform microporous layer contg. micropores having average dia., (r), $0.01-50 \mu$, making up 100-20 (80-20)% of total membrane thickness, and (b) a support layer contg. vacuoles having average longitudinal length, (l), $> 10 \mu$, making up 10-80 (20-80)% of total membrane thickness. Ratio l/r is > 5 and membrane has porosity $> 60\%$. Membranes can be used as ultrafiltration or filtration membranes. Membrane structures consisting only of (a) can be worked to flat, tubular and hollow fibre membranes, whereas structures contg. (a) and (b) can be used only for hollow fibre membrane prodn. SiO_2 use improve uniformity of microporous structure. The membranes resist micro-			ESSW- ★ D15 00299C/01 ★FR 2419-909 Indicator warning that water softener needs more regeneration salt - uses float cup which rises when not weighted down with salt ESSWEIN SA 17.03.78-FR-007803 P28 (16.11.79) A47I-15/44 C02b-01/22 A device for indicating the presence or absence of an undissolved soluble prod. in a liq. inside a tank in claim- ed. An opening is provided in the top of the tank through which the prod. in the tank can be replenished. An open- topped, vertical container pref. cylindrical, is fixed to the base inside the tank. The sidewall of the container is perforated overall, pref. with narrow, vertical slots. A open-topped float cup is fitted to slide freely up and down inside the containers the sidewall of the cup is perforated, pref. in a similar fashion to the container. The cup is linked to an indicator which reveals the height to which the cup rises above the base of the container, if

at all. The cup is designed to float in the liq. so that it is held down only when weighted by a quantity of undissolved prod. Both tank and cup are initially top-loaded with prod. which dissolves equally in both so that usage in the cup represents usage of soluble prod. in the tank.

Used to warn that an undissolves, in liq. inside a tank is nearing exhaustion. This applies partic. to a sol. regeneration salt for ion exchange resins in a water softening plant. A simple, inexpensive device to provide positive, reliable warning. 17.3.78 as 007803 (8pp448)

STRU- ★ D15 00346C/01 ★GB 2023-116
Appts. for magnetic treatment of liquids - with liq. diverted through gap between magnetic poles

STRUTT AGENCIES LTD 21.03.79-GB-009965 (30.05.78-GB-023912)

(28.12.79) C02b-09

Appts. for subjecting a liq. to a magnetic flux includes a flow path for the liq. from an inlet to an outlet. Two magnetic poles are disposed so that lines of magnetic flux passing between them traverse the flow path. The first magnetic pole is sensitive to contact with the liq. and a protective sheet is used to cover this pole. The two magnetic poles may be sized and contoured to focus the magnetic flux.

Appts. is used to magnetically treat a liq. e.g. water in a circulation system. 21.3.79 as 009965 (7pp295)

GOOD/ ★ D15 00350C/01 ★GB 2023-122
Biological treatment of waste water - by fluidising upward flow through particulate bed with partial recycling of flow

GOODSON M G 15.06.79-GB-020944 (19.06.78-GB-027274)

(28.12.79) C02c-01/04

In a biological treatment of waste water, the water is passed upwardly through a bed of particulate matter which it fluidises. The water is withdrawn at a constant rate from a first region near the upper surface of the fluidised bed and is returned to a second region of the fluidised bed situated at a lower level than the first region.

Pref. the waste water is introduced into the fluidised bed at a level intermediate the first and second regions. Pref. air or oxygen is added to the water withdrawn from the first region prior to introduction to the second region.

The method can be used for the simultaneous nitrification and denitrification of waste water as well as removal of carbonaceous matter. 15.6.79 as 020944 (10pp295)

APVC ★ D15 00361C/01 ★GB 2023-180
Plate heat exchanger with plates as anode for chlorine generation - from saline heat exchange media to prevent marine fouling of the plates

APV CO LTD 13.06.79-GB-020551 (13.06.78-GB-026770)

C03 E36 J08 Q78 (J03) (28.12.79) C23f-14 F28f-19

Plate heat exchanger comprises a separable pack of gasketed plates of corrosion resistant metal and electrodes for electrolytically generating chlorine from sea-water or brackish water used as the heat exchange media. The chlorine generated inhibits the growth of marine organisms in the system. The plates themselves can be the anodes so that the chlorine is generated on the heat exchange surfaces themselves and the cathode is a rod electrode at the inlet duct for the heat exchange media.

Fouling of the plates is prevented without resorting to the use of a high copper alloy as the plate material, a metal not well suited to heat exchangers. 13.6.79 as 020551 (4pp916)

SMHL ★ D15 00393C/01 ★GB 2023-442
Sludge settling tank weir or scum board - has elongate plates interconnected with ends in recesses of interposed resilient sealing strips

SIMON HARTLEY LTD 22.06.78-GB-027667

(03.01.80) B01d-21

A weir or scum board comprises a number of elongate plates secured together end-to-end with resilient sealing strip between the ends of plates and having recesses receiving the plate ends.

The strips pref. extend downwardly from the plate tops to above the plate lower edges and may be moulded to extruded. There is pref. a further strip along the plates adjacent their lower edges. The arrangement eliminates

the use of jointing plates bolted to the main plates. 22.6.78 as 027667 (4pp1358)

LENO- ★ D15 00395C/01 ★GB 2023-4
Appts. for removing floating solids from settling tank - with rotating multi-bladed scoops delivering removed solids to central outlet

LENEX INST RES INC 22.06.78-US-917954

F09 (03.01.80) C02c-01/38

An appts. for purifying unclarified water includes a cylindrical tank open at its upper end. The tank has a clarified water output and a central sludge outlet. Rotatable scoops are supported radially of the tank on a support which can move around the upper surface of the liq. in the tank.

The scoop assembly includes several equally spaced scoop blades radially positioned about a centre line and carried by the support which is at an angle sloping from the outer edge of the tank towards the centre. The scoop blades extend further from the centre line towards the edge of the tank to provide horizontal lip edges for engagement of the upper surface of the liq. in the tank.

The appts. is partic. designed for use in clarifying water in the paper and pulp industries. Rapid recovery of the floating impurities is achieved. 19.6.79 as 021281 (7pp295)

DOUW ★ D15 00420C/01 ★GB 2023-56
Recovering ice crystals from aq. slurry - by washing in vertical column with homogenising blades

DOUWE EGBERTS KON 22.06.79-GB-021808 (23.06.78-GB-027792)

(03.01.80) C02b-01/12

Ice crystals are sep'd. from a slurry of an aq. soln. by passing them up a vertical tube as a packed bed. While the bed is advanced it is washed by liq. introduced at the top of the column to form a stable wash front in a horizontal plane which lies within the bed. Aq. soln. is drained from the bed beneath the stagnant wash front.

Tilted vanes are rotated by an axial shaft and advance the crushed ice vertically. Pref. the aq. soln. is removed by a perforated section of the vanes. The vanes also serve to homogenise the porosity of the ice bed throughout its cross-section. A disintegrator is located at the top of the vertical tube to recover the washed ice crystals.

The vanes homogenise the porosity to prevent channel forming in the ice bed. This reduces the loss of wash liq. 22.6.79 as 021808 (10pp295)

HITF ★ D15 00525C/01 ★J5 4146-27
Evaporator for fresh water prodn. from sea water - has a tube-contg. column, a dehumidifier, vapour compressor and load sensor

HITACHI SHIPBLD ENGG KK 09.05.78-JA-055153

(15.11.79) B01d-01/28 B01d-03/42 C02b-01/04

The appts. comprises an evaporation column including a number of vertical heat exchange tubes, a dehumidifier, vapour compressor for compressing the vapour generated from the bottom of the column and before the dehumidifier vapour enters the hollow space between the tubes, and a load sensor to detect increase in power requirement for the compressor.

When an increase in water output is detected in connection with detected power increase, the temp. of the inlet brine to the evaporator is lowered. When an increase in the compressor ratio is detected, a scale removing agent is added to the brine. 9.5.78 as 055153 (5pp47)

YOTS/ ★ D15 00545C/01 ★J5 4146-29
Prodn. of slaked lime for treating waste water - by calcining limestone to give blocks contg. uncalcined limestone and impurities, forming a powder and slaking with water

YOTSUYA J 09.05.78-JA-054604

(15.11.79) C01f-11/02 C02b-01/30 C02c-05/02

The method comprises calcining limestone to give calcined lime blocks contg. impurities and uncalcined limestone, providing the blocks to obtain a minute powder and slaking the powder.

The presence of uncalcined limestone and silicic acid impurities improves the settling properties of waste water. The slaked lime is used as a neutralising, aggregating or setting agent for treating excrement, drainage water or waste industrial water.

In an example, a limestone material was calcined to obtain calcined lime blocks of 5-30 mm. The blocks were divided to obtain a minute powder of about 40 mesh, which was slaked with water. The slaked lime contained uncalcined lime stone and silicic acid impurities. 9.5.78 as 54604(2pp51)

TAKE ★ D15 00550C/01 ★ J5 4146-455
Removing phosphoric ion from aq. soln. - by acidifying and contacting with hydrated zirconium oxide, which is regenerated with alkali

TAKEDA CHEMICAL IND KK 04.05.78-JA-053408
(15.11.79) B01d-15 C02b-01/14 C02c-05/02

Phosphoric ion is effectively and economically removed by adsorption from aq. soln. contg. it without formation of sludge by previously adjusting its pH to 1.5-5.5 (2-4.7), and subsequently contacting it with zirconium oxide of formula: $ZrO_2 \cdot nH_2O$, where n is 0.5-2.0, e.g. $ZrO_2 \cdot H_2O$ ($ZrO(OH)_2$), $ZrO_2 \cdot 2H_2O$ ($Zr(OH)_4$), $ZrO_2 \cdot nH_2O$ ($n=1.5-2.0$) etc. so as to be adsorbed thereon.

Desorption of phosphoric ion and regeneration of zirconium oxide are simultaneously easily carried-out by contacting it with aq. alkali soln., e.g. contg. NaOH, Na_2CO_3 , H_4OH , KOH or $(NH_4)_2CO_3$ etc. in amt. of 1-30 wt. % at pH, esp. >10 without any dissolution of zirconium oxide.

This process is most preferably carried-out when the concn. of phosphoric ion is 1-10000 ppm., and carried-out excellently even in the presence of other ions, e.g. F^- , SO_4^{2-} , chromate ion, Cl^- , $Cr_2O_7^{2-}$, NO_3^- , ClO_4^- , MnO_4^{2-} , CO_3^{2-} and $R-COO^-$ etc. 4.5.78 as 053408(5pp34)

IDE ★ D15 00551C/01 ★ J5 4146-458
Treating waste water contg. higher valent metals - using absorbency of higher valent metal in cell to control amt. of reductant added, where photomultiplier controls supply pump for reagent

NIPPON ELECTRIC KK 08.05.78-JA-054624
(15.11.79) C02c-05/02

In treatment of waste water contg. higher-valent metal ion, e.g. Cr^{6+} etc. by adjusting its pH value, adding a reducing agent, e.g. iron powder, $FeSO_4$, Na_2SO_3 and NaH CO_3 etc. to convert the higher-valent metal ion into lower-valent metal ion, e.g. Cr^{3+} etc., followed by sepn. by coagulation sedimentation, the improvement comprises detecting absorbency of the higher-valent metal ion, i.e. Cr^{6+} at a wavelength of around 350 nm using a cell having the width of pref. ≥ 5 cm, and controlling the amt. of the reducing agent to be added by controlling a pump for the reducing agent by power of photomultiplier due to the fact that the power of the photomultiplier is in proportion to the amt. of Cr^{6+} existing in the cell, so that it becomes possible to carry out economical treatment of the waste water without using excess amt. of the reducing agent. This process is also applicable for removal of Cd or V etc. from water. 8.5.78 as 054624(3pp34)

ITA ★ D15 00718C/01 ★ J5 4147-577
Magnetic separator - has filter comprising laminate of porous magnetic material and porous non-magnetic material

HITACHI KK 12.05.78-JA-055608
J01 (17.11.79) B01d-35/06

In the sepn. of magnetic granules from aq. solns. e.g. from steel plant, power plant or nuclear power plant (as initial cooling water etc.) by passing it through a tubular vessel a housing magnetic filter, the improvement comprises using a magnetic filter comprising a laminate of porous magnetic material, e.g. net having 100-400 meshes, made of Cr-bearing stainless steel, soft steel, permalloy, iron or Si steel etc., and a porous non-magnetic material, e.g. net-like material of Ni-Cr type stainless steel, Cu, Al, alumina or synthetic polymer.

Even very fine paramagnetic granules can be filtered effectively and washing of the filter is easily effected. 12.5.78 as 055608(3pp34)

AGEN ★ D15 00719C/01 ★ J5 4147-653
Treating waste water from thermal decomposition of solid wastes - using oil matter and sepd. scum as fuel for thermal decomposition
AGENCY OF IND SCI TECH (EBAR) 12.05.78-JA-055519
(19.11.79) C02c-05

In treatment of waste water resulting from thermal deco-

position of municipal solid wastes, improvement comprises (a) sepg. oil component by floatation followed by centrifugal sepn. to separate solids; (b) contacting the waste water thus treated countercurrently with air and steam, followed by sepg. floating scum and uncondensed volatile matter from condensed water; (c) adjusting pH of water to about 10, followed by addn. of polymer coagulant and ferrous salt to separate heavy metals and reducing matters by coagulation, then adjusting pH of the sepd. liquor to 10-12, and adding oxidizing agent to effect initial oxidn. while maintaining the oxidn. potential of ≥ 300 mV, then adjusting its pH to 8-9 and effecting secondary oxidn. while maintaining the oxidn. potential at ≥ 650 mV to decompose cyan by oxidn.; (d) adding polymer coagulant to separate by coagulation heavy metals and reducing matters, followed by neutralisation, sand filtration and activated charcoal treatment; and (e) recycling the oil component and the solids sepd. in step (a), and scum and the volatile component sepd. in step (b), and the sludge obtd. in steps (c) and (e) by concn. and dewatering, as the heating source for the thermal decomposition, so that harmful matters, e.g. oil component, solids, heavy metals and cyan etc. are effectively removed. 12.5.78 as 055519(8pp34)

ISHI ★ D15 00874C/01 ★ J5 4148-178
Recovering energy in waste gas from oxidn. reactions - by mixing with combustion gas to give a high temp. and pressure gas which is used in a gas turbine

ISHIKAWAJIMA-HARIMA HEAV 12.05.78-JA-056360
A41 E14 J08 (E36) (20.11.79) B01j-01

A combustion gas is mixed with an exhaust gas, having high pressure, low temp. and low oxygen content, produced in the oxidn. process, to form a high temp. and pressure gas which is conducted to a gas expander (turbine) to recover its energy. During the mixing, compressed air or oxygen is fed, to a mixer while fuel is being burnt.

The waste gas is obtd. in the prodn. of terephthalic acid and/or nitric acid, or in treating waste. The process recovers the energy of the gas and removes its inflammable components, thus avoiding air pollution. 12.5.78 as 056360(4pp26)

HIEJ ★ D15 00884C/01 ★ J5 4148-190
Activated charcoal regeneration - by heating at low temp. and washing with water

HITACHI PLANT ENG CONST 12.05.78-JA-055665
E36 J01 (20.11.79) B01d-15/06 C01b-31/10

Activated charcoal used for treatment of waste waters is reproduced almost completely in its activity by heating it under low temp. so as to be reproduced, and subsequently washing water continuously or in batch-wise to wash off salt e.g. Na_2SO_4 etc. accumulated on the activated charcoal.

In an example, waste water contg. 100 ppm of 12-16C sulphonate was treated with activated charcoal until equilibrium concn., after which the activated charcoal was regenerated by means of low temp. heating oxidising regenerator, and further washed with ion exchange water at SV of 5/hr., so that the activated charcoal was reproduced in its activity almost completely. 12.5.78 as 055665(2pp24)

NISY D15 79190U/51 = J7 9039-665
Treating pva resin-contg waste water - with enzyme from culture medium

NIPPON SYNTH CHEM IND 11.11.71-JA-090209
A14 (D16) (29.11.79) *J48055-557 + C02c-01/02 C02c-05/10

An enzyme, for decomp. PVA resins, sepd. from a culture obtd. from the cultivation of *Pseudomonas* and *Xanthomonas* bacteria, is added to waste water contg. the PVA resins. The waste water is then treated by the activated sludge process, the filtration process, the catalytic process, the oxidn. pond process, or other aerobic, biological treating processes. The enzyme is e.g. derived from simultaneous cultivation of *Pseudomonas* strains Z-301 and Z-302 and *Xanthomonas* strain Z-401. 11.11.71 as 090209 C02c-5/10, 1/02 (29.11.79) NIPPON SYNTHETIC CHEMICAL IND CO. LTD (4pp) (J48055557)

AGEN **D15** 87381X/47 = J7 9039-666
 Treatment of waste water contg. poly-vinyl alcohol type resins - by aerobic biological processes in stages at specified pH
 AGENCY OF IND SCI TECH 19.11.73-JA-129918
 A35 (A14) (29.11.79) *J50080-660 + C02c-01/02 C02c-05/10
 During treatment of poly(vinyl alcohol) (PVA) resins contg. waste waters by aerobic biological processes such as the activated-sludge oxidn. pond and/or contact oxidn. process the waste waters are treated, 1st at pH 6.0-8.0, and then at pH 8.0-9.0 in 2 sepd. aerobic biological treatment tanks. The organic matter and PVA resins are decomposed readily in successive steps at pH 6-8.0 and 8-9.0, resp. on a large scale. In an example, a white turbid waste water (pH 7.2 suspended solids 13 COD 1000 and BOD 800 ppm) obtd. from PVA sizing was treated successively at various pH. When the waste water was treated 1st at pH 7.0 and then at 8.3, the COD-removal efficiency rate was 83 and 54% resp. and the resulting liq. was transparent pH 8.3, with COD 80 and suspended solids 1-2 ppm. 19.11.73 as 129918, C02c-5/10, 1/02 (29.11.79) AGENCY OF IND SCI TECH. (5pp) (J5 0080660)

SNLE **D15** 01043C/01 ★ J7 9039-668
 Electrolytic appts. for treating effluent - in which metal pieces are accumulated on area of effluent path and one electrode is contacted with the metal

STANLEY ELEC KK (INOZ) 24.05.72-JA-051404
 (29.11.79) C02b-01/82 C02c-05/12

In electrolysing vessel for removal of impurities from industrial water or effluent, provided with a pair of electrolysing electrodes, the improvement comprises accumulating metal pieces, e.g. made of Al, Mg and/or Fe etc. on the entire area of effluent path, contacting one of the electrodes with the accumulated metal pieces, and positioning the other electrode at a region of the effluent path, ranging the outside of the metal pieces, so that change of the electrodes becomes hardly necessitated due to the fact that the metal pieces are dissolved exclusively in the electrolysis. 24.5.72 as 051404, C02b-1/82, C02c-5/12 (29.11.79) STANLEY ELEC.K.; INOUE JAPAX RES. INST (4pp) (J4 9009851)

AGEN **D15** 01054C/01 ★ J7 9039-802
 Bacteria-leaching of metals from ores - by spraying waste water contg. ferrous ions with microorganism and nutrient, and aerated to increase removal efficiency and remove iron

AGENCY OF IND SCI TECH 20.04.74-JA-044800
 M25 (D16) (30.11.79) C12d-13 C22b-03 C22b-15/12

All or part of the waste water (I) contg. Fe^{2+} is mixed with nutrients, bubbled with air to increase microorganism, the Fe removed, and sprayed over ore deposit.

In an example, waste water at pH 4.0 contg. Cu 17, Zn 118, Fe(II) 1137, Fe(III) 16 SO_4^{2-} 5966 ppm, and microorganism 6×10^4 /ml was added with $(\text{NH}_4)_2\text{SO}_4$ and KH_2PO_4 0.001% each for 2.5 days to increase microorganism to 1.56×10^7 /ml, treated with NaOH to pH 7-8, and filtered to remove $\text{Fe}(\text{OH})_3$. This was mixed with more water to give microorganism 6×10^6 /ml at pH 3 and sprayed over ore contg. Cu 1.58, Fe 7.38, and S 7.72% to leach 1% Cu compared with 13% for original waste water. 20.4.74 as 044800, C22b-3/00, 15/12, C12d-13/00 (30.11.79) AGENCY OF IND. SCIENCES & TECHNOLOGY (4pp) (J50137305)

SUMO **D15** 67471X/36 = J7 9039-831
 Waste-water treatment - using dye-adsorbing polyethylene fibres

SUMITOMO CHEMICAL KK 05.09.73-JA-100546
 A97 F01 J01 (A17) (30.11.79) *J50051-089 C02c-05/08 C02f-08/36 C08j-05/20 + B01d-15/04 B01j-01/04

Sulphonated polyethylene fibres are excellent adsorbents for cationic or basic dyes in waste waters.

In an example, a high-d, polyethylene was spun to make strands having 3-dimensional net structure. The strands were cut into a pulp (5-10 mm length). The high-d, polyethylene pulp (7g) was soaked in chlorosulphonic acid (300 ml), heated to 60s and kept at the temp. for 5 hrs. The fibres were collected by filtration, washed with water and Me_2CO , and dried at 40° under a reduced pressure.

The sulphonated polyethylene fibres (0.3g) were dispersed in water (20 ml) to which was added 0.01N Methylene Blue soln. (55 ml). The mixt. was stirred for 1 hr. and all-

owed to stand. The dye (0.205g) was completely absorbed by the fibre (0.3g). 5.9.73 as 100546, B01j-1/04, B01d-15/04, C02c-5/08, C02f-8/36 C08j-5/20 (30.11.79) SUMITOMO CHEMICAL KK (3pp) (J5 0051089)

WATA/ **D15** 01069C/01 ★ J7 9039-833
 Device for sepg. volatile substance from water - uses porous separator of hydrophobic material, and water absorbent

WATANABET 25.01.74-JA-010707

E35 (E36) (30.11.79) B01d-13 C02b-01/82

Device for sepg. a volatile substance dissolved in a water soln. such as bromine in sea water and ammonia in waste water, uses a continuous porous separator made of a hydrophobic material and water absorbent for mass transfer of the volatile substance through the separator. 25.1.74 as 010707, B01d-13/00, C02b-1/82 (30.11.79) TAKAHIKO WATANABE & TERUMASA MIYAUCHI (5pp26) (J50104778)

CHEM- **D15** 79608X/43 = J7 9039-939
 Dispersing polymers in water treatment systems - after admixing nonionic surfactants sodium carbonate, chelating agents and filler

CHEMED CORP 27.03.75-CA-223363

A97 (30.11.79) *DT2543-135 B01d-21/* C02b-01/20 C02c-03 C02c-05/02

Process for dispersing high mol. wt. polymers in water-treatment systems takes place by admixing the polymers, before dispersion, with a combination of a nonionic surfactant Na_2CO_3 , a chelating agent and a filler. The process is used for flocculating waste- and other service-waters, e.g. for dewatering and coagulating sludge.

The nonionionic surfactants admixed to polymer form a film which delays wetting of polymer particles and improves sepn. into small particles which do not tend to bake together. Na_2CO_3 ensures alkalinity of soln. and presence of polymer as water-soluble alkali salts.

Polyphosphate chelating agent prevents reaction of Ca- and Mg water hardeners with polymer. Fillers, e.g. Na_2SO_4 , controls moisture uptake. 14.10.75 as 123740 (clg. 27.3.75-CA-223363) C02b-1/20, C02c-5/02, 3/00, B01d-21/01 (30.11.79) CHEMED CORP. (3pp) (J51111759)

NITTO **D15** 73287A/41 = J7 9039-943
 Organic waste water treatment - by aerobic activated sludge treatment to decompose organic material followed by sediment pptn.

NITTO CHEM IND KK 12.02.77-JA-013518

E13 (30.11.79) *J53099-662 C02c-01/06

Organic waste water e.g. urban sewage, human waste water, industrial effluents, etc is treated by passing the water into an aeration tank to decompose the organics by oxidation using activated sludge, and then the treated water contg. sludge is passed into a pptn. tank to sediment the sludge by the addition of a cpd. (I) selected from 2-amino-4-dichloro-6-methylpyrimidine, 2-mercaptobenzothiazole, 2-sulphanilamidethiazole, N-2,5-dichlorophenylsuccinic acid, 4-amino-1,2,4-triazole hydrochloride, 5-mercapto-1,3,4-triazole and trichloromethylaminotriazine, which suppresses the buoyance of the sludge.

(I) allows easier sludge sepn. Amt. of (I) used is 0.1-10 ppm. 12.2.77 as 013518, C02c-1/06 (30.11.79) NITTO CHEM IND. KK (4pp) (J5 3099662)

OKAK/ **D15** 24994B/13 = J7 9039-946
 Inhibitor for preventing sludge bulking due to Hyphomycetes - contains an inorganic polysulphide e.g. calcium polysulphide as major component

OKA K 26.07.77-JA-089952

E33 (30.11.79) *J54024-459 C02c-01/06

The inhibitor for preventing sludge bulking due to Hyphomycetes, in the biological treatment of waste water, contains an inorganic polysulphide, e.g. Ca polysulphide

The inorganic polysulphides used include all polysulphide cpds. which generate activated S when contacted with water and the pref. amt of the inorganic polysulphide is of the order of 10^{-10^3} ppm per day on the basis of the vol. of aeration tank in the form of aq. soln. or powder. 26.7.77 as 089952, C02c-1/06 (30.11.79) OKA K (4pp117) (J5 4024459)

AWA D15 72967X/39 = J7 9040-082
Treatment of sludge produced in hot rolling of steel - to remove oil and recover the iron content
NIPPON STEEL CORP 04.12.74-JA-138453
E14 M21 (M24) (01.12.79) *J51091-817 C22b-01 + C10g-19/02
Sl-contg. hot-rolled sludge produced in the hot rolling of steel is washed with a washing liq. consisting of an alkaline salt mixture 75-95%, a nonyl phenol series non-ionic surfactant 2-10% and water content 5-10% incidentally included in the washing liq. being used in a diluted concn. of 2-10%. Oil content (4-10wt) of sludge is economically removed and the iron content (70-78%) is recovered. 4.12.74 as 138453 C10g-19/02, C22b-1/00 (1.12.79) NIPPON STEEL CORP. (4pp) (J5 1091817)

YOY D15 06608Y/04 = J7 9040-116
Polymerising acrylamide using acid chelate with iron - giving polymers with high flocculating ability
KYORITSU YUKI KK 04.06.75-JA-067214
A14 (A97) (01.12.79) *J51143-093 B01d-21/* C08f-02/44 C08f-20/56

Radical polymerisation of acrylamide, comprises adding an organic acid which chelates with iron at 10 ppm wrt acrylamide to satn. concn. in aq. soln. Pref. 20-2000 ppm of acrylamide are used. Acid is e.g. oxalic acid, citric acid, maleic acid, malonic acid or tartaric acid.
The polymers obtd. are more non-newtonian than usual polyacrylamides and have good flocculating ability. They are useful as flocculants for waste water treatment.
4.6.75 as 067214, C08f-20/56, 2/44, B01d-21/01 (1.12.79) KYORITSU YUKI KK (3pp5) (J5 1143093)

TF ★ D15 01104C/01 ★ J7 9040-231
Adjusting salt concn. of brine - in vapour producer
HITACHI SHIPBLD ENGG KK 26.09.75-JA-116831
(03.12.79) B01d-13 C02b-01/82
Method comprises replacing part of the brine with a desalting water. Part of the brine from the producer is sepd. into two liquids through a membrane, one having a low salt concentration to be fed back to the producer, the other having a high salt concentration to be wasted. 26.9.75 as 116831, B01d-13/00, C02b-1/82 (3.12.79) HITACHI SHIPBLD. ENGG. KK (5pp26) (J5 2040485)

MURK D15 40715Y/23 = J7 9040-232
Backwashing reverse osmosis membranes - by reducing pressure of pure water supply and feeding pure water from reverse side of the membrane
KURITA WATER IND KK 28.10.75-JA-128841
J01 (03.12.79) *J52052-878 B01d-13

Backwashing is carried out when reverse osmosis ceases. Raw water is continuously fed to the raw water chamber of the reverse osmosis unit under lower pressure than reverse osmosis pressure, while fresh water is continuously fed to the opposing fresh water chamber of the unit.

Reverse osmosis membranes have pores which are enlarged when pressurised from the rear surface. Particles trapped in the pores are thus removed when water is passed from the rear to upper surface using osmotic pressure. 28.10.75 as 128841 B01d-13/00 (3.12.79) KURITA WATER IND LTD. (3pp) (J5 2052878)

SHIG/ D15 55029Y/31 = J7 9040-238
Complex adsorbing agent with high metal adsorbing power mfr. - by dispersing inorganic powder into porous carrier
SHIGETOMI Y 02.11.75-JA-131901
A97 J01 (03.12.79) *J52074-588 B01d-15 + C22b-60/02

A complex adsorbing agent is made by dispersing inorganic fine powder or granules (e.g. metal hydroxide oxide sulphide, etc) into porous substance (e.g. organic high polymer gel, zeolite, molecular sieve, etc) as carrier. It has high selective adsorbing power for ions or molecular dissolved in aq. soln. and is excellent in sepn. from aq. soln. by filtration, etc. and durability. The agent is highly useful for recovery of valuable metals from sea water, industrial waste water, underground water ore treating soln. etc. or removal of harmful metals.

In an example, a soln. of 8.0g acrylamide dissolved in 20 ml. water was combined with a soln. of 2.0g N,N'-methylenebis(acrylamide) dissolved in 20 ml. water. 2.0 ml. of a zinc chloride soln. (10 mg/ml) was added, its pH was

adjusted to about 8 by adding NaOH, and zinc hydroxide was pptd. A polymerisation initiator, 3-dimethylamino-propionitrile 1.0 ml was added with stirring to the liq. to obtain a complex adsorbing agent. 2.11.75 as 131901, B01d-15/00, C22b-60/02 (3.12.79) SHIGETOMI Y (4pp) (J5 2074588)

DAIK D15 77341A/43 = J7 9040-472
Preventing corrosion in sea water electrolysis system - by adding hypochlorite and then iron ions to form iron oxide layer
DAIKI ENGG KK (DAIK-) 04.03.77-JA-023483
C03 E36 J03 (04.12.79) *J53108-075 C23f-11 C25b-01/34 + A01n-23

The method comprises electrolysing sea water to obtain hypochlorite, introducing sea water into an iron ion-generating appts. to obtain iron ions and supplying the hypochlorite and the iron ions into the sea water treating system to prevent corrosion of the system and deposition of living organisms on the inner surface.

The improvement comprises firstly supplying the iron ions to deposit them on the inner surface, and supplying the hypochlorite to oxidise the deposited iron, and a corrosion-resistant iron oxide layer on the inner surface of the system. 4.3.77 as 023483 C25b-1/34, A01n-23/00, C23f-11/00 (4.12.79) TAIKI GUM KOGYO KK (4pp) (J53108075)

TAIK- D15 77342A/43 = J7 9040-473
Electrolytic ferrous ion producer in sea water utilisation system - which also has a cell producing hypochlorite ions for protection against microorganisms
DAIKI ENGG KK (DAIK-) 04.03.77-JA-023484
C03 E36 J03 (04.12.79) *J53108-076 C23f-11 C25b-01/34 + A01n-23

A sea-water take-up pipe located in the sea, where the hypochlorite concentration is low, is connected to an electrolytic cell for producing ferrous ions. A ferrous ion injector pipe is connected near to the inlet of the sea water utilisation system e.g. a condenser to inject the sea water contg. ferrous ions, therein.

Another electrolyser is provided which produced hypochlorite ions which suppress growth of micro-organisms in the sea, and prevent them adhering to piping in the system. The system gives a long and stable operation. 4.3.77 as 023484, C25b-1/34, A01n-23/00, C23f-11/00 (4.12.79) TAIKI GOMU KOGYO KK (4pp) (J5 3108076)

AQAC D15 01073R/01 = J7 9040-510
Vapour compression evaporation with ventcond - gas boiler
AQUA CHEM INC 30.01.67-US-612519
J08 Q78 (04.12.79) *US3488-261

WEIR- D15 36641R/20 = NL -162-307
Distillation apparatus
WEIR WESTGARTH LTD (WEI-) 16.11.68-GB-054493
J01 (17.12.79) *NL6917-166 B01d-03/06 + B01d-01/26

A liquid such as a salt soln. is distilled in a multistage evapn. process in which the pressure in each successive stage is lower than that in the preceding stage. The incoming liquid is passed through coils in each stage in the counterflow direction to that of the evaporating fluid so that the coils serve to preheat the liquid and act as condensing surfaces for the vapour.

In order to optimise the heat transfer at the condensor surface, a proportion of the vapour produced in each stage is allowed to expand and flow into the next stage. This measure reduces the size of the appts. and improves the efficiency with which the uncondensable vapour is removed from the installation. 14.11.69 as 017166 (4pp) (1370)

FLEC/ D15 50258U/35 = NL -162-463
Time switch driving mechanism - for water softener distributors
FLECKENSTEIN A J (FLE/) 02.03.72-US-231145
R25 + Q63 Q66 (17.12.79) *BE-796-193 + F16k-31/04

A timing device used with a water softening installation is equipped with a motor mounted on a plate and a series of gears by means of which a crank arm is driven which operates the plunger of a metering pump. The drive gear for the crank has a cut-out on its periphery which coincides in the rest position with a drive pinion on the motor so that normally the motor which runs continuously is not driving the metering plunger. Once every 24 hours the

pinion engages with the drive gear so that the plunger executes one complete stroke.

The motor plate can rotate through a limited angle under the influence of a pin on the timing wheel pushing against a cam surface on the mounting plate, the movement of the plate being limited by the action of a spring. This rotation releases a locking device on the plunger drive gear which then undergoes a small rotation which engages it with the motor drive pinion. 1.3.73 as 002879 (10pp1370)

ZHIV/ ★ D15 01189C/01 ★SU -656-663
Magnetic processor for aqueous system - has permanent magnet with coil connected to thyristor converter contg. controls, triggers and phase changers

ZHIVOV LG 30.08.76-SU-399348

P41 (18.04.79) B03c-01/08

Earlier system for processing of aqueous systems contained a wound permanent magnet, a system for field strength regulation and a pipe within the magnet gap. Now to widen the range of the magnetic field strength and to increase productivity, by preventing ferromagnetic particles being attracted to the poles, the magnet coil is connected to a thyristor converter to change the polarity of the magnet.

The proposed system is useful in mining chemistry, metallurgy and heat engineering for descaling boilers and clarifying suspensions.

Any ferromagnetic particles in the aqueous system are attracted by the magnet poles. To prevent them sticking there, the coil is switched on at a voltage which for a definite time changes its polarity. For this, the outputs of the triggers are connected to control windings of magnetic amplifiers in the controls.

Zhivov, L.G., Komogortsev, B.V. Bul. 14/15.4.79. 30.8.76 as 399348 (4pp840)

GASS= ★ D15 01240C/01 ★SU -656-975
Settling tank to remove suspended solids from liquids - uses central pipe to take out the majority and foaming the remainder, with rotating scraping chains

GAS SCRUBBER WORK 02.09.76-SU-400932

J01 L02 (15.04.79) C02c-01/26

Settling tank, to remove suspended particles from liquids, partic. during the prodn. of asbestos-cement articles, comprises a cylindrical reservoir, contng. a central conical pipe with a flared pipe at the bottom, semi-submerged annular partition, foam-collector, vertical shaft with motor to which is fastened an upper crosspiece bearing the vanes which are distributed inside the space between the central pipe and the semi-submerged partition. The shaft has two more crossarms from which chains are hung inside the central pipe and bottom conical section. The cleaning of the liquid is made more effective, by fastening more crossarms to the vertical shaft to which additional vanes are connected, these being disposed in the central pipe. The upper part of the latter, above the foam collector, has holes, and the foam-collector is fitted with a semi-submerged sloping chute.

Egorov, E.N., Papusha, V.G., Solodko, A.L. et al. Bul. 14/15.4.79. 2.9.76 as 400932 (3pp29)

UCOA= ★ D15 01241C/01 ★SU -656-976
Ammonia water processing in coking industry - by removing volatile ammonia and phenol from cooling water acidifying with gas-collecting water, and steaming

UKR COAL CHEM RES 25.10.76-SU-413929

(15.04.79) C02c-05

Processing of ammonia water in coke/chemicals prodn. and gas ind. involves the combination of gas-collecting water and cooling water, by blowing out the volatile ammonia, de-phenolising, evaporating and feeding in a steam/gas mixture produced during the evaporation stages, and blowing out a second time.

The technology is improved and the corrosive effect of the impurities during the conc. stage is reduced, by subjecting the dephenolised cooling water, after removal of the volatile ammonia, to the action of coking gas. The steam/gas mixture thus formed is fed to the evaporation stage prior to the acidification of gas-collecting water.

Markov, V.V., Petropolskaya, V.M., Mikhailov, N.F. et al. Bul. 14/15.4.79. 25.10.76 as 413929 (3pp29)

AAZP= ★ D15 01242C/01 ★SU -656-976
Petroleum extrn. from gel obtd. from waste purificn. - include treatment with acid and extrn. of liquid phase with organic solvent
AS AZERB PETROCHEM (KASP=) 02.02.76-SU-383754
J01 (15.04.79) C02c-05/02

Method is used for extracting petroleum from gel obtd. during purificn. of aq. industrial wastes, esp. during purificn. of industrial stratal water. The gel is treated with acid at pH 2-3 and the liquid phase is sepd. and subjected to extrn. with organic solvent.

Aliev, V.S., Altman, N.B., Birshtein, I.A. et al. Bul. 14/15.4.79. 2.2.76 as 383754 (1pp932)

FEPu ★ D15 01412C/01 ★SU -657-856
Hydrocyclone flotation unit for clarifying metallurgical aq. effluents - contg. series of radial divider strips under outlet branch pipings in clarified water tray to improve removal of suspended solids and oils
FERR METAL EFFL PURIF 25.12.76-SU-433539
P41 (26.04.79) B03d-01/18 B04c-05/10

Efficiency of purifying the aq. effluents discharged by metallurgical industry from suspended inclusions of solid particles and oils using floatating hydrocyclone is ensured by preventing the froth products from contaminating the clarified water.

The cylindrical conical chamber fed by tangential nozzles with the initial effluent saturated with dissolved air contains perforated tube for the outlet of water clarified off solid particles which pass to the sand nozzle. At the top, the central tube contains a number of radial branch pipings through which the clarified water passes into the outlet tray with overflow ramp for water, and discharge troughs for the froth products. Under the branch piping are situated 2-6 rows of radial divider strips.

The angle between the strips α is determined from the equation (I) $\alpha = C \frac{h \cdot 360^\circ}{\pi D}$ (I)

where C is constant of magnitude equal 0.2 to 0.33; h is distance between the divider and the level of overflow ramp and D is diameter of the tray.

Goncharova, R.B., Kutsyshin, M.L., Muzykina, Z.S. et al. Bul. 15/25.4.79. 25.12.76 as 433539 (3pp135)

RANC= ★ D15 01413C/01 ★SU -657-857
Hydraulic cyclone for effluent stock-breeding aq. purificn. - has additional purification chamber with conical trays and sloping partition of filtering strainer with central discharge nozzle

RANCHES MECH ELEC 03.05.77-SU-481098

P41 (26.04.79) B04c-09

The efficiency of the hydraulic cyclone for purifying sewage and muddy waste waters, e.g. effluents from stock breeding industry, is improved by stabilisation of the outlet stream along the cross section of the chamber.

The cylindrical-conical chamber of the hydrocyclone, which contains tangential inlet nozzle and sand nozzle, has its central outlet pipe equipped with additional purification chamber mounted on the top of the hydrocyclone chamber. On the discharge end of the outlet pipe for clarified fraction in the additional chamber is mounted a stack of conical trays. The top section of the additional chamber is sepd. by radially sloping partition consisting of filtering strainer which at its centre contains opening of discharge nozzle for purified water. Additional chamber contains at the bottom the discharge outlet for sediment falling from the strainer. Laiba, A.G., Sorokin, A.I., Formanyuk, P.N. Bul. 15/25.4.79. 3.5.77 as 481098 (2pp135)

EOCA= ★ D15 01462C/01 ★SU -658-083
Determin. of nitric acid and nitrate(s) - in presence of oxidising agents by potentiometric titration in condensed phosphoric acid media with ferrous oxide soln.

E COAL TAR INST 06.01.76-SU-313289

C04 E37 J04 R16 (25.04.79) C01b-21 G01n-27/46

Nitric acid and nitrates are present e.g. in fertilisers, air reagents, waste waters, oleum, nitrating and other oxidising mixts. They are determined in the presence of oxidising agents, e.g. Mn^{3+} , Cr^{6+} , Ce^{4+} etc., and coloured substances with increased accuracy by pH-potentiometric titration with FeO soln. using condensed phosphoric acid

with sp. gravity 1.85-1.95 gm/cm³ as titration medium. The condensed phosphoric acid, obtd. after treatment with HNO₃ to remove impurities, sharply increases the oxidative capacity of HNO₃ and reductive properties of FeO.

In titration in the presence of oxidising agent two end points are obtd. The first corresponds to titration of HNO₃ and oxidising agent, and the second corresponds to titration of HNO₂ produced. The HNO₃ is thus determined from the difference.

Oyatel, S.G. Bul. 15/25.4.79. 6.1.76 as 313289 (4pp1347)

NCS= ★ D15 01464C/01 ★SU -658-091
Cleaning industrial e.g. metallurgical effluent - using unit for removing large suspended particles, with a hydraulic pressure line for smaller particles, and fine particles settling tank
DNEPR CONS RES INST (UUKR) 20.10.75-SU-181647
J01 M24 Q35 (29.04.79) B65g-53/30 C02c-05
Installation for cleaning industrial discharges from metallurgical factories, to remove insoluble, solid, coarsely-dispersed particles and subsequently remove the accumulated slurry by pressure-hydraulic transportation.

The method is used pref. for taking away dross-contg. flows and removing the solid materials from them and includes a hydraulic pressure line with receiving hopper and discharge chamber, settling tank with device for taking away the slurry, unit for primarily holding back the large-sized constituents, conveying system for the residual slurry, with a pump and shut-off controller.

Power-consumption is reduced, together with the material-capacity, during the construction of a slurry-removing and reverse cycle water-supply system, with a guarantee of continuous operation, by connecting the hydraulic transportation system to the discharge hopper of the pressure-line. The discharging part, during the unloading of the slurry, is disposed inside the receiving hopper and connected by an overflow to the settling tank.

Manusov, A.B., Nedodatko, A.P., Glikin, M.P. et al.
Bul. 15/25.4.79. 20.10.75 as 181647 (4pp29)

KREM= ★ D15 01465C/01 ★SU -658-092
Purificn. of recirculating solution for washing engineering products - using soln. intake devices mounted at top and bottom of storage tank on pipeline connecting it with sedimentation chamber
KREMENCHUG CAR WKS 01.12.76-SU-424879
P41 (29.04.79) B03d-21 B03d-35 C02c-05

Increased period of use of the solution used in cleaning and preparation of surfaces of articles, and recirculated for repeated use in installations mounted in flow production line, e.g. in mechanical engineering plants, is ensured by improved quality of purification of the solutions.

The tank for the working solution has intake devices placed in its top and bottom sections; the devices are mounted in the pipeline connecting closed delivery circuit with sedimentation chamber. The latter is situated above the tank of working solution and connected by feeding pipeline to the delivery circuit and, by discharge pipeline, to the tank of working solution.

Samiilenko, V.Ya., Krivosheya, A.I. Bul. 15/25.4.79.
1.12.76 as 424879 (4pp135)

SJUN- ★ D15 C/01 ★SW 7805-159
Removal of oil from water - by adding tufts of raw wool and allowing them to float to surface

SJUNTORP AB 05.05.78-SW-005159
J01 (10.12.79) C02b-09/02
Water is freed of oil, and esp. of oil carried beneath the surface, by releasing into it separated tufts of raw wool with all its natural oils remaining, and allowing the tufts to float to the surface. 5.5.78 as 005159 (-pp1429)

SJUN- ★ D15 C/01 ★SW 7805-160
Appts. for removal of oil from water - includes filter of raw wool in pierced capsule

SJUNTORP AB 05.05.78-SW-005160
J01 (10.12.79) C02b-09/02
Raw wool, with all its natural oils present, is contained in a pierced or mesh capsule. The wool collects the oil but almost entirely rejects the water. 5.5.78 as 005160 (-pp1429)

BIOM- D15 02374B/02 =US 4179-220
Anaerobic digestion tank - having gas distribution arm fed by annular gas holding ring rotatable at bottom of digester
BIOMECHANICS LTD 05.07.77-GB-028183
(18.12.79) *EP-----293 +B01f-07/16

Biodegradable waste is anaerobically digested in appts. which includes a vertical cylindrical tank, a gas delivery duct near to the base and axis of the tank and a mixing assembly in the tank for rotation about the axis. The assembly has a gas holder defining an annulus open at its lower face and being concentric with the axis, and a gas distribution arm extending radially from the holder having exhaust apertures along its length. Part of the annulus is located above the outlet of the delivery duct.

Pref. the mixing assembly is supported on bearings above the intended liq. level. Compaction of sludge on the tank bottom is prevented. 28.6.78 as 919809 (8pp1376)

AIDE/ ★ D15 01559C/01 ★US 4179-243
Pump mounted on raft with pipe - pivotable from vertical operating position to horizontal position for ease of installation
AIDE R J 21.06.77-US-808457
Q56 (18.12.79) B01f-03/04 F04b-21

A pump is used to transfer water from the bottom of a lake to the top. The pump includes a raft formed of floats mounted at spaced intervals. An elongated pipe is mounted on the raft and extends downwardly. A wind-driven shaft is mounted on the pipe with a propeller on the lower end of the shaft positioned within the top of the pipe. Rotation of the shaft by the wind rotates the propeller to draw water up the pipe.

The pipe is pivotally mounted at its upper end to the raft to pivot about a horizontal axis from the vertical position to a horizontal position when it is positioned between two of the spaced floats. There is a lock for securing the pipe in its vertical position. The pivoting device and lock each have a vertical sliding connection to the pipe. There is a threaded rod to raise and lower the pipe relative to the raft.

The appts. is used to aerate a lake by pumping water from the bottom and discharging it near the top. The pipe is pivotable for ease of installation of the raft on the lake. 21.6.77 as 808457 (6pp295)

SIGE D15 40967W/25 =US 4179-289
Passive metal electrode for electrochemical cells - made with porous titanium/titanium oxide base coated with fused titanium and noble metal

SIGRI ELEKTROGRAPHI GMBH 02.02.74-DT-405010
E36 J03 + P53 (18.12.79) *BE-824-754 +B22f-03 B22f-05
Prod'n. of an electrode for electrochemical processes comprises (a) mixing Ti powder and TiO₂ powder in a ratio of 7:1 to 1:3; (b) adding binder; (c) compressing and sintering at 1200-1400°C in Ar; and (d) coating with a layer contg. an activating substance.

Reductions in the electrochemical activity of the electrode due to partial loosening or detachment of the covering layer are completely avoided. Electrodes are used e.g. for desalination of sea-water or for oxidn. of organic substances. Layer of metallic sintered Ti improves the weldability and solderability. 14.12.77 as 860299 Div. ex. 4029566, 4078988 (15.1.78, 7.2.77-US-541348, 765899) (9pp936)

NALC ★ D15 01594C/01 ★US 4179-329
Colour removal from paper mill waste waters - by pptn. with polyethyleneimine, then hydrocarbon amine
NALCO CHEMICAL CO 09.01.76-US-647757
A97 F09 (A26) (18.12.79) D21c-11

Colour (due to chemical reaction on or degradation of lignin) is removed from cellulose paper pulp bleaching effluent waste waters as follows: (a) pH is adjusted to 2-7; (b) waters are treated with 10-2000 ppm of a polyethyleneimine (I) (mol. wt. 300-1800) to combine with coloured materials to form H₂O-insol. solids; (c) mixt. is treated with an amine(II) without solvent and the solids are sepd. (II) has one or more 8-24C hydrocarbon gps. attached to the amino-N.

Solvent-free process uses only small amts. of readily available reagents, and is esp. useful when paper pulps

are bleached with Cl_2 , ClO_2 or NaOCl , then treated with NaOH . 9.1.76 as 647757 (3pp478)

OMNI- ★ D15 01603C/01 ★ US 4179-347
Electro-catalytic treatment of waste water - with controlled addition of electrolyte and filtration of treated water
OMNIPURE INC 28.02.78-US-882264
J03 (18.12.79) C02b-01/82

A measured quantity of an electrolyte is added to an influent stream before passage between closely spaced, electrocatalytically active electrode plates which have exposed surfaces including a precious metal or metaloxide. The plates are positioned parallel to the flow of waste water. A constant level of waste water is maintained in the vessel holding the plates. Application of an electric current generates disinfecting chemicals and causes suspended solids to float as a foam which is continuously removed.

The treated waste water stream is passed through a filter to remove fibrous residual suspended solids. The conductivity of the influent stream is measured and this value is used to control the amt. of electrolyte added, thereby controlling the amt. of residual chlorine present in the treated stream.

The process is used to treat sewage. The appts. reduces the problems of sludge disposal and reduces odour problems. 28.2.78 as 882264 (7pp295)

ERAP D15 33422A/19 = US 4179-348
Cyanide separation from effluent - by anodic oxidation in electrodialysis using a cation-permeable membrane
ELF AQUITAINE PROD 03.11.76-FR-033076
H09 M14 (18.12.79) *BE-860-398 B01d-13/02

In the elimination of CN^- from waste water by anodic oxidn., the water for processing enters only the anodic compartment of an electro-dialyser having a cation-permeable semipermeable diaphragm sepg. the anode and cathode compartments, and a separate aq. soln. (I) of electrolyte is conveyed through the cathode compartment, the separate electrolyte comprising an electrolyte from a source other than the water to be processed. Esp. the waste water for treatment is adjusted to a pH of 10-13.5, the voltage between the electrodes is 5-15V and the anode current density is 2-4A/dm², (I) being a soln. of NaCl , Na_2SO_4 , K_2SO_4 or NaOH at a concn. which is adjusted so that the resistivity of the soln. is 200-600 ohm cm.

No reagent need be introduced into the waste water for treatment, and e.g. a spent electroplating bath is treated. 3.11.77 as 848298 (5pp990)

SUMV D15 48068B/26 = US 4179-365
Treating phenol-contg. waste liquor - by solvent extn., followed by pH adjustment aeration and treatment with activated sludge
SUMITOMO DUREZ CO 28.10.77-JA-128647
E14 (18.12.79) *J54062-659 C02c-01/06 + B01d-11/04 C02c-05/10

Treatment of waste aq. stream contg. > 10,000 ppm of free phenols, comprises (i) solvent extracting the waste stream or effecting an adsorption process to reduce the phenol content to < 100 ppm, (ii) treating the resulting stream in a conditioning zone with nutrients and adjusting the concn., pH and temp. to BOD 350-800 ppm, 6.4-7.6 and 15-35°C respectively, (iii) agitating the aq. stream in an aerating zone in contact with activated sludge contg. aerobic bacteria, and (iv) settling the activated sludge to provide a purified water stream.

Pref. 10-50 wt. % of the purified stream is recycled to step (ii). Pref. the conditioning zone has a capacity equal to 0.3-1 times the amt. of aq. stream treated daily in the aerating zone. 19.10.78 as 952911 (4pp924)

UNIC D15 20880X/12 = US 4179-366
Biological effluent treatment plant - with three tanks arranged for reversible flow
UNION CARBIDE CORP (KAEL/) 18.11.74-CH-015346
(18.12.79) *CH-572-003 C02c-05/10

In an activated sludge water treatment process in which waste water is passed through a series of three tanks in the first two of which aeration occurs and in the third the sludge settles and pure water is removed and during which treatment the sludge content of the first two tanks

decreases as the content in the third tank increases, the water flow direction is reversed when the sludge content in the first tank decreases to a specified level.

Reversal is accomplished by ceasing water intake to the first tank starting intake to the third tank while ceasing to remove water from any of the tanks, and after the sludge has settled in the first tank establishing reversed flow from the third-second-first tanks.

Mechanical sludge removal is unnecessary. 2.8.78 as 930136 (+10.6.75, 29.11.76-US-585572, 745567)(7pp1376)

WILL/ ★ D15 01615C/01 ★ US 4179-368
Hydraulic flocculation in multistage appts. - with weighted plate obstructing risers maintaining constant G-factor despite flow changes

WILLIS R M 28.04.78-US-901255
(18.12.79) B01d-21/*

A liq. is subjected to hydraulic flocculation by passing it through a conduit provided with an orifice whose effective size is adjusted. The adjustment is in accordance with the flow rate to maintain a predetermined head loss across the orifice. The G-factor remains constant despite variations in the flow rate.

The orifice is pref. at the upper end of the conduit and is covered by a weighted plate supported by vertical guide rods. The wt. corresponds to the prod. of the required head loss, the density of liq. and the unobstructed area of the conduit.

Esp. the method is used in conjunction with a water treatment system comprising three flocculation stages linked by conduits with weighted plates. The G-factor remains constant despite variations in the flow rate of the water. 28.4.78 as 901255 (7pp295)

METG ★ D15 01619C/01 ★ US 4179-374
Appts. for treatment of waste water - including oxidation and denitrification units with backwash facilities
DRAVO CORP 18.10.77-US-843203 (26.06.74-US-483231)
(18.12.79) C02c-01/06

A sewage treatment plant includes an enclosed facultative unit which receives and contains both raw sewage and partially processed recycled sewage. Effluent from the facultative unit is delivered to an enclosed columnar oxidising unit which comprises a deep bed filter and into which oxygen or air is discharged. The filter bed can be backwashed, the spent water being treated to digest and remove sludge.

The plant also includes a denitrification unit also in the form of a deep bed filter. Some of the effluent from the oxidising unit is passed to this unit in which facultative microorganisms grow in the filter bed. This filter bed can be backwashed and part of the backwash liq. can be directed to the facultative unit to replace bacteria. 18.10.77 as 843203 (+12.5.76-685770)(7pp295)

SMIT/ ★ D15 01620C/01 ★ US 4179-375
Aeration of waste in septic tank - by controlled circulation through external ducting with addition of air
SMITH A J 23.10.78-US-953475 (11.08.77-US-823622)
(18.12.79) C02c-01/08

Sewage is aerated in a septic tank having curved walls to help in creating a revolving flow of the waste. Ducting removes waste from one side of the tank and it is pumped to a point where oxidising fluid is introduced. Ducting conveys the waste and oxidising fluid to a distribution outlet positioned within the tank but near the opposite side to the ducting inlet.

The outlet includes an elongated slit in the ducting which is bent so that it extends along the length of the tank. The ducting is made of expandible material and the slit opens in response to application of pressure to the fluid flowing in the ducting.

The system is used to aerate and diffuse solid material in low cost as well as other sewage disposal systems. 23.10.78 as 953475 (5pp295)

HAKA/ D15 60854A/34 = US 4179-376
Appts. for industrial effluent flocculation and filtration - comprise slowly revolving plate filter surrounded by flocculating trough
HAKANSSON L A H 16.02.77-SW-001734
(18.12.79) *DT2806-109 C02c-01/34 + C02b-01/20

Industrial waste water is purified in a device which includes a flocculation chamber, a precipitation chamber, and a filter unit to further purify the water from the pptn. chamber. The filter unit has an annular array of radial, inclined lamellas, the array being slidably and rotatably mounted on a vertical outlet tube in the pptn. chamber.

The array is kept at a required height by a float. The flocculation chamber is in the form of an annular, open channel around the filter array. An apertured cylindrical casing is between the array and the annular channel and is driven to follow the array.

The device is compact yet has a good capacity. 14.2.78 as 877749 (5pp1376)

NALC ★ D15 01630C/01 ★US 4179-396
Single addn. organic-inorganic blend emulsion breaking compsn. - comprises aq. soln. of acidic aluminium salt and quaternised dehydration condensation polymer of triethanolamine
NALCO CHEMICAL CO 23.02.78-US-880504
A97 (18.12.79) B01d-17/04

Single addn. organic-inorganic blend emulsion comprises an aq. soln. of an inorganic Al salt (I) and a quaternised dehydration condensation polymer of triethanolamine and/or acylated methanolamine, which contains tert. amino gps. of which 20-100% are quaternised. The compsn. is acidic, pref. of pH 2-5, and the concn. is such that (I) and the polymer remain dissolved for ≥ 14 days at 40-10°F.

The compsn. is used to break oil-in-water emulsions in industrial wastes, where the pH of the waste is higher than the pH of the compsn., and (I) comes out of soln. Vegetables, animal or mineral oil-contg. wastes may be treated. The dose is typically 10-3000 ppm.

The compsn. avoids the use of heavy metal cpds. and is relatively non-corrosive against iron and steel, and non-corrosive against stainless steel. 23.2.78 as 880504 (5pp960)

NALC ★ D15 01644C/01 ★US 4179-424
Aminomethyl acrylamide polymers prodn. - by reacting acrylamide polymer solution with formaldehyde and di:alkylamine
NALCO CHEMICAL CO 21.11.77-US-853772
A14 F09 (A91) (18.12.79) C08I-61/20

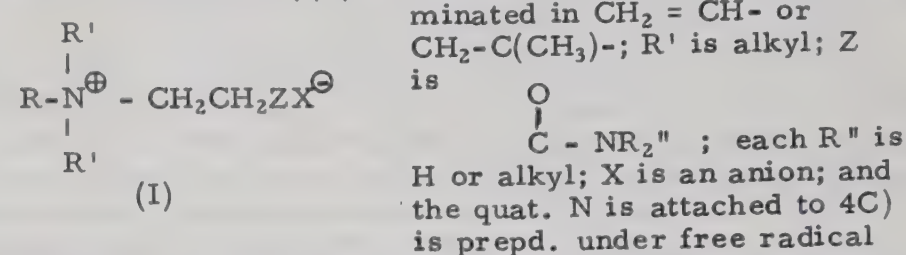
Amino-methylated acrylamide polymers are prepd. by adding to a 2.8-6% aqs. soln. of an acrylamide polymer of M.wt. $> 500,000$ 1 mole formaldehyde and 1 mole C_{2-4} dialkyl amine based on the amide content of the acrylamide polymer. The formaldehyde and amine are added with agitation and reacted with the polymer at 80-100°C for 2-15 mins.

Used in water treatment, particularly in paper mills. The polymers can be used in the form of a C_{1-4} alkyl quaternary salt derivative. This can be prepd. by reacting the polymer at pH 8.4-8.7 with 1 mole of a C_{1-4} alkyl quaternising agent, e.g. dimethyl sulphate or methyl bromide, at 50-80° for 2-5 mins. 21.11.77 as 853772 (15pp)

PETL ★ D15 01692C/01 ★US 4179-549
Polymers for treating water contg. oil or suspended solids - contain quat. ammonium adduct of di:methylamino:ethyl methacrylate and acrylamide

PETROLITE CORP 14.11.74-US-523813
A14 H01 (A91 H05) (18.12.79) C08f-02/32 C08f-18/22 C08f-20/70 C08f-22/22

The polymer is a terpolymer of acrylamide, dimethyl-aminoethyl methacrylate, and the quat. adduct of dimethyl-aminoethyl methacrylate and acrylamide, and the anion is chloride or acetate. The polymer of a quat. ammonium adduct of -formula (I) (where Ris a polymerisable gp. terminated in $CH_2 = CH-$ or $CH_2-C(CH_3)-$; R' is alkyl; Z



conditions, by reacting conjugate acid salts of a cpd. of formula $R-N-(R')_2$ (where the N is attached to 3C) with a cpd. of formula $CH_2=CH-Z$.

The polymers are useful in the clarification of water contg. oil or suspended solids, esp. oil coated solids, in oil field applications, petroleum refineries and metal working processes. The use of the polymers allows a substantial reduction in the amt. of inorganic coagulants required for water clarification and sometimes their complete elimination. This results in reduced sludge and consequent reduced disposal costs. 14.11.74 as 523813 (8pp1390)

THET- ★ D15 01715C/01 ★US 4179-616
Appts. for sanitising liquid using ultraviolet radiation - with air flow around lamp to produce ozone and to cool lamps
THETFORD CORP 02.10.78-US-947505 (21.02.78-US-879204)
R45 (18.12.79) C02b-01 C02b-03/08 H01j-61/52

An appts. for sanitising liquids includes an elongated UV lamp. An inner duct surrounds the lamp and is formed of a material transparent to the germicidal wavelengths of the UV light. An outer duct surrounds the inner duct. Air is passed through the inner duct so that it is irradiated and ozone is formed. A liq. is passed through the outer duct so that it is irradiated.

The irradiated liq. and irradiated air are passed to a tank. The inner duct includes a zone where the air flows slowly to produce a high concentration of ozone. Cooling air is passed at a high velocity along at least a portion of the lamp to hold the lamp temp. sufficient to achieve a high radiation output.

The appts. is used to disinfect water to eliminate harmful microorganisms. It increases the efficiency of UV radiation while simultaneously optimising the ozone concn. potential. 2.10.78 as 947505 (9pp295)

See Also

D13 DT 2924663	D13 GB 2023119	D16 SU 657063
D22 J5 4146862	D22 SU 657746	D23 GB 2023118
D23 GB 2023120		

D16: FERMENTATION INDUSTRY

HOFF/ ★ D16 C/01 ★CS 7601-058
L-Asparaginase enzyme purification - to improve antitumour activity
HOFFMAN J 19.02.76-CS-001058
B04 (31.07.79) C12d-13/10

CEPE/ ★ D16 C/01 ★CS 7606-918
Cultivation station
CEPELKA V 27.10.76-CS-006918
(31.07.79) C12d-01/10

APAL/ ★ D16 C/01 ★CS 7607-946
Organic fertiliser prepn. from ligno-cellulose materials
APALOVIC R 07.12.76-CS-007946
C04 (31.07.79) C05f-11

FUSK/ ★ D16 C/01 ★CS 7704-038
Vermistatin antibiotic with cytotoxic activity
FUSKA J 20.06.77-CS-004038
B04 (31.07.79) C12d-09/10

IZHI/ ★ D16 C/01 ★CS 7705-026
Tissue and pulp cultures testing - to detect turbulence inhibiting cpds.
IZBICKY A 29.07.77-CS-005026
(31.07.79) C12k-09

HRBK/ ★ D16 C/01 ★CS 7800-392
Diagnostic antigen for bonding reaction of complement with mycoplasm
HRBKA A 20.01.78-CS-000392
B04 (31.07.79) C12k-01

RYBA/ ★ D16 C/01 ★ CS 7800-465

Yeasts aerobic cultivation

RYBAROVA J 24.01.78-CS-000465

(31.07.79) C12c-11/18

KOCK/ ★ D16 C/01 ★ CS 7800-896

Ergosterol producing yeast cultivation

KOCKOVA-KRATOCHVILLO 13.02.78-CS-000896

B02 (31.07.79) C12d-13/08

SKUR/ ★ D16 C/01 ★ CS 7803-668

Determin. of alcohol-dehydrogenase - in biological material by photomeric means

SKURSKY L 06.06.78-CS-003668

B04 J04 R16 (31.07.79) G01n-21/02

BETI/ ★ D16 C/01 ★ CS 7804-008

Citrinin antibiotic prepn. - from *Penicillium janthinellum* Biourge

BETINA V 19.06.78-CS-004009

B02 (31.07.79) C12d-09/04

CANC- D16 26989S/16 = DS 2049-515

Vaccine against hepatitis

INST FOR CANCER RES (CAN -) 08.10.69-US-864788

B05 (20.12.79) *DT2049-515 +A61k-39/12

Viral hepatitis vaccine obtd. from Australia antigen-contg. blood material comprises Australia antigen and a blood-compatible medium. The Australia antigen comprises particles of size 180-210 Å which are free of nucleic acids, and is free of infectious particles and has a density of 1.21.

In prepn. of the vaccine, removal of impurities, including infectious components, from the blood material is effected, e.g. by density gradient centrifugation in cesium chloride soln. or by enzymatic decomposition.

The prod. has high purity and can be used as a vaccine without endangering the health. 8.10.70 as 049515 (17pp927)

YAMS D16 11783V/07 = DS 2334-314

Polynucleotide prepn from nucleoside diphosphates - by achromobacter fermentation opt in inoculated incubated soln

YAMASA SHOYU KK 21.07.72-JA-072471

B04 (20.12.79) *DT2334-314 C12d-13/06

Biotechnical prepn. of polynucleotides comprises polymerising the corresp. nucleoside diphosphate using polynucleotidephosphorylase in the presence of divalent metal cations. Process comprises using a microorganism of genus *Achromobacter* which exhibits a high and easily extractable polynucleotidephosphorylase activity, with the exception of *Achromobacter* Sp. KR 170-4 (ATCC 21942), in one of 3 alternative methods.

In the 1st method, the microorganism is fermented and the obtd. culture, without sepn. of the cell mass from the culture broth, is incubated in the presence of Mg^{++} or Mn^{++} ions and ≥ 1 nucleoside diphosphate. In the 2nd method, the microorganism is fermented, the cell mass is sepd. from the culture broth, and the cells are suspended in an incubation soln. and incubated in the presence of Mg^{++} or Mn^{++} ions and ≥ 1 nucleoside diphosphate.

In the 3rd method, the microorganism is fermented, the cell mass is sepd. from the culture broth, the cells are broken open and a crude cell extract, or a partially purified polynucleotide-phosphorylase compsn. prepd. from such extract, is suspended in an incubation soln. and incubated in the presence of Mg^{++} or Mn^{++} ions and ≥ 1 nucleoside diphosphate. If significant amts. of enzymes which decompose nucleoside diphosphates are present, these enzymes must be removed before prepn. of the polynucleotide. 5.7.73 as 334314 (5pp927)

FARH D16 08585A/05 = DS 2633-451

Bacterial cell mass protein source for nutrition - prepd. by cultivating *Methylomonas clarus* strain on nutrient media contg. methanol (BE 25.1.78)

HOECHST AG 24.07.76-DT-633451

C03 (D13) (20.12.79) *DT2633-451 C12b-01

Prepn. of bacterial cell material comprises cultivating *Methylomonas clara* ATCC 31226 under aerobic conditions in a nutrient medium contg. methanol as C source, N sources and essential mineral salts. The concn. of methanol is 5-150 (pref. 10-50) ppm based on the wt. of the nutrient medium.

Prod. has a high protein content and also contains fats,

carbohydrates and vitamins. It is useful as a base material for feedstuffs and foodstuffs. Method gives a prod. free from pigments, toxic cpds., residues such as polyhydroxybutyric acid, and secondary metabolites. 24.7.76 as 633451 (5pp927)

SHIS/ D16 26539B/14 #DS 2740-78

Culture media contg. vegetable matter and peat hydrolysates - for high biomass yield cultivation of fodder yeasts

SHISHKOVA Z 08.09.77-GB-037474 (09.09.77-DT-740785)

C03 (D13) (20.12.79) *GB1543-491 C12b-03/08

Culture medium esp. for prodn. of fodder yeast (I) comprises (a) 48-97 wt. % crude vegetable hydrolysate of pH 4.0-4.4, (b) 0.1-50 wt. % peat hydrolysate, (c) 0.02-0.08 wt. % nitrogen source (calculated as nitrogen), (d) 0.03-0.12 wt. % phosphorus source (calculated as P_2O_5), (e) 0.016-0.064 wt. % potassium source (calculated as potassium) and (f) balance water.

The peat hydrolysate is obtd. by hydrolysing high moorland peat in the presence of 18 wt. %, based on the dry peat of conc H_2SO_4 to obtain oligosaccharide. The prod. is diluted with water to acid content 5% then heated at 110-120°C under pressure to convert the oligosaccharide to monosaccharide. The hydrolysate is adjusted to pH 4.0-4.4 and the ppt is sepd.

(I) is used to enhance the vitamin and protein content of fodder and can be obtd. in yields ≥ 70 wt. % using the medium. 9.9.77 as 740785 (4pp945)

KLEI/ D16 64776B/36 = DS 2805-607

Bio-catalyst prodn. in polymer matrix - of crosslinked poly:methacrylamide by two-stage polymerisation, with addn. of microorganisms just before gelation

KLEIN J 10.02.78-DT-805607

A96 B04 (A14) (20.12.79) *DT2805-607 C12d-13/10 C12k-01

Prepn. of biocatalysts by polymer-encapsulation of microorganisms is carried out in a multistage process, the 1st stage of which comprises preparing the following mixts. (A) - (D). (A) consists of (a) a moist or dry cell mass of viable or dead microorganisms; and (b) if necessary, a physiological aq. salt soln. to obtain the required flowability of (a). (B) consists of a soln. or dispersion of (c) methacrylamide in an amt. of 60-90 wt. % based on total of (c) and (d); (d) a water-soluble divinyl cpd. such as N,N'-methylenebisacrylamide as crosslinking agent in an amt. of 10-30 wt. % based on total of (c) and (d); in (e) water, to which acid, alkali or buffer is added to obtain a pH of 7-9 in (B). (C) consists of (f) a water-soluble radical initiator (e.g. peroxide-disulphate) in an amt. of 0.05-2.0 wt. % based on sum of (b) to (g); and (g) water in a ratio of (f) to (g) up to 30:100. (D) consists of (h) a water-immiscible suspension liq.; and (i) a suspension stabiliser in wt. ratio of (h) to (i) of 10000:1-1000.

In the 2nd stage a mixt. of (B) and (C) is polymerised at -5 to +80°C. In the 3rd stage a mixt. of (A) and the mixt. from the 2nd stage just before its gel point is stirred to obtain a uniform distribution. In the 4th stage the system from the 3rd stage (≥ 2 pts. vol) is added to (D) (1 pt. vol. with stirring to obtain a bead-like liq-liq. suspension of aq. in non-aq. phase, and suspension polymerisation is carried out at -5 to +80°C to completion.

In the 5th and final stage the obtd. biocatalyst beads are sepd. from the liq. suspension phase and washed with physiological salt soln. The proportion of relevant components (a) - (i) in stages 1-3 are specified. 10.2.78 as 805607 (8pp927)

OLYU D16 84424A/47 = DS 2820-441

Enzyme reaction rate measurement - with thermistor reading for adjusting temp. correction coefficient

OLYMPUS OPTICAL KK 10.05.77-JA-053596

A89 R16 (20.12.79) *DT2820-441 G01n-31/14 G01n-33/16

The velocity of an enzyme reaction, e.g. in blood, is measured. The extinction (optical density) is measured per time unit taking into consideration the measuring temp. A temp. probe is put directly into the reaction soln. so that alterations in the temp. correction coefft. can be made throughout the measurements.

A suitable appts. comprises a transparent measuring cell in a thermostat block, a source of light and a means for measuring the extinction. A temp. probe in the measu

ing cellis connected to a conversion control to calculate the alterations in the temp. correction coefft. 10.5.78 as 820441 (6pp068)

BOEF ★ D16 00076C/01 ★DT 2825-636
Microbiological test materials e.g. for detecting microorganisms - comprise nutrient substrate covered by selectively permeable polymer film

BOEHRINGER MANNHEIM GMBH 12.06.78-DT-825636
A96 B04 J04 (20.12.79) C12k-01/10
Microbiological test materials comprise a nutrient-impregnated absorbent substrate covered by a film which is permeable to nutrients but impermeable to bacteria. The film is a water-insoluble polymer film produced from an aq. polymer dispersion and modified with one or more pore formers (i.e. cpds. which dissolve or swell on contact with H_2O).

The test materials can be used as a substitute for conventional agar culture media, e.g. for detecting microorganisms in body fluids, foodstuffs or water. They give the same results as agar media but have better storage characteristics and are easier to dispose of by incineration. 12.6.78 as 825636(34pp367)

MUZZ/ ★ D16 00225C/01 ★DT 2923-802
Chitosan-glucan complex from fungal mycelium - by treating with alkali to remove chitin acetyl groups (NL 18.12.79)

MUZZARELLI R 14.06.78-IT-000625
A11 B04 F06 P34 (B07 D13 D22 F09) (20.12.79) A61k-09/48
A611-15 C01b-15/08 C07q-07/02 C08b-37/08 C12b-03/12

Chitosan-glucan complex is new. Also new is the prodn. of this complex by (a) removing lipids and protein materials and simultaneously the acetyl group of the chitin from mycelia of filamentous fungi (such as *Allomyces*, *Aspergillus*, *Penicillium*, *Mucor*, *Phycomyces*, *Choanephora*, *Zygorrhynchus*), yeasts and other mould-fungi and fungi by treatment with strong alkalis (pref. NaOH) in high concentration in water or organic solvents at boiling point or below, and (b) isolating the insoluble polysaccharide phase by usual procedures.

The complex has polyelectrolytic properties, is film-forming and chelating and has high hydrophilicity. It can be used for the production of products and preparations such as membranes, foils, fibres, gums, adhesives, flocculating agents, coagulation agents, carriers for enzymes, chromatographic adsorbents, thickening agents, paper additives, and adjuvants and additives for textiles, glass wool, plastics, dyes, natural and artificial skins, pharmaceutical capsules, wound dressings, cell aggregation, microbiological media, culture media, and foodstuffs for humans and animals. 12.6.79 as 923802(21pp280)

UYDA- ★ D16 00288C/01 ★FR 2419-727
Prepn. of polyvalent anti leprosy vaccine - by culture of at least one form of *Hansens bacillus* and sterilisation

UNIVERSITE DE DAKAR 15.03.78-FR-007416
B04 (16.11.79) A61k-39/02 C12k-05 C12k-09
Polyvalent vaccines against leprosy are prepared from at least one form of *Hansens' bacillus*, i.e. BAAR (acid-resistant bacilli), cyanophilic forms, form 2, form 3, or mixtures of some or all of these forms, obtd. from cultures in suitable selected media, of leprous inoculums which are leprous serums, leprous bacillary suspensions, filtrates of leprous bacillary suspensions not treated with decontaminants, ground leprous tissue, filtrates of BARR cultures lysed on Lowensteins medium, aged BAAR cultures, these inoculums being used alone or in mixts. then transplanting the leprous strains obtd. into a suitable maintenance medium, and stopping the multiplication of the cultures by any appropriate sterilisation technique. The product is then subdivided into unit doses for the prophylactic treatment of leprosy.

The method overcomes the known difficulties of preparing leprosy vaccine. 15.3.78 as 007416 (39pp520)

UYAL- D16 13830A/07 =GB 1558-538
Maltase prepn. which can hydrolyse maltotetraose slowly - useful in amylase assays

UNIV OF ALABAMA 16.11.76-US-742240 (07.10.76-US-730820)
B04 + R16 (03.01.80) *US4071-407 C07h-03/06 + C08b-01/10

An oligosaccharide fraction having no G4 or lower oligosaccharide content is obtd. by adding a yeast and a maltase simultaneously to a source soln. contg. $\geq G4$ and higher oligosaccharides, and then sepg. the yeast and maltase from the soln.

Pref. the source soln. is first treated with the yeast or maltase alone. The yeast used is the baker's or brewer's yeast. *Saccharomyces cerevisiae*, *S. italicus* or *S. uvarum* and the maltase is the Peak II enzyme derived from *Saccharomyces* strain ATCC 20487, which hydrolyses maltotetraose but not higher malto-oligosaccharides.

The process is esp. used to extract a suitable mol. wt. range of oligosaccharides for use as a substrate for amylase assay, without large amts. of glucose, maltose (G_2) and maltotrose (G_3). 4.10.77 as 041257 (7pp931)

BIFO- ★ D16 00375C/01 ★GB 2023-286
Continuous flow analysis device - uses a carrier in which sample is injected and measuring cell provided reaction characteristic

BIFOK AB 14.06.78-SW-006853
J04 R16 (28.12.79) G01n-21/26

The continuous flow analysis device quantitatively determines slowly reacting cpds. using a single measuring cell. The sample is injected at a point into a continuously flowing sample zone in the form of a reproducible gradient. The zone is led into a cell and the flow is stopped by shunting the carrier flow by stopping a pump. The carrier flows via a coil and the sample and carrier flows via another coil to the cell. The coils and the cell are within a thermostat.

When the flow is stopped the reaction occurs in the cell, while the reaction mixt. is measured. The reaction speed can be detected from the incline of the obtd. response curve and the amt. of sought-after cpd. is calculated. By setting the stop at a certain point in the curve and always selecting the point at the same time distance from the peak of the curve during flow a total reproduction of the analysis is ensured.

Useful in the reaction between glucose dehydrogenase and β -D glucose in the kinetic determ. of glucose for investigation and verification of the stop-flow injection principle. 13.6.79 as 0120567 (6pp1371)

FARH ★ D16 00385C/01 ★GB 2023-420
Vaccine comprising *Pasteurella haemolytica* antigen - effective against infections, esp. respiratory diseases produced by *Pasteurella haemolytica*

HOECHST UK LTD 21.06.78-GB-027446
B04 C03 (03.01.80) A61k-39

A vaccine comprising at least one capsular associated antigen obtd. from *Pasteurella haemolytica*, is new. The vaccine may comprise one or more of other microbial antigens, e.g. bacterial cells or fragments, virus, etc. and pref. comprises an adjuvant, generally Al hydroxide, pref. in gel form. An antiserum comprising antibodies directed against the Capsular associated antigen obtd. from *P. haemolytica*, is also claimed, and is obtd. by administering the antigen to an animal, bleeding after a suitable time and prepg. the antiserum from the blood.

The vaccine is active against infections produced by *P. haemolytica*, e.g. respiratory diseases in animals; it has improved immune response and a decreased toxicity. 21.6.78 as 027446 (6pp957)

MITO ★ D16 00658C/01 ★J5 4147-171
Biological treatment of kitchen waste, e.g. vegetable with anaerobe - by feeding via crusher to dissolving liquid, then depositing onto screen and aerating

MITSUBISHI HEAVY IND KK 10.05.78-JA-054415
(17.11.79) A23k-01/10 B01j-01 C12d-03/10

When dissolving liq. is upwardly moved in a hopper, the kitchen refuse is introduced from an outlet through a crusher into a dissolving liq. tank. Then, heavy substances such as glass, metal stones and sand are sepd. and removed from the refuse to be deposited on a screen.

When the dissolving liq. is moved downstream, the kitchen refuse is deposited on the screen to form a uniform layer. Then, the air is heavily supplied to the permeable anaerobe to generate the biological reaction in the refuse mass to prevent the hardening thereof.

The sticky kitchen refuse may be smoothly transferred to permit easy dissolving and treating operation so as to accelerate the biological reaction in the hopper. 10.5.78 as 054415(5pp35)

MARU-★ D16 00748C/01 ★J5 4147-908
Wound treatment compsn. - obtd. by culturing nucleoside phosphotransferase producing strain on clostridium
MARUHO KK 10.05.78-JA-055985
B04 (19.11.79) A61k-37/48 C12d-13/10

Novel compsn. for treating wound, comprises as active ingredient a nucleoside phosphotransferase fraction which is produced by a nucleoside phosphotransferase-producing strain of Clostridium.

The active fraction from Clostridium is applied topically in the form of powder or ointment to the wounded part of patients. It is contained in an amt. of 0.05-1.0% in the compsn.

The active substance can be obtnd. by cultivating Clostridium perfringens (ATCC 21510) in a culture medium of pH 8 at 37°C for 45 hrs. under anaerobic conditions and sepg. an active fraction from the cultured broth by the common method such as extrn., pptn., dialysis, salting-out, chromatography, gel filtration and/or electrophoresis. 10.5.78 as 055985(16pp33)

SUMO ★ D16 00775C/01 ★J5 4147-993
Extraction of urokinase from human urine - by contacting with water-insoluble polysaccharide gel having functional gp. capable of supporting metal ion
SUMITOMO CHEMICAL KK 10.05.78-JA-055832
B04 (19.11.79) C07g-07/02 C12d-13/10

The process comprises contacting water-insol. polysaccharide gel having functional gp. capable of holding metal ion where metal ion is supported, with soln. contg. urokinase such that the metal ion catches the urokinase, then breaking the bond between the functional gp. and metal ion.

Urokinase is useful for treating thrombus or infarction in blood system such as peripheral arterial venous thrombus or cerebral blood-vessel atresia. Urokinase is also used in combination with carcinostatic drug. Recovery of urokinase from human urine is improved. 10.5.78 as 055832(5pp69)

AGEN ★ D16 00776C/01 ★J5 4147-994
Bacterial prodn. of beta-amylase and alpha-1,6 glucosidase - by culturing Bacillus bacteria in medium contg. organo-nitrogen source, manganese cpd. and ammonium salt to increase amylase yield

AGENCY OF IND SCI TECH 11.05.78-JA-056001
(D17) (19.11.79) C12d-13/10

Prodn. of bacterial β -amylase (I) and α -1,6-glucosidase (II), comprises incubation of bacteria (III) belonging to Bacillus, which can produce (I) and (II), in a culture medium contg. organic nitrogen source, Mn cpd. (IV) and ammonium salt (V).

Pref. (IV) is Mn sulphate, chloride, phosphate, nitrate, formate, etc. and (V) is ammonium chloride, phosphate or nitrate. The concs. of (IV) and (V) in the culture medium are 1×10^{-6} - 1×10^{-3} and 0.05-0.5 M, respectively. An example of (III) is Bacillus cereus var. mycoides (FERM-P No. 2391).

(I) is used for hydrolysis of amylose and amylopectin, to produce maltose. (II) hydrolyses α -1,6-glucosidic linkages in amylopectin, limit dextrin and pullulan. Both (I) and (II) are used for prodn. of maltose by hydrolysis of starch. The addn. of (IV) to culture medium is effective to increase the yield of (II). The addn. of (V) to the culture medium, increases (I)-yield. 11.5.78 as 056001(4pp42)

AGEN ★ D16 00777C/01 ★J5 4147-995
Prodn. of beta-amylase and alpha-1,6-glucosidase - by culturing Bacillus bacteria in medium contg. manganese cpd., calcium salt and organic nitrogen source
AGENCY OF IND SCI TECH 11.05.78-JA-056002
(D17) (19.11.79) C12d-13/10

Prodn. of beta-amylase (I) and alpha-1,6-glucosidase (II), comprises incubation of bacteria (III) belonging to Bacillus which can produce (I) and (II), in a culture medium contg. organic nitrogen source, manganese cpd. (IV) and calcium salt (V).

(I) is used for hydrolysis of amylose and amylopectin, to produce maltose. (II) hydrolyses alpha-1,6-glucosidic linkages in amylopectin, limit dextrin and pullulan. Both (I) and (II) are used for prodn. of maltose by hydrolysis of starch. Addn. of (IV) to culture medium is effective for increase of yield of (II). Addn. of (V) to the culture medium, is effective for increase of (I)-yield.

Pref. (IV) is manganese sulphate, chloride, phosphate, nitrate, formate, etc. Pref. (V) is calcium chloride. 11.5.78 as 056002(4pp42)

AGEN ★ D16 00778C/01 ★J5 4147-996
Bacterial beta-amylase prodn. - by incubating bacillus bacteria in medium contg. organic nitrogen source treated with alkaline earth metal hydroxide or salt

AGENCY OF IND SCI TECH 11.05.78-JA-056003
(D17) (19.11.79) C12d-13/10

Bacterial beta-amylase (I) is prepd. by incubating bacteria (II) belonging to Bacillus in a culture medium contg. organic N source (III), which has been pre-treated with alkaline earth metal hydroxide (IV) or water-sol. alkaline earth metal salt (V).

(I) is used for prodn. of maltose by hydrolysis of amylose, amylopectin, dextrin and glycogen. The yield of (I) can be increased. The treatment of (III) with (IV) or (V) removes cpds. which inhibit prodn. of (I).

Pref. (II) is Bacillus cereus var. mycoides (FERM-P No. 2391), Bacillus polymyxa or Bacillus megatherium; (III) is meat extract, fish extract, soy bean casein, milk casein, peptone, defatted soy bean extract etc.; (V) is chloride, nitrate or other salt of calcium, barium, strontium etc.; and the cpds. which inhibit prodn. of (I) are sulphates, sulphites and heavy metal cpds. 11.5.78 as 056003(4pp)

MITU ★ D16 00779C/01 ★J5 4147-998
9:Alpha-hydroxy-androst-4-ene-3,17-dione prodn. - by cultivating Corynebacterium microorganisms in medium contg. androst-4-ene-3,17-dione

MITSUBISHI CHEM IND KK 08.05.78-JA-054265
B01 (19.11.79) C12d-13

Prodn. of 9 α -hydroxy-androst-4-ene-3,17-dione (I), comprises incubation of microorganism (II) belonging to Corynebacterium in a culture medium contg. androst-4-ene-3,17-dione (III).

Pref. (II) is Corynebacterium equi (ATCC 6939, 7698, 7699, etc. and IAM 1038). (III) is produced by incubation of microorganism such as Mycobacterium parafortuitum complex (MCI-0807), Norcardia aliena (MCI-0710, -0711), in culture medium contg. sterols, such as sterol, C-3 esterified sterol, C-3 etherified sterol. (II) is used after inducing the enzyme by treatment of (II) in a culture medium contg. (III). The culture medium contains carbon source, such as hydrocarbon, alcohol, fatty acid, saccharide, etc. nitrogen source, such as distillers solubles, gluten, yeast extract, etc. and inorganic salts, such as ammonium sulphate, potassium dihydrogen phosphate, etc. 8.5.78 as 054265(9pp42)

CHUS ★ D16 00780C/01 ★J5 4147-999
Antibiotic dihydroabikoviromycin - by culturing fungi of Streptomyces genus
CHUGAI PHARMACEUTICAL KK 13.05.78-JA-056162
B04 (19.11.79) C12d-09/14

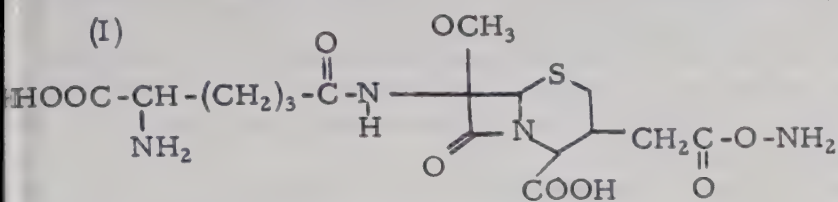
The process comprises culturing dihydroabikoviromycin-producing fungi of Streptomyces genus in nutrient culture medium and separating dihydroabikoviromycin from culture mixt.

The microorganism is e.g. Streptomyces SP No. 85 strain sepd. from soil at Tokyo prefecture Tama City, the strain is deposited as FERM-P 4401. Physicochemical properties and biological properties of resultant dihydroabikoviromycin hydrochloride are described. 13.5.78 as 056162(8pp69)

AJIN ★ D16 00781C/01 ★J5 4148-000
Antibiotic cephamycin C prodn. - by culture of Streptomyces inositolivorus microorganism
AJINOMOTO KK 08.05.78-JA-054243
B02 (19.11.79) C12d-09/14

Prodn. of Cephamycin C comprises culturing fungi of Streptomyces

Streptomyces inositolivorus Cephameycin C is a 7-methoxycephalosporin and has formula (I). It has strong antibacterial effect



on Gram negative bacteria. It is difficult to decompose by means of β -lactamase, and is effective against bacteria resistant to β -lactam antibiotics such as penicillin or cephalosporin.

It is *Streptomyces inositolivorus* AJ 9408 accumulates Cephameycin C in culture liquor. The nov. sp. is deposited as FERM-P 4482. 8.5.78 as 054243 (6pp69)

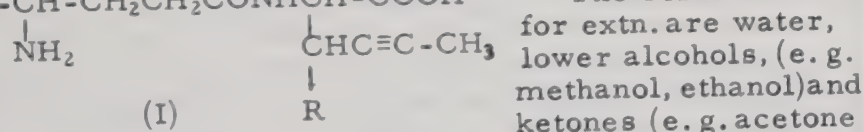
AMS D16 15114A/08 = J7 9040-636
Culturing of mould, e.g. *Penicillium*, *Rhizopus* or *Mucor* - adding 3',5'-cyclo-adenylic acid or its salt to accelerate mould germination
YAMASA SHOYU KK 00.00.77-JA-061218 (23.10.73-JA-118459)
(04.12.79) *J53003-581 C12d-13/10 C12k-01

The method comprises culturing mould (except *Aspergillus*) in a culture medium, in which 3',5'-cycloadenylic acid (I) or its salt is added. By adding (I) its salt to solid or liquid culture medium the germination of moulds can be accelerated by simple method.

Suitable salts of (I) include alkali(ne earth) metal salt, and organic amine salt. (I) or salts are added in amt. 1.0 mg - 10g (5 mg-5g) in 1 litre of liquid culture medium of 1 kg solid culture medium. 23.10.73 as 61218/77, Div. ex. 118459/73, C12k-1/00, C12d-13/10 (4.12.79) YAMASA SHOYU KK (3pp5) (J5 3003581)

MITU D16 42310Y/24 = J7 9040-637
Glutamylamino hexynoic acid and/or -hydroxy hexynoic acid prodn. - by extraction from Basidiomycetes of genus *Tricholomopsis*
MITSUBISHI CHEM IND KK 28.10.75-JA-129493
B05 (04.12.79) *J52054-084 C12d-13/06 + C07c-101/02

Novel 2- γ -glutamylamino-4-hexynoic acid (I where R = H) and/or 2- γ -glutamylamino-3-hydroxy-4-hexynoic acid (I, where R = OH), are prepd. by extn. from Basidiomycetes belonging to the Genus of *Tricholomopsis* using a solvent, HOOC-CH-CH₂CH₂CONHCH-COOH



(methyl ethyl ketone). Prefd. solvent is a mixt. of water and lower alcohol. The extn. is effected at normal temp. or under heating. The extract is submitted to chromatography or recrystallisation to give the purified prod. (I) are expected to show physiological activities. 28.10.75 as 129493, C12d-13/06, C07c-101/02 (4.12.79) MITSUBISHI CHEM IND. KK (4pp33) (J52054084)

MITU D16 42311Y/24 = J7 9040-638
Amino acids prodn. - by extracting Basidiomycetes culture with solvent e.g. water, lower alcohol, and purifying by chromatography or recrystallisation
MITSUBISHI CHEM IND KK 28.10.75-JA-129494
B05 E16 (04.12.79) *J52054-085 C07c-101/04 C12d-13/06

An amino acid of formula R-CH₂-CH(NH₂)-COOH (I) (where R is vinyl, ethynyl, 1-propynyl or 1-butene-3-ynyl), is prepd. by extraction from a (I)-producing amino acid Basidiomycetes belonging to the *Amanita* species. The extraction is effected using a solvent such as water, methanol, ethanol, acetone, methyl ethyl ketone or a mixed solvent of these at room temp.

Cpd. (I) is expected to show physiological activities. In an example 2-amino-4-pentynoic acid 2-amino-4-heptene-6-ynoic acid, 2-amino-4-hexynoic acid and 2-amino-4-pentenoic acid was obtd. by extraction of *Amanita pseudoporphyria* Hongo with 80% ethanol. 28.10.75 as 129494, C12d-13/06, C07c-101/04 (4.12.79) MITSUBISHI CHEM. IND. KK (5pp) (J5 2054085)

LEPE

D16

05629X/04 = NL-162-429

Anti-bacterial rifamycins P, Q, R and U prepn. - by aerobic fermentation of *Nocardia mediterranea* mutants

GRUPPO LEPETIT SPA 30.08.74-GB-037913

B02 (17.12.79) *BE-832-921 C12d-09/14

New group of reframycins, named resp. P, Q, R and U are produced by culturing a mutant of *Nocardia mediterranea* to form the mixt. of refamycins and then isolating the individual components. Microorganism strains used are e.g. *N. mediterranea* ATCC 31064 or 31065 and 310-66 which produce yields of the same order of magnitude. 25.8.75 as 009998 (15pp913)

CELL-

D16

74974U/49 = NL-162-430

Cell culture appts - comprising permeable capillary with circulating nutrient medium

CELLCO INC (CEL-) 18.05.72-US-254678

(17.12.79) *NL7306-659 C12k-09

Appts. for growing and preserving cells in a tissue culture in vitro comprises an enclosed chamber with a sealed-in constructed tubular membrane, permeable for the nutrient required by the cells and the prods. formed by them. The tube separates the chamber into two compartments, and nutrient is supplied through it. The living cells of the tissue culture is maintained in a nutrient base in the compartment around the tube.

The tube comprises at least two mutually parallel capillaries having a number of walls which are permeable to nutrient and/or cell prods. of high mol. wt., and a number of walls permeable to gas. The capillaries are so placed that the extra capillary is large enough for three dimensional growth of a large number of cells, but no so large that the growth on a capillary is no longer influenced by at least one other capillary.

Pref. the capillaries are made from cellulose acetate and silicon polycarbonate. 14.5.73 as 006659 (8pp913)

ENER-★

D16

C/01 ★PT--69-441

Simultaneous sepn. of alcohol and conc. residues from wine - using multiple-phase evaporator

APLICACIONES ENERGIA 06.04.79-PT-069441

(06.12.79) C12f

SNAM

D16

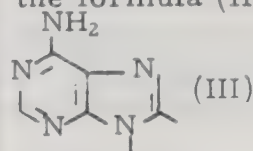
06130Y/04 = SU-656-520

Adenosine derivs. with 8-omega-carbonyl side chain and prepn. - from 8-halo deriv. and mercapto carboxylate and opt. amino-substd. polymer (BE1701)

SNAMPROGETTI SPA 15.07.75-IT-025419

A97 B02 (05.04.79) *DT2631-046 + C07d-473/34

New adenine derivs. (I) have an omega-carboxyl side chain in the 8-posn. (I) includes cpds. contg. unit(s) of the form -ula A-S-(CH₂)_n-CO-N= (in which n is an integer, A has the formula (III):-



and is a deriv. of a cpd. (II) with an adenine ring. The N atom bound to the CO gp. is part of a high-mol. cpd.). The claims also cover the prepn. of (I) (a).

by reacting an 8-halo-deriv. of (II) with a cpd. of the formula M⁺S-(CH₂)_n-COO⁻-M⁺ (in which M⁺ is an alkali ion); and (b) by reacting the cpd. of the formula A-S-(CH₂)_n-COOH with a polymer with prim. or sec. amino gp(s).

The novel derivs. are used in biochemistry, e.g. as non-diffusing co-enzyme or an affinity chromatography.

Reaction (a) takes place in a polar aprotic solvent at 20-60°C and reaction (b) in the presence of a water-soluble or insol. carbodiimide as condensing agent and/or water and opt. a water-soluble organic solvent at 5-50°C. In an example, a soln. of 380 mg (1.1 mole) 8-bromo-adenosine in 5 ml. anhyd. PO(NH₂)₃ was treated with 633 mg. (4.2 m mole) NaS(CH₂)₂COONa and stirred 16 hr. at room temp. under dry N₂. 327 mg 8-(2-carboxymethylthio)-adenosine were recovered from the prod.

Giappelli, P., Rossodivita, A., Pappa, R. et al. Bul. 13/5.4.79. 15.7.76 as 381802 (3pp)

BEEC

D16

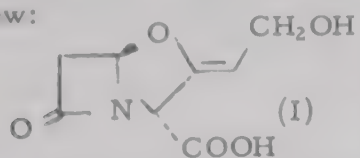
72840W/44 = SU-656-522

Clavulanic acids and derivs - as antibacterials and beta-lactamase inhibitors prepd from *Streptomyces clavuligerus*

BEECHAM GROUP LTD 09.10.74-GB-043651

B02 C02 (05.04.79) *DT2517-316 C07d-498/04 + A61k-31/58

Clavulanic acid of formula (I) and its salts and esters are new:



(I) is prep'd. by cultivating *Streptomyces clavuligerus* esp. ATCC 27064. (I) has antibacterial activity and inhibits β -lactamase so synergises the activity of penicillins and cephalosporins against

β -lactamase synthesising bacteria. It may be used in human or veterinary medicine.

Coule, M., Haworth, T.T., Riding, C. Bul. 13/5.4.79. 30.1.76 as 129801 (5pp)

KOCK D16 80304V/46 =SU -656-527
Enzyme substrate compositions with high activity - e.g. of glycerol tricaprionate adsorbed onto inert carrier useful for making food storage indicators

KOCKUMS CHEM AB (FOOD-) 25.04.73-US-354412

E17 R16 (D13) (09.04.79) *NL7405-543 C07g-07/02

Compsns. comprises (a) a solid inert carrier with a surface of $\geq 50 \text{ m}^2/\text{g}$, pref. $\geq 200 \text{ m}^2/\text{g}$ and (b) a layer contg. a substrate for the enzyme (esp. glycerol tricaprionate) bound to the carrier by adsorption and which is difficultly soluble in water and stable in the absence of the corresponding enzyme. The layer may also contain diluents such as mineral oils, higher aliphatic alcohols, polyols etc. and viscosity modifiers such as metal soaps (e.g. Al stearate). Products are useful in combination with suitable enzymes and pH indicators to indicate the storage condition (acid prodn.) of foods such as refrigerated and deep frozen foods.

Blikst, K.G., Ternmark, S.I.A., Yuchlin, R. et al. Bul. 13/5.4.79. 24.4.74 as 023701 (4pp)

GIDR = * D16 01312C/01 ★SU -657-059
Cultivating yeasts in nutrient medium - contg. mother liquor from cotton-seed filter cake, ammonium phosphate and water, used in food industry

GIDROLISFROM DES 21.07.77-SU-508935

(15.04.79) C12b-03/12 C12c-11/08

Yeasts are cultivated in nutrient media contg. sources of carbon, nitrogen, phosphorus, mineral substances and water.

Inexpensive nutrient medium can be prep'd. using as a source of carbon and mineral substances a mother liquor obtd. from the filter cake of cotton seeds, after sepn. of the oil, proteins and phytin. Ammonium phosphate is used as a source of nitrogen and phosphorus. The compsn. contains (in g/l) mother liquor of cotton seeds 24-30 (calculated as dry substance) ammonium phosphate 3-6; the balance is water.

Stakhorskaya, L.K., Maisheva, L.K., Shakirov, T.T. et al. Bul. 14/15.4.79. 21.7.77 as 508935 (2pp70)

VOTE = * D16 01313C/01 ★SU -657-060
Activating pressed yeasts for use in bakery or confectionery - by soaking in nutrient medium contg. acid wort concentrate and mono:potassium or di:potassium phosphate salt

VORO TECHNOL INST 06.06.77-SU-494486

(D11 D13) (16.04.79) C12c-11/26

Pressed yeasts are activated, for use in bakery or confectionery, by soaking in a nutrient soln.

This process is intensified by using as a nutrient medium a mixt. of a concentrate of acid wort and mono- or dipotassium phosphate, and keeping the yeasts in this mixt. for 45-60 min. at 32-34°C under aerobic conditions. By this method, the yeast activation time is shortened by 20-30%. The nutrient medium is inexpensive.

Derkanosov, N.I., Pashchenko, L.P. Bul. 14/15.4.79. 6.6.77 as 494486 (2pp70)

YALO = * D16 01314C/01 ★SU -657-061
Maturing sherry by actinic irradiation and contact with oak wood - intensified by introduction of wine yeast autolysate and additional storage under oxygen-free conditions

YALOVENY AGR IND AS 06.09.76-SU-401036

(16.04.79) C12h-01/22

Sherry can be matured by the action of actinic radiation; subsequently, the sherry is cooled and stored in contact with some oak wood.

The process is intensified and the quality of the product is improved by introducing into the sherry, after the cool-

ing, 0.5-1.0 vol.% of an autolysate of wine yeasts, heating the sherry at 40-45°C for 10-20 days, and then cooling to 15-25°C. After the storage in contact with oak wood (e.g. 12 months at 18°C), additional storage (e.g. 6 months) is applied under oxygen-free conditions under an inert gas (e.g. N_2). The ratio of the two storage periods is 2:1 to 3:1 respectively.

The method is suitable for the maturing of dry sherry. Khachatryan, R.P., Kozub, G.I., Averbukh, B.Ya. et al. Bul. 14/15.4.79. 6.9.76 as 401036 (2pp70)

AUCO = * D16 01316C/01 ★SU -657-062
Pseudomonas strain for decomposing alkyl sulphate s) in effluents - is used for effluents from textile factories contg. high concn. of sodium dodecyl sulphate

AS UKR COLL CHEM 09.11.77-SU-546016

F06 (D15) (16.04.79) C12k-01/02

Strain *Pseudomonas* sp. 1C can be used for purification of aq. effluents, esp. of detergent effluents contg. alkyl sulphates from textile factories.

This strain is capable of decomposing sodium dodecyl sulphate in higher concentrations (up to 7 g/l) than *Citrobacter freundii* 2T used for this purpose heretofore (up to 3 g/l). The strain *Pseudomonas* sp. 1C was found in the effluent-purifying plant in Kiev.

Pseudomonas sp. 1C appears in the form of straight or slightly bent rods, single or forming short chains. The strain is gram-negative. It does not form spores or capsules. The oxidase test is positive; the strain produces lecithinase and gelatinase. The strain produces levan from saccharose; assimilates mineral forms of nitrogen; assimilates glucose, arabinose, xylose. The strain is aerobic. Optimal cultivation temp. is 28-30°C. Suitable cultivation media include meat-peptone agar or broth. In mineral medium technical alkyl sulphates are decomposed in concn. up to 1 g/l.

Stavskaya, S.S., Krivets, I.A., Samoilenko, L.S. et al. Bul. 14/15.4.79. 9.11.77 as 546016 (2pp70)

SOIL = * D16 01378C/01 ★SU -657-34-
Soil nitrate or nitrite reductase determination - includes pretreatment of sample with alkali metal hydro-sulphate and nitrate or nitrite for accuracy and speed

SOIL INST 21.11.75-SU-192042

R16 (20.04.79) G01n-31/14 G01n-33/24

Extracellular nitrate-reductase and nitrite-reductase enzymes determination in soil (e.g. colorimetrically), includes treatment of soil sample with alkali metal hydro-sulphate as electron donor and alkali metal nitrate or nitrite as electron acceptor followed by holding of the resulting mixt. in anaerobic conditions at pH 7.8-8.4 and 20-25°C for 15-60 mins. prior to analysis. The soil sample pretreatment improves accuracy of determination of enzymatic activity in soil. The method is useful in the evaluation of activity of nitrogen fixing bacteria in soil.

The pretreatment simplifies and accelerates analytical procedure and is used in micro-biology and enzymology. With some soil samples enzyme inhibitor (e.g. NaF) must be used.

Ilna, T.K., Negru-Vode, V.V., Vasilenko, E.C. Bul. 14/15.4.79. 21.11.75 as 192042 (2pp938)

SCHW- D16 09287X/06 =SU -657-73-
Determination of iso-enzymes of lactate dehydrogenase - by transformation of lactate and of nicotinamide adenine dinucleotide with pyruvate at specific pH values

SCHWARTZHAUPT KG 12.09.74-DT-443741

B04 R16 + P31 (18.04.79) *BE-833-348 A61b-10

Method is described for determination of the iso-enzymes of the lactate dehydrogenase (LDH), esp. enzymes 4 and 5 either singly or mixed with each other or with other iso-enzymes. The lactate is transformed with nicotinamide-adenine-dinucleotide (NAD^+) into the pyruvate at a specific pH value for a given buffer, esp. at pH values in the range 6 to 6.5. A diagnostic procedure is described also for the determination of pathological changes inside the female genital tract.

Lamprecht, W. Bul. 14/15.4.79. 9.9.76 as 171403 (3pp)

VTU = ★ D16 01393C/01 ★ SU -657-826
Mycobacterium tuberculosis in blood or sputum determ. - includes
treating inoculated culture medium in pulsating magnetic field
SVERD TUBERCULOSIS 01.09.76-SU-397937
B04 P31 P34 (08.05.79) A61b-10 A61n-01/42

Mycobacterium tuberculosis strain presence in blood or
sputum sample is evaluated microbiologically by incubating
test material with nutrient medium at 37°C and comparing
results with the standard sample.

The mycobacterium inoculum growth in the nutrient med-
ium is accelerated producing uniform size colonies if the
inoculated nutrient is subjected for 2.2-3.2 hrs. to pulsat-
ing magnetic field action. The magnetic field strength is
100-3200 Oe (pref. 2000 Oe) produced by electromagnet
using full wave rectified 50 Hz ac voltage.

Gavrilov, S.A., Mordovskoi, G.G., Kosienko, M.A. et al
Bul. 15/25.4.79. 1.9.76 as 397937 (2pp938)

DDFO = ★ D16 01469C/01 ★ SU -658-166
Grape or berry pulp juice extractor - has eccentric sleeve connecting
ribbed bush of perforated drum with auger shaft

ODESS FOOD IND TECH 22.06.77-SU-498488
P71 (25.04.79) B30b-09/16 C12g-01/02

The yield of juice is increased and the quality of juice is
improved by an eccentric sleeve connecting the ribbed bush
of the perforated drum with the auger shaft.

The pulp from the hopper is subject to increased press-
ure during the interaction of the auger and the perforated
cylinder. The position of the eccentric sleeve places its
projection in antiphase with respect to the end of the
pressing flight of the auger blade.

As a result, the pulp at the tip of the pressing blade is
not squeezed between the outer and inner perforated cylind-
ers, and it enters the press chamber without restraint.
The inner perforated cylinder on the rotating eccentric
sleeve carries out a planetary motion and gradually com-
pacts the pulp.

Ivanenko, A.V., Kitnashvili, A.N. Bul. 15/25.4.79.
22.6.77 as 498488 (2pp89)

LUKA/ ★ D16 01564C/01 ★ US 4179-266
Culturing fungi for microscopic examination - maintaining sterility
of culture medium and cover slip until ready for use
LUKACSEK P A 27.10.77-US-845897 (22.04.77-US-789773)
(18.12.79) C12b-01

Fungi are cultured preparatory to microscopic examin-
ation by removing a cover from a base formed of optically
clear material and then removing a sealing membrane to
expose a culture nutrient medium. This is in jelled form
and is contained within a compartment in the base. The
jelled material fills the compartment to a level flush with
the planar top surface of the base.

A fungi is inoculated into the culture medium and a cov-
er slip is placed to rest on the planar top surface to seal
the compartment and to be in contact with the culture
medium. The fungi are incubated for development of
fungal growth on the culture medium and on the downward-
ly facing surface of the cover slip.

The method is used to prepare a fungi for microscopic
examination. The possibility of contamination of the cul-
tured fungi is considerably reduced. 27.10.77 as 845897
(6pp295)

RETO ★ D16 01596C/01 ★ US 4179-335
Microbiological thermostable lactase prepn. - by culture of Bacillus
coagulans strains
REYNOLDS R J IND INC 23.02.76-US-660094 (04.12.74-US-
529329)

(D13) (18.12.79) C12d-13/10
Lactase (I) of improved thermal stability is prepd. by cul-
tivation of Bacillus coagulans on a suitable nutrient med-
ium. (I) retains a substantial amt. of its activity after 4
1 hr. at 60° (as determined by assaying the activity associ-
ated with washed cells of the organism in 0.05M phosphate
buffer of pH 7 in the presence of o-nitrophenyl-β-galacto-
side).

(I) has improved heat stability and is effective in hyd-
rolysing lactose (I) in milk and milk prods. at higher
temps. which discourage bacterial growth. Hydrolysis of
(II) (to glucose and galactose) increases the sweetness of
the prods., and allows them to be consumed by persons

suffering from lactose intolerance.

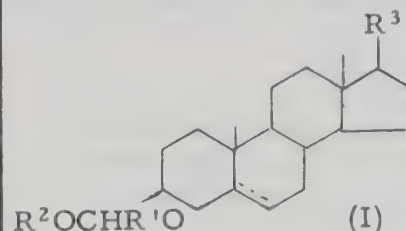
B. coagulans strain is pref. NRRL B-8100, and is cul-
tured at 25-60°, pref. 45-50°. Hydrolysis of (II) with (I)
is pref. at 45-65°/pH 4.8-8.0. 23.1.76 as 660094 (4pp)

SCHD D16 06352A/04 = US 4179-336
Androstan-(17)-one derivs. prodn. by fermentation - of sterol cpds.
to degrade the side chain, useful as intermediates for
pharmaceutically active steroid cpds.

SCHERING AG 16.07.76-DT-632677

B01 (18.12.79) *BE-856-860 + C07b-29/02

17-Keto steroids of the androstane series are produced by
subjecting a sterol 3-ocetal of formula (I) to the oxidative
degradation activity of the culture of microorganism which
degrades sterol side chains to the 17-keto gp., the fer-
mentation being conducted in the absence of an inhibitor
which inhibits attack on the ring system. In the formula,
---- is a single or double bond; R' is H or lower alkyl;
R² is alkyl, whose chain is opt. interrupted by an O atom,
and R³ is a sterol side chain.



The androstan-17-one de-
rivs. produced are intermed-
iates for the prodn. of phar-
macologically active ster-
oids. For example, they
may be cleaned in the pre-
sence of H⁺ ions or Lewis
acids to produce 3β-hydroxy
-5-androstan-17-one and

3β-hydroxy-5α-androstan-17-one respectively. 6.7.77 as
813391 (8pp990)

DAVI/ ★ D16 01597C/01 ★ US 4179-337
Non-immunogenic peptide compsn. - obtd. by coupling peptides to
poly: alkylene glycol cpds.

DAVIS F F 28.07.77-US-819831 (20.07.73-US-381191)

A96 B04 (18.12.79) A61k-37/26 C07g-07

Peptide compsn. (I) comprises a physiologically active
polypeptide (II) coupled to a linear polymer (III) of mole-
cular wt. 500-20000 daltons. (III) is polyethylene glycol
or polypropylene glycol (both opt. substd. by 1-4C alkyl
or alkoxy).

(I) are water-soluble non-immunogenic while retaining
a large part of the original activity of (I) when injected into
the mammalian circulatory system. (II) include enzymes
and esp. insulin.

Use of (III) having a mol. wt. of 750-2000 dalton, esp.
polyethylene glycol, with 10-100 polymer moieties coupled
with (II), esp. insulin is pref. Other prods. (II) include
ACTH, glucagon, somatostatin, somatotropin, thymosin
parathyroid hormone, pigmentary hormones, somatomedin,
erythropoietin, luteinising hormone, chorionic gonadotrop-
in, hypothalamic releasing factors, antidiuretic hormones,
TSH and prolactin. 28.7.77 as 819831 (+17.7.75-US-
596931)(12pp1248)

GORD/ ★ D16 01598C/01 ★ US 4179-338
Microbiological medium sterilisable by ionising radiation - contg.
buffer soln., nutrients, and electron acceptor

GORDON M R 27.04.78-US-900791 (19.09.77-US-834169)

(18.12.79) C12k-01

Microbiological medium consists of a buffer soln. contg.
nutrients for microorganisms, and an electron acceptor
(I). (I) consists of (a) α- or β-nicotinamide adenine di-
nucleotide reduced form, di-Na (NADH); and (b) one cpd.
from β-nicotinamide mononucleotide (or reduced form, di-
Na), α- or β-nicotinamide adenine dinucleotide (NAD),
pyridoxine HCl, pyridoxal-5-phosphate HCl, nicotinamide,
adenine dinucleotide phosphate (NADP), cytochrome C, or
nicotinamide 1,N⁶-etheno adenine dinucleotide phosphate.

Use of (I) in the medium reduces the adverse changes
that are known to occur in media exposed to radiation, and
increases the degree of ionisation caused by the radiation
so that more microorganisms are killed. In addn., the
medium has less H₂O loss due to dessication during stor-
age and less surface syneresis and is hence stable to stor-
age at room temp. for ≤ 2 years. 27.4.78 as 900791
(5pp478)

OLYU D16 65664A/37 = US 4179-339
Fluid feed device for automatic incubator - with detachable pipe inlets and swivelling dispenser

OLYMPUS OPTICAL KK 05.04.77-JA-U41592 (02.03.77-JA-U24766)

A88 (18.12.79) *DT2809-032 C12k-01/10

A liq. feeder for automatic culture appts. includes a liq. storage container, a suction pump for withdrawing liq. from the container, a tube connecting the pump outlet to an incubator and a tube fitting in the incubator wall having an outer pipe hermetically secured to the wall and an inner pipe hermetically and detachably secured to the outer pipe.

The tube from the pump extends through the inner pipe and is surrounded by a silicone filler which seals the tube to the inner pipe. A standard and automatic culture method is possible. 13.2.78 as 876894 (+5.4.77-JA-041589)(12pp1376)

BEEC D16 72175X/39 = US 4179-498
Antibiotic MM 17880 from streptomyces olivaceus - active against gram positive and negative bacteria, synergistic with ampicillin and amoxycillin

BEECHAM GROUP LTD 15.03.75-GB-010914

B04 (18.12.79) *BE-839-324 A61k-25

Pharmaceutically acceptable dibasic salts of MM 17880 are claimed, which are $\geq 75\%$ pure when MM 17880 is a di-acidic solid of formula $C_{11-14}H_{18-23}O_{8-11}N_2S_2$.

In the form of pure di-Na salt, it has the following properties: (a) it has characteristic IR and NMR spectra, and a UV max. of 297 nm in water; (b) it has antibacterial activity against gram-positive and -negative organisms including *B. subtilis*, *Euterobacter cloacal*, *E. coli*, *Klebsiella aerogenes*, *Proteus minabilis*, *Salmonella typhimurium*, *Serratia marcescens* and *S. aureus*; and (c) when mixed with ampicillin or amoxycillin it synergises their antibacterial activity, esp. against *S. aureus* and *Klebsiella aerogenes*. MM 17880 is obtd. by cultivating strains of *Streptomyces olivaceus*. 24.8.76 as 717336 (+8.3.76-US-664917)(9pp997)

ZAID D16 09548X/06 = US 4179-573
Peptidase-inhibitor bestatin - produced by cultivating bestatin-producing streptomyces

ZH BISEIBUTSU KAGAKU KEN 01.07.74-JA-075090

B05 (18.12.79) *DT2528-984 C07c-101/72

(2S, 3R)-3-Amino-2-hydroxy-4-phenylbutanoic acid (I) is claimed. (I) is prepd. by the hydrolysis of bestatin, $[2S, 3R)$ -3-amino-2-hydroxy-4-phenylbutanoyl]-L-leucine, obtd. by cultivating a strain of *Streptomyces* in a nutrient medium under aerobic conditions. Pref. strain is *S. olivoreticuli* FERM-P No. 2590 (ATCC 31159).

Bestatin inhibits aminopeptidase *B. leucine* aminopeptidase and bleomycin hydrolase and enhances the anti-tumour activity of bleomycin. (I) yield acid salts which are more soluble in water than bestatin. 19.8.77 as 825997 Div. ex. 4052449 (+30.6.75, 27.5.76-US-591924, 690457) (7pp924)

ASBI = ★ D16 01727C/01 ★ WP 7901-137
Stabilisation of immobilised proteins - by freeze-drying in presence of filler

AS USSR BIORG CHEM (KOZL/) 29.05.78-SU-620877

A96 B04 (27.12.79) C07g-07

D/S: N(CH, DT, GB, SW, US).

Stabilisation of immobilised proteins (for storage and/or transport) is effected by freeze-drying a suspension of the immobilised protein in water or a buffer soln. in the presence of an inert water-soluble solid filler.

The process can be applied to immobilised enzymes, biospecific sorbents (e.g. for affinity chromatography) and immunoassay reagents (immobilised antigens or antibodies).

Addn. of the filler significantly reduces the loss of activity occurring during freeze-drying.

13.4.79 as SU0017 (12pp367).

(R)ISR: US3133001; 1 Journal Reference.

DEUT/ D16 92201B/51 = WP 7901-147
Microporous element with tapered penetrations in each layer - induces flow of fluid through element without additional driving energy and without osmosis effect

DEUTSCH D H 14.05.79-US-038586 (30.05.78-US-910110)

J01 + Q56 (27.12.79) *NL7904-243 B01d-31 + F04b-39

D/S: N(BR, CH, DT, GB, JA, SU, SW).

Microporous element comprises ≥ 3 bonded layers, each layer contg. tapered, hollow penetrations. The larger ends of the hollow penetrations all terminate in one face whilst the narrower ends terminate in the opposite face, adjoining layers being so oriented that all the penetrations taper in the same direction. A fluid passing through the element passes through $\leq 10 \times 10^6$ hollows in sequence.

Depending on the application, the total thickness of the composite element lies between 0.001 microns and 100 cms, whilst the average distance between adjacent pores across the surface of a layer is between 0.001 and 100 microns. The construction of the element is such that a gas or liq. in which the element is placed is caused to flow through the element without the use of any additional energy and without the necessity of a difference in concn. across the element creating an osmosis effect.

The element induces the flow of the fluid for which it is constructed without the use of additional energy. It is partic. useful for cleaning the gaseous discharge from a chimney, inducing an atmosphere change in a biological reaction vessel without permitting the passage of liquid, or inducing the flow of a liq. in a reaction system.

29.5.79 as US0363 (22pp1370).

(E)ISR: US3839201; US3158532; US4026977; US3988245; US3764018; US4147480; US4147481.

BIBB/ ★ D16 01732C/01 ★ WP 7901-169
Streptomyces plasmid useful as DNA vector - derived from *Streptomyces lividans* strains

BIBB M J 25.05.79-GB-018420 (01.06.78-GB-026219)

B04 (27.12.79) C12k-01/02 C12k-03

Intermediate Priority: 26.4.79 -GB-14519.

D/S: N(JA, US).

New *Streptomyces* plasmids (I) are characterised in that when present in non-integrated form in a *Streptomyces lividans* strain, (I) impart the properties of (a) forming pocks when grown on a lawn of *S. lividans* NC1B 11416 and (b) not forming pocks when grown on a lawn of *S. libidans* NC1B 11417.

Streptomyces lividans strains having properties (a) and (b) and plasmids derivable from (I) by removal or addn. of DNA, are also new.

The new plasmids are useful as vectors for introducing additional DNA into *Streptomyces* microorganisms. 1.6.79. as GB 0095 (31pp367).

(E)ISR: 6 Journal References.

See Also

D13 DT 2924076

D13 J7 9040626

D13 SU 657035

D15 J7 9039665

D15 J7 9039802

D17 J7 9040617

D17 NL 162431

D21 US 4179333

D22 NL 162428

D23 GB 2023118

D17: SUGAR; STARCH

JURI/ ★ D17 C/01 ★ CS 7703-915
Maltose syrups prepn.

JURISOVA E 14.06.77-CS-003915

(31.07.79) C12d-13/04

BURI/ ★ D17 C/01 ★ CS 7801-182
Starch enzyme hydrolysates

BURIANEK J 24.02.78-CS-001182

(31.07.79) C13l-03

17: SUGAR; STARCH		-p. 27	Week C01	D17
LI/ ★	D17	C/01 ★CS 7801-357	sugar soln. (III) is pref. spiral-ribbon shaped membrane. Regeneration of the resin is possible using the filtrate of the ultrafiltration process. 70-95% NaCl can be recovered in the filtrate. 27.2.76 as 020016 B01d-13/00, C02c-5/02 (3.12.79) MITSUI SUGAR KK (4pp) (J5 2103380)	
Adoses liberation from N-phenylglycosyl-amines BILIK V 03.03.78-CS-001357 (31.07.79) C07h-03/02				
OSA/ ★	D17	C/01 ★CS 7801-757	AGEN ★ D17 01139C/01 ★J7 9040-617 Increasing yields in beet sugar mfr. - by reacting syrup with alpha-galactosidase, treating with ion exchange resin and clarifying AGENCY OF IND SCI TECH (HOKK-) 25.12.70-JA-128413 (D16) (04.12.79) C13d-03 In beet-sugar mfr., the improvement comprises reacting α-galactosidase with syrup sepd. from massecuite to decompose raffinose, treating the syrup with ion-exchange resin, and returning the syrup to the clarification process. The α-galactosidase used is obtd. by culturing Streptomyces olivaceus var. raffinose utilizer, Mortierella vinacea var. raffinose utilizer, etc. Pref reaction conditions are 45-55°C, Brix. concn. of 20-60 pH of 5.0-5.2, enzyme concn of 2500000-5500000 units per g raffinose, and reaction time of 2-3 hrs. The ion-exchange resin used is a combination of cation-exchange resin H type and anion-exchange resin OH type. The method minimises accumulation of raffinose and increases yield of sugar. 25.12.70 as 128413, C13d-3/00 (4.12.79) HOKKAIDO TOGYO KK; AGENCY OF IND.SCI. TECH. (8pp83)	
KOSAR J 20.03.78-CS-001757 (31.07.79) A23k-03/04				
ASM/ ★	D17	00009C/01 ★DS 1642-534	HAYB D17 10520X/06 =NL -162-431 Maltose prodn from saccharified starch hydrolysates - using specific enzyme treatment to improve product purity HAYASHIBARA SEIBUTS 07.11.74-JA-128638 (17.07.74-JA-081949) (D16) (17.12.79) *NL7508-476 C13k-07 Maltose is produced from starch by (a) fluidising the starch, (b) enzymatically saccharifying it using a system having a ratio of multitriase : maltase activities of ≥ 2.5, (c) purifying the reaction mixt., and (d) recovering the maltose by crystallisation. Typically the enzyme system is confined to that obtd. from a higher plant and/or bacterial source. Suitable sources are swedes, carrots, stalks, leaves, seeds, grain etc., or bacteria from Pseudomonas, Flavobacterium, Escherichia, Klebsiella, Erwinia, Sarcina, Streptomyces etc. 16.7.75 as 008476 (12pp913)	
Plant cellulose hydrolysis using dil. inorganic acid - comprises comminuting raw material and mixing with acid to pumpable mixt. KASMANNHUBER H 26.01.68-DT-642534 E13 (20.12.79) C13k-01/02 In a process for the stepwise partial or total hydrolysis of cellulose plant raw materials with dil. inorganic acids, in which one or more short-term hydrolysis reactions are released at 100-240°C and the inorganic acid is changed after each hydrolysis, the raw material and the dil. acid are conveyed concurrently through the reaction zone and hydrolysis takes several min. at most. Novelty consists in comminuting the raw material down to dust grain size; mixing with dil. acid to a pumpable mixt. which cannot be unmixed by sedimentation and continuously passing this mixt. through the hydrolysis reaction zone. Yield is increased. Direct conversion takes place to mono-saccharides. Hydrolysis reaction time, by-prod. formation and hydrolysis step no. are reduced. Hydrolysis plant can be simplified. 26.1.68 as 642534 (6pp200)				
HENK	D17	39736U/28 =DS 2164-907	DOLI/ ★ D17 C/01 ★PT --69-469 Conversion of tomato concentrate plants - to processing of sugar beet DE OLIVEIRA A S 11.04.79-PT-069469 (06.12.79) C13d	
Foam reduction - in sugar refining by addition of ethylene/propylene oxides reacted with fatty alcohols HENKEL KG AUF AKTIEN 28.12.71-DT-164907 (20.12.79) *BE-793-419 C12b-01/18 C13f-01 Ethylene oxide/propylene oxide addn. prods. of 6-36C aliphatic alcohols having a turbidity point under 25°C are used as antifoaming agents in the sugar and yeast industries. Other known antifoaming agents may also be present. Suitable addn. prods. include prods. of 12-18C fatty alcohols, 3 ethylene oxide units and 10 propylene oxide units. The addn. prods. are physiologically harmless and long acting. 28.12.71 as 164907 (068)				
BOEF ★	D17	00106C/01 ★DT 2826-120	HOLL- ★ D17 01563C/01 ★US 4179-265 Rotary drum drier operation - in which the flow of gas is controlled inversely to the pressure drop through the drum HOLLY SUGAR CORP 17.10.77-US-842397 C04 J08 Q77 (D14) (18.12.79) F27b-07/20 F27d-19 In a rotary drum drier of particular use with sugar beet pulp, the flow of heated gas through the drum is controlled inversely in accordance with the pressure drop along the drum. The pressure drop is measured by sensors located in a discharge chamber connected to the drum, and in a furnace feeding hot gas to the drum, and a damper in the gas outlet of the discharge chamber is opened or closed accordingly. A differential pressure along the drum of 1.2-1.6 inches of water is pref. and an override device is geared to the furnace pressure to prevent further closing of the damper should a desired furnace pressure just below atmospheric be exceeded. The furnace uses less gas and operates at a lower temp. (by some 10°C) than prior art devices. 17.10.77 as 842397 (11pp525)	
Xylitol recovery from residual syrups - by chromatographic sepn. and hydrolysis and hydrogenation of polysaccharide fraction SUDDEUTSCHE ZUCKER 14.06.78-DT-826120 E17 (20.12.79) C07c-29/24 C07c-31/18 Recovery of xylitol (I) from residual syrups (remaining after the last crystallisation stage in the prodn. of (I) from xylan-contg. materials) is carried out by first chromatographically sepg. the syrup into a first fraction rich in polysaccharides and polysaccharide alcohols and one or more subsequent fractions rich in pentitols and hexitols. The first fraction is then subjected to acid hydrolysis, after which the acid is removed, the hydrolysate is hydrogenated, and (I) is crystallised from the hydrogenated soln. The (I)-rich subsequent fraction is evapd. to remove all or part of the H ₂ O, and (I) is crystd. from the concentrate by cooling or pptn. Any other subsequent fractions, contg. (I), other sugar alcohols and polysaccharides, are subjected to further chromatographic sepn. The process gives high total recovery yields (e.g. 52.1 wt.% based on solids content of initial syrup). 14.6.78 as 826120 (18pp367)				
MITD	D17	73241Y/41 =J7 9040-390	See Also D16 J5 4147994 D16 J5 4147995 D16 J5 4147996	
Treatment of anion exchange resin waste regenerant - by ultrafiltration using acetyl cellulose membrane MITSUI SUGAR KK 27.02.76-JA-020016 A88 J01 (03.12.79) *J52103-380 B01d-13 + C02c-05/02 The method involves ultrafiltration of the regenerant with heat-treated acetyl cellulose membrane (III) to obtain a filtrate contg. NaCl and a concentrate contg. pigments and high molecular cpds. The filtrate is reused as regenerant of anion exchange resin. This method can be applied to the regenerants contg. NaCl. The heat-treatment of (III) is carried out at 62-75°C for > 3 mins. The method is pref. used for decolorisation of				

D18: SKINS; HIDES; LEATHER; TOBACCO

FBPM- D18 30397A/17 #GB 1558-367
Hide stacking device for tanneries - with photocell control of stacking table carriage motion

FBP/MECCANICA SNC 16.10.76-DT-646788 (10.09.76-GB-037593)

+Q36 (28.12.79) *DT2646-788 +B65h-29/16

Hides can be stacked in tanneries using a device which includes a driven conveyor belt formed of spaced parallel bands, a sensor for detecting a hide on the belt, a movable truck at the downstream end of the belt and having a support on which the hides can be stacked, and a mechanism for moving the truck either in the same or opposite direction to that of the belt after a time delay following the sensing of a hide on the belt.

Pref. the sensing is provided by a photosensitive cells located between the parallel bands. The hides can be stacked the same way up or such that adjacent hides are the opposite way up. 10.9.76 as 037593 (4pp1376)

KEPE- D18 25375Y/15 =GB 1558-391
Leather dressing emulsions - contg. nitrocellulose or cellulose acetobutyrate and polyurethane resin

KEPEC CHEM FAB GMBH 25.09.75-DT-542767

A82 F08 (A11 A25) (03.01.80) *DT2542-767 C08I-01/14 C08I-75/04

An agent for dressing leather and leather substits. is prepd. contg. a combination of a soln. of nitrocellulose and/or cellulose acetobutyrate in ≥ 1 organic solvent contg. 10-60wt. % of an emulsifier, with a soln. of a linear polyurethane resin in a ≥ 1 organic solvent in the form of an aq. emulsion.

The agent is prepd. in a wt. ratio of nitrocellulose and/or cellulose acetobutyrate to polyurethane resin of 1:0.1-10. The organic solvents are not miscible with water and have a volatility sufficient for drying the leather at 80-160°C.

The leather dressing prepd. gives the finished leather protection against exterior mechanical and optical influences, as well as to give its appearance a special look. 23.9.76 as 039425 (5pp931)

CANA/★ D18 C/01 ★IT 1034-807
Automatic bags turning out appts. - with automatic leather feed
CANAVESE P 03.04.75-IT-021953
(10.10.79) C14b

SPOR=★ D18 00669C/01 ★J5 4147-185
Waterproofing agent for leather - includes polyterpene and high mol. hydrocarbon opt. mixed with solid hydrocarbon and higher fatty acid and/or its salt (SW 12.11.79)

SPORT CAMPING ARTIC 11.04.78-SW-004063 (08.05.78-JA-053707)

A97 (A11) (17.11.79) C09g-01/08 C09k-03/18 C14c-09 C14c-11

The waterproofing agent comprises a hydrophobic lubricating compsn. consisting of 80-90 wt. % polyterpene and 12

-7 wt. % high molecular hydrocarbon opt. mixed with solid hydrocarbon and 8-7 wt. % higher fatty acid and/or the salt. The high molecular hydrocarbon is paraffin, ceresine, ozocerite, petroleum or wax. The higher fatty acid is stearic acid or oleic acid and its calcium, lithium or zinc salt.

The waterproofing agent is used for treating shoes, boots, sports shoes and leather coats. 8.5.78 as 053707 (5pp15)

KAGR=★ D18 01317C/01 ★SU -657-0
Persian lamb skin primary cleaning brush - has metal teeth with spherical heads and held in comb on shaft by elastic pads

KAZA AGRIC ELEC MEC 04.03.77-SU-460670

(20.04.79) C14b-15

The primary cleaning of Persian lam skins is improved process efficiency is enhanced by the implement having metal teeth with spherical heads on the free end of the comb. The latter is attached to the shaft by an elastic pad.

The fur side of the skin is fed towards the rotating bush, and the comb teeth impact the fur and at the same time comb the hair and loosen the dry dirt adhered to it. The elastic pad softens the blows and thus prevents hair detachment from the skin.

Seitbekov, L., Nepsha, G.E., Asaev, R.A. et al. Bul. 15.4.79. 4.3.77 as 460670 (3pp89)

LIGG- D18 37913Y/21 =US 4179-3
Appts. for making hollow filter rod for cigarettes - with mandrel carrying tubing into nozzle for shaping fibrous filter material around tubing

LIGGETT GROUP INC (LIGG) 16.07.75-US-596471 (27.08.73-US-391581)

+P15 (18.12.79) *US4024-012 +A24c-05/50

A filter rod for cigarette filter tips is mfd. by passing a stream of self-supportable rigid tubing through a guide mandrel to co-axial centre the stream with a stream of fibrous cellulose acetate filter, placing the stream together by passing the filter through a Venturi nozzle surrounding the mandrel, passing air through the nozzle to bloom the filter into an inwardly tapering passage, moving the streams and paper into the passage to frictionally engage the tubing with the filter, and folding opposite edges of the paper to envelop the filter and cutting the rod into desired lengths.

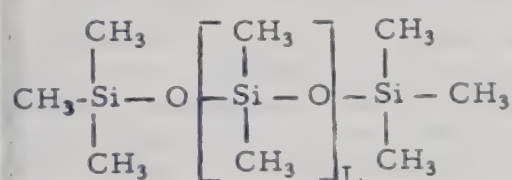
Parent patent claims the appts. for mfg. the rod. 17.2.77 as 769616 Div. ex. 4024012 (+16.7.75-US-596471)(7pp1376)

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

KAOS D21 12819Y/08 = DS 2645-282
Hair protective compsn. comprising specified polyol esters - and/or long chain alkanols, polymethylsiloxane and an alcohol

KA0 SOAP KK 14.10.75-JA-123392
A96 E19 (A26) (20.12.79) *BE-847-194 A61k-07/06
Hair cosmetic compsn. contains (A) 0.5-40 wt. % of one or more substances of formulae $X_1-O-(CH_2)_n-CR_1R_2-(CH_2)_m-X_2$ (where $X_1 = R$ or $RCO-$; $X_2 = R$, $RCO-$ or H ; R is 8-12C branched alkyl; R_1 is H or 1-3C alkyl; R_2 is H , CH_3 , CH_2H_5 or OH and n and m are 1, 2 or 3) or $R_3-CHR_4-CH_2OH$ where R is 8-10C alkyl and R_4 is 6-8C alkyl (B) 0.5-10 wt. % of one or more cpds. of formula (where $L = 3-14$) and



(C) an alcoholic solvent. The wt. ratio of components (B) : (A) is 1:10 to 8:1.
The compsn. protects against mechanical damage, e.g.

brushing. A suitable compsn. comprises 2-ethylhexylglycerylether-2-ethylhexanoate, methylpolysiloxane, dimethylsiloxane, ethanol and perfume. 7.10.76 as 645282 (8pp068)

HENK ★ D21 00156C/01 ★DT 2826-757
Deodorant compsns. contg. acid aluminium salt - in combination with deodorant ester and antioxidant

HENKEL KG AUF AKTIEN 19.06.78-DT-826757
E33 (E19) (20.12.79) A61k-07/38
The use of the following components in cosmetic deodorant preps. is claimed: (a) 1-20 (pref. 5-15) wt. % of an astringent acid Al salt; (b) 0.5-20 (pref. 2-10) wt. % of an ester of citric and/or acetylcitric acid or a mono- or dibasic 2-4C hydroxycarboxylic acid with a 1-6C aliphatic or alicyclic alcohol; and (c) 0.01-5 (pref. 0.1-3) wt. % of an antioxidant.

Component (a) is pref. Al hydroxychloride ($Al_6(OH)_{15}Cl_3$). Component (b) is pref. a trialkyl citrate or acetylcitrate or a neutral ester of a 2-4C aliphatic hydroxycarboxylic acid. Component (c) is pref. a mixt. of 2- and 3-t-butyl-4-hydroxyanisole (BHA) and 2,6-di-t-butyl-4-methylphenol (BHT) in a ratio of 1:9 to 9:1.

Addn. of components (b) and (c) greatly improves the deodorant action of component (a). 19.6.78 as 826757(17pp)

HENK ★ D21 00157C/01 ★DT 2826-758
Deodorant compsns. - contg. citrate and/or acetyl citrate ester(s) in combination with antioxidants

HENKEL KG AUF AKTIEN 19.06.78-DT-826758 (00.00.74-DT-418338)
E19 (20.12.79) A61k-07/32

The Parent Patent disclosed the use of certain esters (I) as deodorants in anhydrous cosmetic preps., where (I) are esters (pref. triesters) of citric and/or acetylcitric acid with 1-6C aliphatic or alicyclic alcohols.

The improvement lies in that the cosmetic preps. contain 0.5-20 (pref. 1-10) wt. % of (I) in combination with 0.01-5 (pref. 0.1-3) wt. % of an antioxidant (II). (II) is pref. a mixt. of 2- and 3-t-butyl-4-hydroxyanisole (BHA) and 2,6-di-t-butyl-4-methylphenol (BHT) in a ratio of 1:9 to 9:1.

Addn. of (II) greatly improves the deodorant action of (I). Combinations of (I) and (II) can also be used in H_2O -contg. cosmetic preps. 19.6.78 as 826758 Add to 2418338(21pp)

HENK ★ D21 00158C/01 ★DT 2826-759
Deodorant compsns. contg. hydroxy-carboxylic acid ester cpds. - in combination with antioxidants

HENKEL KG AUF AKTIEN 19.06.78-DT-826759 (00.00.74-DT-418362)
E17 (E15) (20.12.79) A61k-07/32

The Parent Patent discloses the use of certain esters (I) as

deodorants in anhydrous cosmetic preps., where (I) are esters (pref. neutral esters) of mono- or dibasic 2-4C aliphatic hydroxycarboxylic acids with 1-6C aliphatic or alicyclic alcohols.

The improvement is the cosmetic preps. contain 0.5-20 (pref. 1-10) wt. % of (I) in combination with 0.01-5 (pref. 0.1-3) wt. % of an antioxidant (II).

Addn. of (II) greatly improves the deodorant action of (I). Combinations of (I) and (II) can also be used in H_2O -contg. cosmetic preps. (II) is pref. a mixt. of 2- and 3-t-butyl-4-hydroxyanisole (BHA) and 2,6-di-t-butyl-4-methylphenol (BHT) in a ratio of 1:9 to 9:1. 19.6.78 as 826759 Add to 2418362(18pp367)

HESS/ ★ D21 00246C/01 ★DT 2924-095
Adhesive compsn. for dental prostheses - contains sodium bicarbonate as bactericide and fungicide, and adhesive agent esp. CMC salt or alginate

HESELGREN S 16.06.78-SW-006939

A96 P32 (A11) (20.12.79) A61c-13/26

Adhesive compsn. applied to the surface of dental prostheses, lying on mouth mucous membrane when inserted in mouth, contains (i) $NaHCO_3$, as bacteria- and fungus-growth inhibitor, and also (ii) > 1 orally acceptable adhesive agent, pref. an alkali metal salt of CMC, esp. NaCMC, or an alginate salt, to impart the adhesive properties to hold the prosthesis in position.

$NaHCO_3$ is (a) an efficient inhibitor, (b) non-allergenic and non-toxic w.r.t. mucous membrane, (c) can be easily removed with commercial cleansers, and (d) acts as a buffer against lowering of pH and prevents caries of the remaining teeth. 15.6.79 as 924095(17pp200)

OREA ★ D21 00260C/01 ★DT 2924-229
Cosmetics for greasy hair and skin - contg. N-organo:thioethyl-alkanolamine derivs; used to reduce lipid content of skin (NL 18.12.79)

L'OREAL SA 16.06.78-FR-018071

A96 E19 (20.12.79) A61k-07/48 C07c-147 C07c-149/24 C07d-265/28

Cosmetic preps. for treating greasy hair and skin, contg. alkanolamine derivs. of formula $R_1-S(O)_n-CH_2CH_2-NR_2-CH_2-CHOH-R_3$ (I) in a suitable carrier, are claimed. In (I), $n=0-2$; R_2 is H , CH_2CH_2OH , $CH_2CH(OH)CH_3$ or $CH_3CH(OH)CH_2OH$; R_3 is H , Me or CH_2OH ; R_1 is Me , $CH_2CH=CH_2$, CH_2CH_2OH , $(CH_2)_m-CH(NHR_4)COOH$, CH_2COR_6 , $PhCH_2$, o-aminophenyl or o-carboxyphenyl; $M=1$ or 2 ; R_4 is H or COR_5 ; R_5 is opt. unsatd. 1-8C alkyl; R_6 is OH or $NR'R''$; R' and R'' are H or 1-5C alkyl or together form a $(CH_2)_O$ $(CH_2)_2$ or $(CH_2)_5$ gp.).

Also claimed are new cpds. of formula (I) where n , R_1 , R_2 and R_3 are as defined above, with the proviso that (i) when R_1 is benzyl, R_2 can only be H when R_3 is H , and (ii) when R_1 is o-carboxyphenyl, R_2 and R_3 cannot be H . Acid-addn. salts of the new cpds. are also claimed.

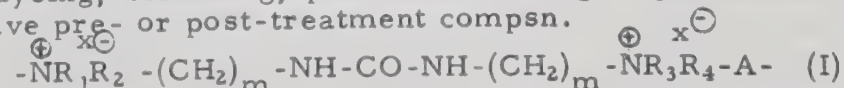
(I) are more effective in reducing the lipid content of the skin than 2-benzylthioethylamine hydrochloride. 15.6.79 as 924229(89pp367)

OREA ★ D21 00261C/01 ★DT 2924-230
Hair cosmetics for dyeing, bleaching or permanent waving - contg. quaternised poly:amine-urea polymers

L'OREAL SA 15.06.78-FR-017899

A96 (20.12.79) A61k-07/13

Hair cosmetics contain polymers contg. units of formula (I), together with the necessary ingredients for producing a dyeing, bleaching, permanent waving or permanent-wave pre- or post-treatment compsn.



In (I), R_1 , R_2 are opt. substd., opt. unsatd. aliphatic or alicyclic gps. or opt. substd. araliphatic gps., or NR_1R_2

or NR_3R_4 can be a heterocyclic ring opt. contg. a 2nd heteroatom other than N; A is an opt. subst. alkylene or alkenylene gp. opt. contg. ≥ 1 heteroatoms or arylene gps.; X^- is an anion; $m=2$ or 3.

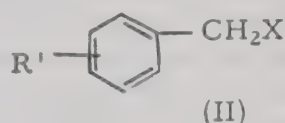
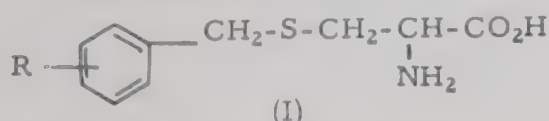
The polymers protect the hair against the harmful effects of dyeing, bleaching and permanent waving. They improve the appearance and feel of the hair, make it easier to comb, and have an antistatic action. 15.6.79 as 924230(39pp367)

PARC-★ D21 00431C/01 ★GB 2023-598
Mucolytic S-benzyl-L-cysteine derivs. - useful in pneumology and otorhinolaryngology

PARCOR 22.06.78-FR-018693

B05 C03 (03.01.80) A61k-31/13 C07c-149/24

S-benzyl-L-cysteine derivs. of formula (I) and their salts and intermediates of formula (II) are new.



(where R is lower alkoxy-carbonyl or carboxy; R' is alkoxy-carbonyl; X is halogen, esp. Cl or Br).

(I) have high tolerance and low toxicity. Admin. is pref. p.o. or as drops or nasal spray. Doses are 0.05-3 g/day. (I) are useful in human or veterinary medicine in treatment of chronic bronchitis, tracheo-bronchitis, bronchorrhea, otitis, sinusitis, pharyngitis and rhino-pharyngitis. 22.6.79 as 021910 (5pp949)

SHIS★ D21 00764C/01 ★J5 4147-936
Prepn. of water- and alcohol-contg. cosmetics - by injecting one component into another in a maturing vessel through a nozzle

SHISEIDO KK 08.05.78-JA-054212

(19.11.79) A61k-07

The method comprises injecting the alcohol phase or the heated aq. phase in a heated aqueous layer or alcohol layer in a maturing vessel through a nozzle.

The heated aq. phase or alcohol phase is previously made mist and by colliding the mist having large specific surface area with heated water molecules or alcohol molecules, bonding between water molecules and alcohol molecules can be promoted. Thus matured cosmetics with reduced irritation to skin and mucosa and improved smell can be obtd., e.g. face lotion, hair tonic, pack and milk lotion.

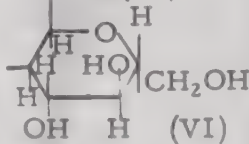
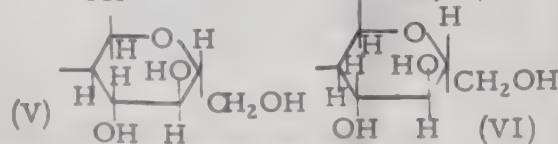
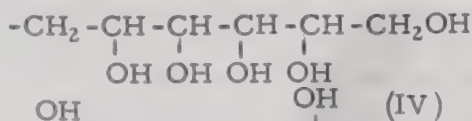
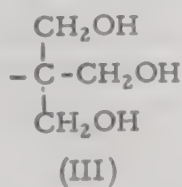
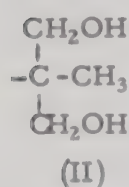
A physical change which usually proceeds slowly, can be induced in a short time. Usually the aq. phase is used at 20-90°C (30-70°C) and the alcohol phase is used at 20-60°C. In the case of milk lotion oily phase is previously emulsified in aq. phase and the emulsion phase is injected in alcohol phase as above. 8.5.78 as 054212(4pp5)

KANE★ D21 00765C/01 ★J5 4147-937
Hair or skin cosmetics - contain a glycidyl:ether-alkanolamine reaction prod. as nonionic surfactant

KANEBO KK 13.05.78-JA-056858

E17 (E13) (19.11.79) A61k-07/06

Cosmetics contg. 0.1-20 (1-20) w/w% of ≥ 1 cpd. of formula (I), $\text{R}_1-\text{O}-\text{CH}_2-\text{CH}(\text{OH})-\text{CH}_2-\text{NHR}_2$ (where R_1 is 10-22C



alkyl, hydroxyalkyl, hydroxyalkenyl or alkenyl; R_2 is the gp., (II), (III) (IV), (V) or (VI)). (I) are easily prepd. in high yield by heating 1 mol. of glycidylether of higher alcohol with 1.2-3 mol of alkanolamine.

(I) are nontoxic, nonstimulative to skin and have good physiological stability, affinity to skin, emulsion stability and preservative stability. (I) can be used as a nonionic surfactant and can be used for preparing the cosmetics excellent in appearance such as skin cosmetics in the form of cream, emulsion, lotion and oil and hair cosmetics such as hair dressing agent, hair conditioner, shampoo, rinse, etc. 13.5.78 as 056858(11pp5)

SUNZ★ D21 00766C/01 ★J5 4147-936
dentifrice compsn. for removing nicotine stains etc. - is prepd. using abrasive comprising aluminium hydroxide and e.g. zirconium silicate or calcium carbonate

SUN STAR HAMIGAKI K 08.05.78-JA-054851

E33 (E32) (19.11.79) A61k-07/16

The dentifrice compsn. is prepd. by using 20-80 w/w% on total abrasive base of Al hydroxide having average particle size 2-40 μ pref. 5-25 μ esp. 10-25 μ together with balance of ≥ 1 other abrasives selected from anhydrous Ca hydrogen phosphate, Ca carbonate and Zr silicate having average particle size 3-15 μ as the abrasive base.

The compsn. can clean nicotine-stained teeth giving good crispy feel without damaging the surface of teeth. 8.5.78 as 054851(6pp5)

TOKS-★ D21 00999C/01 ★J5 4148-866
High strength, heat resistant cyanoacrylate polymer moulding prodn. - using cyanoacrylate-contg. moulding material, with water applied to mould surface acting as reaction catalyst

TOKYO SUPPLY KK 15.05.78-JA-057306

A32 P32 (A14 A96) (21.11.79) A61c-13 B29c-05 C08j-05

Resin mouldings are produced by forming a mould contg. water on the surface of at least the moulding space side, pouring the moulding materials contg. cyanoacrylates into the moulding space, and polymerising and curing the cyanoacrylates with the water contained from the surface side of the mould.

The moulding materials are cured at ordinary temp. under ordinary pressure. As the water contained in the mould acts as the reaction catalyst, the moulding operation is easy, and mouldings of precise mould-shape are obtd.

The cyanoacrylate polymers have excellent strength, heat resistance, chemical resistance and weatherproof property. Therefore, the mouldings obtd. are free from scratch at the time of after-treatment (e.g. grinding). Cyanoacrylates include, pref. alkyl- α -cyanoacrylates. The moulds comprise e.g. water-contg. agar-agar, sodium alginate, PVA and gelatin. The moulding resin liqs. comprise cyanoacrylates and polymethacrylates in a wt. ratio of 30:70-70:30. 15.5.78 as 057306(5pp136)

SAKB★ D21 01138C/01 ★J7 9040-614
Hair conditioner - contains levulinic acid and/or its salt

OTSUKA KAGAKU YAKUHI 07.10.71-JA-078994

E19 (04.12.79) A61k-07/08

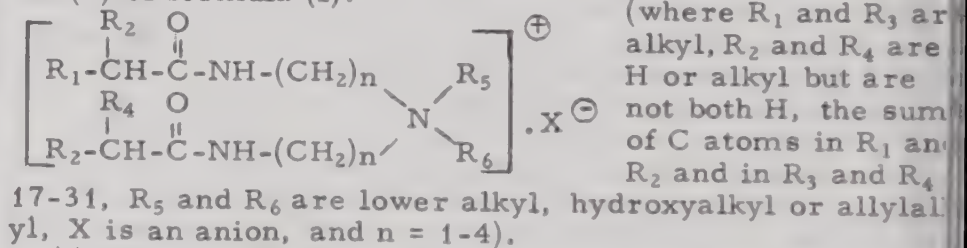
Hair conditioner comprises levulinic acid and/or its salt such as triethanolamine salt, Na salt, Ca salt, etc. The conditioner gives hair excellent smoothness and softness. It can be used alone as a rinse or in combination with a shampoo, a permanent wave soln. etc. 7.10.71 as 078994 A61k-7/08 (4.12.79) OTSUKA KAGAKU YAKUHI (2pp83) (J4 8040945)

LIOY D21 09332A/05 = J7 9040-615
Finishing agent for hair - contains quat. ammonium salt(s) with good dispersion stability

LION FAT & OIL KK 11.06.76-JA-067622

E16 (04.12.79) *J52151-737 A61k-07/06

The agent contains 1-10, pref 2-8 w/w % of ammonium salt(s) of formula (I):



17-31, R_5 and R_6 are lower alkyl, hydroxyalkyl or allylalkyl, X is an anion, and $n = 1-4$).

(I) gives good softness, smoothness and dampness to hair. Excellent hair-rinsing agents, spray-type hair conditioners, hair lotions, etc. can be prepd. from it. Pref. (I) are di(α -methylsteroylaminoethyl)dimethylammonium halide, di(α -methylarachinoylaminoethyl)dimethylammonium-methylsulphate, di(α -propylbehenoylaminoethyl)dimethylammonium halide α -ethylarachinoylaminoethylmontano-aminomethyldiethylammonium halide, etc. 11.6.76 as 067622, A61k-7/06 (4.12.79) LION FAT & OIL KK (5pp5) (J5 2151737)

S/ D21 47821A/27 = US 4178-686
 Artificial tooth root of plastic loaded with a bioactive phosphate - to form a root bone graft without later rejection
 REISS G (RIES/) 23.07.77-DT-733394
 A96 P32 (18.12.79) *BE-864-402 A61c-13
 Artificial tooth includes implantable root constituted of a biostable polymer matrix compatible with human tissue, reabsorbable, bioreactive Ca phosphate in finely dispersed form being introduced in the polymer matrix. A porous layer of non-reabsorbable Ca phosphate encompasses the bioreactive Ca phosphate; a core forming connecting means for mounting dental superstructure being inserted in the polymer matrix.
 An intermediate member is arranged in the tooth neck encompassed by the gingiva and extending between the tooth root and the dental superstructure. The intermediate member comprises a tissue compatible material supporting the sealing contact of the gingiva. The dental superstructure is shock-absorbingly connected to tooth root.
 The tooth can permanently grow together with jawbone. It withstands high mechanical loads. 6.1.78 as 867336 (pp964)

EGS D21 06146B/04 = US 4179-286
 Low gold content alloy for baking on dental porcelain - contains palladium, tin, indium, germanium and rhenium and/or ruthenium
 DEUTSCHE GOLD & SILBER 31.03.78-DT-813813
 M26 (18.12.79) *DS2813-813 C22c-05/02
 Ag-free, low Au, noble metal alloy suitable for firing on dental porcelain comprises (a) 3-59 (31-53.9)% Au; (b) 0-60 (31-59)% Pd; (c) 1-12% Sn; (d) 0-10 (0-9.45)% In; (e) 0.1-3% Ge; and (f) 0.05-1% Re and/or 0.05-1% Ru.
 Pref. the wt. ratio of Ge to the total of Re and Ru is 1-3:1. Alloy has good processing properties in regard to casting technology. 17.1.79 as 004191 (3pp936)

BEOL-★ D21 01575C/01 ★US 4179-288
 Palladium base dental alloy - containing gallium, gold and boron suitable for application to porcelain
 NEOLOY PRODUCTS INC 24.01.79-US-006078
 M26 (18.12.79) C22c-05/02
 Dental alloy consists of 7-12% Ga, 2-5% Au, 0.125-0.5% Cu, balance Pd. The pref. alloy is 8% Ga, 2% Au, 0.125% Cu, balance Pd.
 The alloy is practical for crowns, inlays and applicat-

ion of low fusing porcelain. Alloy has melting point about 2400°F. Adhesion to porcelain is superior and expansion coefficient is compatible. 24.1.79 as 006078 (3pp1135)

POLH D21 75586B/42 = US 4179-304
 Non-carcinogenic nail varnish compsn. - comprising mixt. of sucrose benzoate, sucrose acetate isobutyrate and opt. a plasticiser, and a nitrocellulose
 POLYCHROME CORP 03.04.78-US-893094
 A96 E19 G02 (A11 A82) (18.12.79) *DT2913-344 A61k-07/04 C081-01/18
 Novel fingernail lacquers comprise (a) sucrose benzoate, (b) sucrose acetate isobutyrate, opt. (c) an organic phthalate, adipate or phosphate plasticiser and (d) nitrocellulose. Pref. compsns. also contain an additional film-forming resin, esp. a cellulose resin and a colourant and/or organic solvent.

These compsns. are free of prior art carcinogenic formaldehyde-contg. resins. 3.4.78 as 893094 (4pp974)

FREU D21 60608A/34 = US 4179-333
 Water-soluble elastin hydrolysates prodn. - by acid treatment followed by enzymatic degradation with alkaline protease(s)
 FREUDENBERG, CARL FA (ROHG) 11.02.77-DT-705670
 (D16) (18.12.79) *DT2705-670 +C12d-13/06

A water-soluble elastin hydrolysate is produced from elastin-contg. starting materials by acid treating the starting material at a pH below 4 and at > 80°C and then enzymatically degrading the acid-treated material, while in comminuted form, in an aq. bath at 30-70°C for 4-24 hrs. in the presence of urea, with an alkaline bacterial proteinase having an activity optimum in the pH range 9-13, the initial pH of the enzymatic treatment being within the pH range optimum for the enzyme employed. Pref. the urea concn. in the aq. bath is 0.005-1.0 (0.01-1.0) mole/l, and the alkaline proteinase is derived from a Bacillus strain or a Streptomyces species.

Previously unusable raw materials, such as the neck ligaments and tendons of slaughtered stock, can be hydrolysed. The hydrolysate is useful as a cosmetic agent having improved penetration and improved softening of the skin in comparison to previous hydrolysis products. 9.2.78 as 876237 (4pp990)

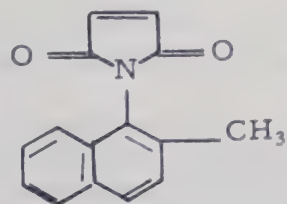
See Also

D13 DT 2924663

D22: BANDAGES; DRESSINGS

AMBR/★ D22 C/01 ★CS 7806-703
 Antimicrobial treatment of knitted articles - in particular protective gloves
 AMBRO M 14.10.78-CS-006703
 F06 P21 (31.07.79) A41d-19 D06m-11 D06m-13/28

ABB0 D22 19938B/10 = DS 2845-408
 Bactericidal and fungicidal 2-methyl-1-naphthyl maleimide - prepd. e.g. from maleic anhydride and 2-methyl-1-naphthylamine
 ABBOTT LABORATORIES 19.10.77-US-843610
 A60 C02 E13 + P34 (20.12.79) *US4141-905 C07d-207/44
 (2-Methyl-1-naphthyl)-maleimide of formula (I) is new.
 (I) is prepd. by heating equimolar amts. of 2-methyl-1-naphthylamine and maleic acid in the absence of solvent for ≥ 1 hr. at 130-190°C or in the presence of a lower fatty acid for 1-10 hr. at from 100°C to the b. pt. of the reaction mixt.
 Cpd. (I) exhibits antibacterial and antifungal activities. It is useful for protecting leather, plastics, cellulosic materials and industrial fluids (e.g. cooling water), cosmetics, coating compsns. etc. from bacterial or fungal attack. It is also suitable for use as an agricultural fungicide for protection of plants and crops. 18.10.78 as 845408 (5pp927)



FARH ★ D22 00050C/01 ★DT 2825-073
 Resorcinol derivs. prodn. from delta-keto carboxylate ester - by heating with hydrogen over two component metal catalyst

HOECHST AG 08.06.78-DT-825073

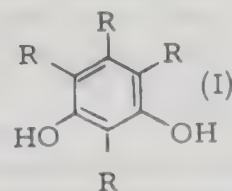
A60 E14 G06 (E24) (20.12.79) C07c-37 C07c-39/08

Prodn. of resorcinols of formula (I) comprises gas-phase reaction of S-ketoesters $RCH_2.CO.CHR.CHR.CHR.COOR^1$ (II) at 250-500°C in presence of H_2 . (Each R is H, (cyclo) alkyl, aryl, alkoxy or alkoxycarbonyl with a total of > 12C. R^1 is > 8C (cyclo) alkyl or aryl). Reaction is over a 2-component catalyst consisting of (A) ≥ 1 Gp.8 and/or Gp.IB cpd. on ≥ 1 carrier and (B) ≥ 1 Gp.IIA, IIIB and/or IVB cpd. on ≥ 1 carrier.

Pref. (A) comprises 0.01-10% Pt, Pd, Ir, Rh, Ru or Os and (B) 0.05-10% Mg, Ca, Sr, Sn, Pb, Zr, La, lanthanides, Th or U (calc. as metal on total wt. of the component).

(I) are resin components in the rubber and wood industries: couplers for diazo copying and antiseptics.

Single-step method which does not produce inorganic salt by prods. Conversion (85-90%), selectivity (75-85%) and yield based on amt. of noble metal catalyst, are better than in known processes and the catalyst is easily regenerated by treating at 100-500 (250-400)°C with a stream of O_2 (pref. 1-5 vol.%) in N_2 , CO_2 , stream or inert gas. 8.6.78 as 825073 (35pp1251)



DELB- ★ D22 00292C/01 ★FR 2419-748
Air ducting outlet filter box partic. for hospitals etc. - pressed and folded from single piece of sheet metal
DELBAG-LUFTFILTER G 17.03.78-DT-U08587
J01 P34 Q74 (16.11.79) A611-09 B01d-35/14 B01d-46/42 F24f-03/16

Box is of the type which is fitted with a removable, mechanical filter element. It is also capable of accommodating selected equipment for conditioning the air and for controlling the conditioning processes, e.g. ultra violet sterilising tube, heating/cooling coils, humidifying sprays timer(s) etc.

Improved is that the box comprises a sheet-metal, main casing pressed and folded from a single piece of material. The casing is formed with stiffening ribs or channels and cruciform embossed face(s) to prevent bucking. The outlet aperture of the casing is surrounded by a stiffening rib to which is internally welded a frame to provide a seating on which the filter element can be clamped.

Brackets, lugs, studs, nuts etc. are fixed appropriately inside the casing to secure conditioning equipment controls etc. Easy removal of the filter element for changing, cleaning etc. Should give full access to all encased equipment and controls. These to should be easily removable and replaceable.

Used to provide safe, aseptic, conditioned sterile wards etc. Appts. is simple and inexpensive to install in existing hospitals etc. The construction is easy to clean, check and maintain. 16.3.79 as 007216 (30pp448)

STIC- D22 19965A/11 =GB 1558-533
Washer for exhaust air from animal sheds - using metal wire mesh packing with recirculating liq. and flexible housing (NL 6.3.78)
STICHT INST MEC ARB 02.09.76-NL-009784
J01 + P14 Q74 (03.01.80) *DT2739-635 B01d-47/06

A gas-liq. contact device comprises liq. supply, distributor and collector, and contact means in the casing providing large surface area over which gas and distributed liq. can be contacted. The casing consists of rigid grid walls covered by an impervious flexible material. Pref. the walls are of metal wire gauze with meshes of ≥ 4 cm width and length; and the flexible material is easily detached from around the walls, and has a bootlace or tagged string closure upon a strip of the flexible material overlying this closure, to secure the flexible material around the walls.

The device may be a gas washer or liq. aerator, and may be used in e.g. cattle sheds. 2.9.77 as 036677 (pp976)

MAGN- ★ D22 00351C/01 ★GB 2023-123
Stabilising aq. acrolein soln. by lowering pH - the soln. being used as antimicrobial agent and hydrogen sulphide scavenger in oil-field brine or waterflood liquor

MAGNA CORP 16.06.78-US-916418 (16.06.78-US-916417)
C03 E17 H01 (28.12.79) C02b-03/06

Working life of acrolein in water is increased reducing the pH to from 2 to 6. Acrolein is used for controlling the growth of organisms and for scavenging hydrogen sulphide esp. in oilfield brine or water flood liquor.

Suitable acids for reducing the pH include acetic, benzoic, formic, phosphoric, sulphuric, hydrochloric, sulphamic acid, and nitric acid and polymers contg. carboxylic phosphoric acid, phosphonic acid, sulphuric acid and sulphonic acid groups. 15.6.79 as 020946 (5pp916)

JOHJ ★ D22 00389C/01 ★GB 2023-431
Diaper with contoured absorbent batt - having elastic strips along sides so diaper conforms thighs of infant (BR 16.10.79)
JOHNSON & JOHNSON 03.04.78-US-892628
P21 (03.01.80) A41b-13/02

A disposable diaper comprises a moisture-pervious facing layer, a moisture-impervious backing layer, and sandwiched between them a contoured batt. The batt is smaller than the other two layers and is spaced inwardly from the ends and sides of them. An intermediate portion of the batt has a reduced width defined by batt side edge segments extending inwardly towards each other. Longitudinal strips of elastic extend along each side of the diaper including inwardly inclined strips in the region of reduced batt width.

The diaper has a close fit between the thighs of an infant to which it is applied. 30.3.79 as 011231 (10pp295)

JOHJ ★ D22 00406C/01 ★GB 2023-431
One way absorbent laminate - comprising nonwoven fibrous backing and ruptured film cover
JOHNSON & JOHNSON 21.06.78-US-917696
A94 F07 P73 (A96) (03.01.80) B32b-03/28 B32b-05/14
Laminate which will absorb liq. in one direction but oppose its flow in the other, comprises a non-woven fibrous backing layer and a fractured plastics film layer bonded to one surface of the backing layer. A prefd. film is of polyethylene and the backing layer can be of any conventional hydrophilic fibres, e.g. papermaking fibres.

Laminate can be made by bonding the film to the layer between heated pressure rolls. The roll contacting the film has a dimpled resilient surface and is driven at a slightly higher speed than the other roll. The compression and shearing effect thus accomplished fractures the film into a reticulated configuration.

Used for one-way absorbing. The laminate is useful in sanitary application and as surgical dressings. 19.6.79 as 021283 (9pp525)

MOLI- ★ D22 00460C/01 ★GB 2023-671
Knitting elastic dressing bands with chain warps - omitting some needles to provide retraction space for elastic wefts
MOLINIER SA 27.06.78-FR-020089
F04 (03.01.80) D04b-21/18

A knitted fabric band is formed on a Raschel machine with longitudinal chain warps and an elastic weft. Some needles between the warp knitting needles are omitted.

The spaces formed between the chain warps provide a retraction space for the wefts. The selvages are uniform and not rolled up. The output of the machine is increased. The fabric is used as an elastic dressing. 5.6.79 as 019559 (5pp1320)

SEIS ★ D22 00590C/01 ★J5 4146-84
Porous material prepn. from citrus fruit pith - by dissolving in alkaline soln. sepg. out alkali metal salt of pectic acid, gelling an aq. soln. of the salt and drying the gel
SEISAN KAIHATSU KAGAKU 09.05.78-JA-055111
F08 J01 (D15) (16.11.79) B01d-13/04 C08j-09/28

Process comprises treating the pith of citrus fruits with an aq. soln. with pH 1-3 making the pH value of the aq. soln. 10.5-12.5 using alkali to dissolve the pith, then adding on alcohol to the liq. to separate the pptd. alkali metal salt of pectic acid, gelling an aq. soln. of the sepd. alkali metal salt of pectic acid with a water sol. polyvalent metal salt and thermally drying the prod.

As alkali NaOH, KOH or weak acid salt of Na or K is suitable. As alcohol, easily recoverable methanol, ethanol and isopropanol are suitable; water-insol. alcohol cannot be used.

A porous substance with controlled pore size and strength is mfd. easily with high reproducibility from a natural material. It can be used for finely porous films for ultrafiltration, gas-permeable food packaging films, bacteria-proof artificial skin, artificial leather, etc. 9.5.78 as 055111 (8pp57)

IDEK ★ D22 00664C/01 ★J5 4147-17
Sublimable compsn. contg. camphane - with perfume, mothproofing agent, antifungal agent or antioxidant as active material
IDEMITSU KOSAN KK 11.05.78-JA-054980
C03 (17.11.79) A01n-17/02 A61k-07/46 C09k-03 C09k-15/04

Sublimable compsns. comprise (1) camphane combined with (2) perfume, mothproofing agent, antifungal agent or antioxidant.

The sublimable compsns. have excellent mechanical strength and appearance as commodity, and since the active substances are carried by camphane whose water absorption is small. 11.5.78 as 054980 (3pp96)

DEK ★ D22 00665C/01 ★ J5 4147-179
Sublimable compsn. based on camphane and endo-tri:methyl:norbornane - obtd. by mixing with perfume, mothproofing agent, rust preventative, antiseptic, fungicide and/or antioxidant

IDEMITSU KOSAN KK 11.05.78-JA-054981

C03 (17.11.79) A01n-17/02 A61k-07/46 C09k-03 C09k-15/04

Sublimable compsns. are prepd. by: (i) formulating ≥ 10 wt. % of camphane and endo-trimethylenenorbornane; (ii) adding effective substance(s) to (i) selected from perfume, mothproofing agent, rust preventing agent, antiseptic, antifungal agent and antioxidant as the effective substances.

The sublimable compsns have good mechanical strength and appearance as commodity. Since the effective substances are carried by sublimable carrier whose water absorption is small, this may be widely used. 11.5.78 as 054981(4pp96)

PIPE- ★ D22 00675C/01 ★ J5 4147-194
Hydrogen peroxide adduct - obtd. from soln. of hydrogen peroxide, potassium sulphate and sulphuric acid or potassium hydrogen sulphate

NIPPON PEROXIDE KK 10.05.78-JA-054439

E34 (17.11.79) C01b-15/08

The hydrogen peroxide adduct is of formula $K_4H_2(SO_{42})_3H_2$. The adduct is obtd. from a soln. contg. hydrogen peroxide, potassium sulphate, and sulphuric acid or potassium hydrogensulphate. It is useful as a bleach for sterilisation and for cleaning various surfaces. It can be used alone or in combination with other components according to use.

H_2SO_4 can be replaced by $KHSO_4$. The temp. at which the adduct can be produced conveniently is $0-40^\circ C$. The concns. of H_2O_2 at the range of the temp. is ≥ 130 g/l (pref. $200 \sim 400$ g/l) 10.5.78 as 054439(3pp55)

GEN ★ D22 00723C/01 ★ J5 4147-696
Antithrombus elastic body for catheters, blood by/pass tubes, etc - obtd by heparinating a crosslinked mixt. of polyethylene oxide methacrylate copolymer and polyether type polyurethane

AGENCY OF IND SCI TECH 12.05.78-JA-055627

A96 B07 P34 (A14 A25) (19.11.79) A61m-01/03

The body is obtd. by heparinating a cross-linked substance obtd. by cross-linking a mixt. of methacrylic ester copolymer contg. a side chain polyethylene oxide radical, diat. ammonium salt and cross-linking radical, and polyether type polyurethane. The ratio of copolymer to polyurethane is 1:10 to 1:1.

The body has a long life time (e.g. ≥ 3 months), high mechanical strength (e.g. tensile strength ≥ 1 kg/mm²) and improved elasticity. The body is suitable for use in affg. catheten, cannulas, monitoring tubes, drains, circulatory system for artificial kidneys and blood bypass tubes. 12.5.78 as 055627(6pp2)

HUS ★ D22 00756C/01 ★ J5 4147-924
Insecticidal compsn. for protection of wood material - comprising synergistic mixt. of tri:alkyl isocyanurate and pyrethroid

CHUGAI PHARMACEUTICAL KK 10.05.78-JA-054436

C03 E16 F09 (E15) (19.11.79) A01n-09/02

Compsn. for combating insects harmful to wood material, contains as active component trialkyl isocyanurate and pyrethroid type insecticide. The compsn. shows the residual effect and immediate effect at low levels.

Trialkyl isocyanurates include, e.g. triethyl, tri-n-propyl, tri-n-butyl cyanurates. As pyrethroid type insecticide there are used e.g., d-transallethrin, allethrin, methalathrin, etc. The ratio of blend of pyrethroid type insecticide to trialkyl isocyanurates is 2-40%. Since trialkyl isocyanurates are stable and are liq. at normal temp., the present compsn. can be used directly but it is pref. used in the form of organic solvent soln. or emulsion. 10.5.78 as 054436(4pp108)

MITP ★ D22 01044C/01 ★ J7 9039-675
Surgical bandage impregnated with photocurable resin - comprises e.g. glass fibre sheet impregnated with liq. polyfunctional acrylate urethane and a photosensitiser

MITSUBISHI PETROCH KK 09.05.74-JA-050747

A96 P34 (A14 A25) (29.11.79) A611-15/07 C08f-02/46 C08f-299/06

Hydroxyalkyl acrylate is reacted with polyhydric isocyanate to produce a reaction prod. Polyhydric alcohol is added to the reaction prod. to produce a liq. polyfunctional (meth)acrylate urethane. A sheet such as glass fibre is impregnated with a photo-curing resin composed of the liquid polyfunctional acrylate urethane, and a photosensitiser. 9.5.74 as 050747, A611-15/07, C08f-2/46, 299/06 (29.11.79) MITSUBISHI PETRAH KK (8pp76) (J50152586)

NITL ★ D22 01137C/01 ★ J7 9040-606
Plastic sticking plaster - comprising adhesive medicinal substances spread on elastic nonwoven fabric of long synthetic fibres bonded by low melting resin

NITTO ELECTRIC IND KK 05.08.70-JA-068819

A96 P32 P34 (04.12.79) A61f-13/02 A61k-09/70 A611-15/06 C09j-07/02

Sticking-plaster comprises adhesive medicinal substance spread on elastic nonwoven fabric made of relatively long synthetic fibres bonded together at intersections by low-melting resin.

The sticking-plaster shows excellent elasticity in all directions, and fits well to movement of human skin.

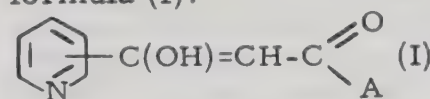
The fibres used are of nylon, rayon, polyester, etc. with length of 1-3 in. The bonding agent used is powder or fibre of low-melting nylon, polyester, etc. The fibres and bonding agent are blended and hot-pressed to give elastic fabric. Medicinal plaster having permanent tack, such as that based on natural rubber and terpene resin, is applied on the fabric in thickness of ca. 30 μ . The plaster is covered with release film, or the fabric is applied with release agent on its backside and wound into roll. 5.8.70 as 068819 A611-15/06, C09j-7/02, A61k-9/70, A61f-13/02 (4.12.79) NITTO ELECTRIC IND KK (3pp83)

THOM D22 55213T/35 = J7 9040-613
Uv absorbing 1-phenyl-3-(3-pyridyl)-1,3-propan-diones - used as light protecting agents in cosmetics, medicines and for paper

THOMAE K GMBH 08.02.71-DT-105672

B03 E13 P34 Q34 (04.12.79) *DT2105-672 A61k-07/42

Light protecting agents contain pref. 2-8% of a cpd. of formula (I):



where A = pyridyl or Ph opt. substd. with Hal, lower alkyl or alkoxy. Combination of I with p-alkoxy-cinnamic

acid esters or amides gives light absorption from 280-400 nm. 7.2.72 as 013535 (clg 8.2.71-DT-105672) A61k-7/42 (4.12.79) THOMAE GMBH K (5pp) (J4 7035147)

AVTE- D22 79979U/52 = NL -162-304
Liquid absorbing fibrous mass - eg non-woven cushion

AVTEX FIBERS INC (FMCC) 05.06.72-US-259944

A96 F04 P34 + P32 (17.12.79) *NL7307-655 A611-15 D01f-02/06

Compsn. with a strong liq. absorbancy, esp. pad or tampons, consists of 2-component fibres having regenerated cellulose as the main material.

Compsn. comprises dry alkaline fibres of regenerated cellulose, having an alkali salt of polyacrylic acid dispersed throughout, and the liquid retaining possibility of the fibres being ≥ 4.55 ml/g.

The amt. of alkali salt of poly-acrylic acid is pref. 10-35 wt. % based on cellulose. The fibres pref. have a lubricating dressing e.g. of a higher fatty acid ester of sorbitan. 1.6.73 as 007655 (4pp549)

UPJO D22 45992U/33 = NL -162-428
7-o-demethylcelesticetine derivs - antibiotics and disinfectants

UPJOHN CO 03.01.72-US-215119

B03 P34 (D16) (17.12.79) *NL7217-796 A611-13 C12d-09/14

Antibacterial 7-0-demethylcelesticetine (I) is prepd. by culturing Streptomyces caelestis NRRL 5320. Pref. (I) is hydrolysed with an (in)organic base, or converted into β -hydroxyethylthiolincosaninide by heating in hydrazine, or converted into the 2-unsubst. phosphate or acylate (derived from ≥ 18 C carboxylic acid).

The microorganism used is a mutant of and has the same properties as Streptomyces caelestis NRRL 2418. 29.12.72 as 017796 (9pp913)

AMCY ★ D22 C/01 ★PT --69-468
Surgical sutures of block copolymers of segmented polyesters
AMERICAN CYANAMID CO 14.08.78-US-933224
A96 F01 P34 (A23) (06.12.79) A611 11.4.79 as 069468

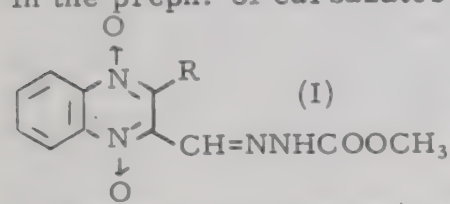
BEKI ★ D22 01215C/01 ★SU -656-833
Timber-treating resin compsn. - contg. polycondensation monomer
or resin, catalyst and amino-alcohol stabiliser
BELORUSS KIROV TECHN INS 03.06.76-SU-367541
A97 E16 F09 P63 (19.04.79) B27k-03/50

Timber is modified by treating with a compsn. consisting
of (by wt.): 95.0-99.9% of a polycondensation cpd. and 0.1
-5.0% of an aminoalcohol stabiliser of formula
 $\text{NH}_3\text{-n}(\text{C}_2\text{H}_4\text{OH})_n$ where $n = 1, 2$ or 3 .

The stabiliser extends the life of the compsn.
Vikhrov, Yu. V., Erdman, M. E., Solamakha, A. I. et al
Bul. 14/15.4.79. 3.6.76 as 367541 (4pp314)

PFIZ D22 00365A/01 =SU -657-746
Antibacterial and growth-promoting quinoxaline 1,4-dioxide
derivs. - prepd. by reacting (2)-halomethyl cpds. with (1) sulphonyl-
(2)-methoxycarbonyl-hydrazine cpds. (NL 19.12.77)
PFIZER INC 15.06.76-US-696263
B03 C02 E13 +R29 (D15) (15.04.79) *DT2725-023 A61k-31/49
C07d-241/44

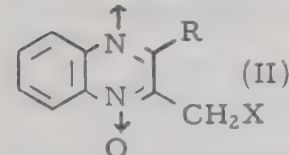
In the prepn. of carbazates of formula (I)



(I)

(where R is H, 1-6C alkyl,
1-6C hydroxyalkyl, 2-7C alk-
anoyl, benzoyl or -CONR₁R₂;
and R₁ and R₂ are 1-6C alkyl,
1-6C hydroxyalkyl or 1-6C
aminoalkyl), a cpd. of formula

(II)(where X is Cl or Br) is reacted with 1 or 2 equivalents
of an alkali carbonate and 1 or 2 equivalents of a hydrazine
of the formula R''NHNHCOOCH₃ (III) (where R'' is CF₃SO₂,
CF₃CH₂SO₂, CH₃SO₂ or CH₃C₆H₄SO₂) in an inert solvent at
75-85°C, and (I) is subsequently isolated.



(II)

Cpds. (I) in which R is not H, 1-6C alkyl
or -CONHCH₃ are claimed as new cpds.
Intermediates of formula (III) are also
claimed as novel cpds.

(I) have antibacterial activity against
Gram-positive and -negative organisms and can be used as
industrial antimicrobial agents (e. g. for water treatment,
for sludge control, or as paint or wood preservatives) and
as disinfectants for topical use. They may also be used
for the treatment of infections in animals.

Specific cpds. (I) include methyl 3-(2-quinoxalinylmeth-
ylene)-carbazate 1,4-dioxide. In an example, this is pre-
pd. in ca. 100% yield by reacting 2-bromomethylquinoxal-
ine 1,4-dioxide in acetonitrile with N-methoxycarbonyl-N'-
trifluoromethylsulphonyl-hydrazine in the presence of an-
hydrous K₂CO₃.

Kisuba, L. J. Bul. 14/15.4.79. 14.6.77 as 494212 (3pp)

SUTU D22 72276T/45 =US RE30-170
Hydrolysable copolymers - of amino acids and hydroxy acids useful
as absorbable sutures

SUTURES INC 09.06.71-US-151577 (04.04.75-US-565076)
A23 F01 +P34 (18.12.79) *ZA7107-572 C08g-69/10

Hydrolysable film and fibre-forming polymer contains re-
peating units of formula -NH-CRR₁-CO-OCR₂R₃-(CH₂)_n-
CO-(I).

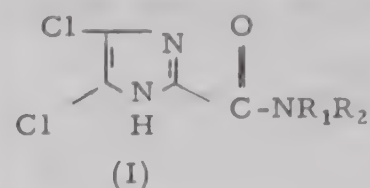
In (I) R is lower alkyl, aryl, alkanoyl or aralkyl; R₁,
R₂ and R₃ are each H, or lower alkyl, ≥ 1 being H; n = 0-
2. In a typical unit, R is Me or benzyl, R₁₋₃ are all H and
n = 2.

The polymer is easily decomposable under neutral bas-
ic or acidic conditions but requires longer periods for
decomposition than polylactides and polyglycolides. The
films and fibres have high tensile strength; they are used
in surgical sutures. 12.10.77 as 842379 Reissue of
3773737 (7pp964)

FARB D22 65000Y/37 =US 4179-277
(4,5)-Dichloro-imidazole (2)-carboxylic acid derivs. - useful as
herbicides, fungicides, bactericides, insecticides etc.

BAYER AG 29.07.76-DT-634053 (12.03.76-DT-610527)
C02 E13 (18.12.79) *BE-852-313 A01n-09/22 C07d-233/66

4, 5-Dichloro-imidazole-2-carboxylic acid amides of form-
ula (I) and their acid addn. salts are new.



(I)

In (I), R₁ and R₂ are each H,
1-12C alkyl opt. substd. by CN,
OH, CONH₂, COOH, phenyl or N-
4, 5- dichloroimidazole-2-carbox-
amide; cyclohexyl, alkenyl or al-
kynyl with 3-6C atoms; or phenyl
or naphthyl, opt. substd. by 1-4
C alkoxy, 1-4C haloalkyl, halo,
1-4C (halo)alkoxy, acetyl or phenoxy, naphthoxy, phenyl-
mercapto or naphthylmercapto opt. substd. by halo, 1-4C
alkyl, CF₃, 1-4C alkoxy, NO₂ or 1-4C alkylmercapto.

(I) have insecticidal, acaricidal, fungicidal, nematocid-
al and herbicidal properties. 18.2.77 as 770260 (+2.6.76
-DT-624759)(57pp936)

AVTE- ★ D22 01640C/01 ★US 4179-416
Alloy rayon fibres of high fluid holding capacity - comprise PVP and
polyacrylic acid alkali metal salt dispersed in a regenerated
cellulose matrix

AVTEX FIBERS INC 23.02.78-US-880535 (24.11.72-US-309076)
A11 F01 (A14) (18.12.79) C08l-01/02

Alloy rayon fibres of higher fluid-holding capacity than
non-alloy rayon comprise a regenerated cellulose matrix
in which are dispersed a polyvinylpyrrolidone polymer
(PVP) and an alkali metal salt of a polyacrylic acid.

The fibres may be used in the mfr. of sanitary napkins
and tampons, where high fluid retention is required and
no special equipment is required. The fibres are not
brittle and can be carded, and may be blended with e. g.
rayon, cotton, nylon or polyester. The fibres have a fluid
holding capacity of ≥5 cc/gas measured by the syngyn a
test 23.2.78 as 880535 Cip. 3919385, 3951889, 4041121
(+24.11.72, 6.12.74, 12.10.75, 7.11.75, 12.11.76-US-
309290, 630476, 625445, 629952, 741172)(6pp960)

MITU D22 20398Y/12 =US 4179-437
Antibacterial acylamino benzyl penicillin derivs - prepd. by (N)-
acylating amino-benzyl penicillins

MITSUBISHI CHEM IND KK 16.02.76-JA-015563 (08.09.75-JA-
108708)

B02 (18.12.79) *DT2640-432 C07d-499/68

6-(D-2-Prolylamino-2-phenylacetamido)penicillanic acid
(I) and its non-toxic salts, are new.

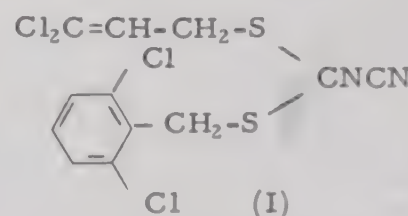
In an example, into a suspension of Pd(BaCO₃ in 5 ml
of water was passed H₂. To the suspension was added a
soln. of K 6/D-2-(1-benzoyloxycarbonyl-D-prolylamino)-
2-phenylacetamido/penicillanate. H₂ gas was passed and
the catalyst filtered off. (I) was obtd. from the filtrate
by acidification, washing, neutralising and concentrating.
24.4.78 as 899458 C.i.p. 4111932 (+12.8.76-US-713808)
(15pp982)

STAU ★ D22 01682C/01 ★US 4179-523
Controlling bacteria or fungi - by application of 1,1-di:chloroallyl
2,6 di:chlorobenzyl cyano:di:thio:imido carbonate

STAUFFER CHEMICAL CO 05.06.78-US-912905 (02.10.69-US-
863319)

A60 C03 E14 (18.12.79) A01n-09/20

Method of controlling bacteria or fungi comprises applying
thereto an effective amt. of 1,1-dichloroallyl 2,6-dichloro-
benzyl cyanodithioimide carbonate of formula (I).



(I)

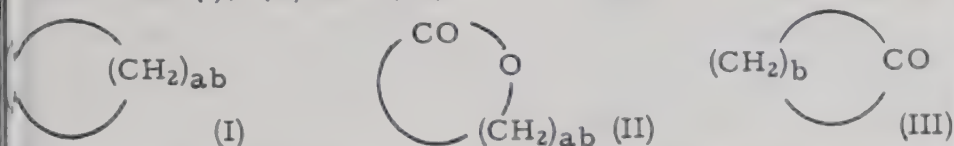
Cpd. (I) is also eff-
ective against algae.
It can be applied to tex-
tiles, leather, paint,
soaps, paper, wood,
plastics, oils, etc. or
used as a paper mill
slime controlling agent.
The Parent Patent

claimed cpd. (I). 5.6.78 as 912905 Div. ex. 4124637 (4pp)

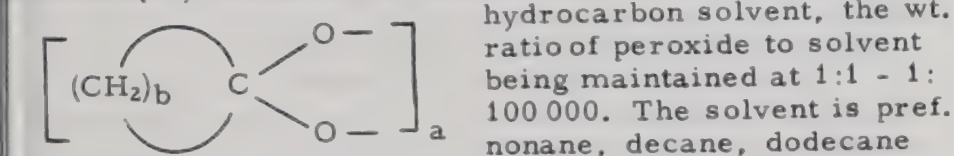
D23: OILS; FATS; WAXES

SE/ ★ D23 C/01 ★CS 7702-932
ne fat prodn.
JASEK A 04.05.77-CS-002932
(31.07.79) A23k-01/10

SE D23 95718R/51 =DS 2034-737
macrocylic cpds for cyclic peroxides
RESEARCH CORP (RESC) 17.07.69-US-842739
E13 (20.12.79) *BE-752-356 + C07c-13/02 C07c-49/27 C07d-313
C11b-09
macrocylic hydrocarbons, lactone and ketones are prepd.,
formulae (I), (II) and (III)



where a = 2 or 3 and b is at least 4 and one methylene gp.
may have a methyl substituent). A di- or triperoxide of
formula (IV) is heated to 100-350°C for 1-80 minutes in a



hydrocarbon solvent, the wt.
ratio of peroxide to solvent
being maintained at 1:1 - 1:
100 000. The solvent is pref.
nonane, decane, dodecane
and/or benzene. Dilactones may also be produced.
The prods. e.g. cyclopentadecanolide are useful as per-
fumes. 14. 7. 70 as 034737 (8pp068)

TUD ★ D23 00011C/01 ★DS 2332-038
deodorising fat and oil - by contacting mixts. with super-critical
carbon dioxide and pref. retaining contaminants on adsorbent
STUDIENGES KOHLE MBH 23.06.73-DT-332038
(20.12.79) C11b-03/14

super-critical CO₂ at 150-250°C and 101.3-253.3 bar pres-
sure is contacted with fat- and oil-contg. mixts., to de-
odorise the fats and oils while simultaneously minimising
the free fatty acid content.

Natural or synthetic food fats and oils can be purified
without loss or hydrolysis of the fats and oils. In an exam-
ple for producing odourless and tasteless soya oil contg.
0.02% free fatty acids, soya oil loss was reduced from 13%
to 0.34% by increasing column temp. from 90- to 200°C
when charging CO₂ at 202.5 bar pressure. 23. 6. 73 as
032038 (4pp200)

JIN ★ D23 00347C/01 ★GB 2023-118
palm oil processing effluent treatment - using combination of
Trichosporon yeasts and Candida, Hansenula, Pichia or Rhodotorula
yeasts

AJINOMOTO KK 26.04.78-JA-049434
(D15 D16) (28.12.79) C02c-01/02
Waste water discharged from palm oil factories is treated
by culturing in it ≥ 1 yeast of the genus Trichosporon and
 ≥ 1 yeast of the genera Candida, Hansenula, Pichia or
Rhodotorula under aerobic conditions. The process is carr-
ied out at pH 3-6 and 25-40°C. A nitrogen source e.g.
(NH₄)₂SO₃ and a phosphorus source e.g. KH₂PO₄ may be
added.

It is not necessary to remove oily substances and sus-
pended solids, or to dilute the water, and the treatment
time is short. 25. 4. 79 as 014384 (4pp955)

MYMA- ★ D23 00349C/01 ★GB 2023-120
palm oil processing effluent treatment - by solvent extn. to remove
oil and give an oil free sludge

UNIV MALAYA 11.06.79-GB-020291 (12.06.78-GB-026675)
(D15) (28.12.79) C02b-09 C11b-13
Treatment of palm oil mill processing effluent comprises
(a) solvent extn. using a water-immiscible solvent, to give
an extract contg. oil, etc. and an aq. sludge; (b) recovering
of palm oil and solvent from the extract; and (c) treatment
of the sludge to separate suspended solids from the aq.
phase. The solvent is a (halogenated) hydrocarbon e.g.
hexane, heptane, naphtha, benzene, trichloroethylene.
Removal of the oil facilitates sepn. of solids. The
process gives quicker, more complete solids and BOD re-

moval. 11.6.79 as 020291 (6pp955)

ROSE/ ★ D23 00412C/01 ★GB 2023-507
Making wax foil candle decoration - by rolling foil onto relief
pattern plastics matrix made from photoengraved metal block

ROSE D 03.03.78-EI-000437
P78 (03.01.80) B44c-01/24

Foil decoration is made by rolling foil onto a plastics mat-
rix to raise a relief pattern. Printing ink may be applied
to raised parts of the design with a roller.

The matrix is pref. made of photoengraving a polished
flat metal block with recesses of uniform depth, then pre-
ssing the block onto a heated sheet of partially cured ther-
mosetting plastics to impress the design and fully cure the
plastics. The raised parts of the design are smooth flat
and of uniform height to facilitate roller colouring. 2. 3. 79
as 007369 (3pp1358)

BRPE ★ D23 00443C/01 ★GB 2023-634
Solvent extn. of glyceride oils - from offal, oil seeds etc., using
solvent contg. formic or propionic acid

BRITISH PETROLEUM LTD 21.06.77-GB-025824 (13.06.78-GB-
026777)
(03.01.80) C11b-01/10

Oil is extracted from an oil-contg. substrate, e.g. oil
seed, animal offal, bone meal, oily fish, etc. by treatment
with hydrocarbon solvent(s) of b. pt. 32-300°C contg. $\geq 3\%$
formic acid and/or propionic acid.

The acid-contg. solvent drains more rapidly from the
residue. A proportion of the acid remains in the residue,
protecting it from bacterial and fungal attack. 13. 6. 78 as
026777 (3pp955)

SHIE ★ D23 00920C/01 ★J5 4148-704
Organic halogen compounds, e.g. pharmaceuticals or perfumes -
by treating organic silicon cpd. with cupric chloride
SHINETSU CHEM IND KK 15.05.78-JA-057317
B05 E19 (21.11.79) C07b-09

Prodn. of organic halogen cpds. comprises treating an
organic Si cpd. of formula K₂(RSi F₅) (I) (where R is opt.
subst. monovalent hydrocarbyl) with cupric chloride to
give an organic halogen cpd.

(I) are useful in field of fine chemicals such as pharm-
aceuticals and perfumes. 15. 5. 78 as 057317 (5pp69)

CHCC ★ D23 00921C/01 ★J5 4148-706
Carbonyl cpd. prodn. from formic acid ester - by gas phase catalytic
reaction, useful in prodn. of pharmaceuticals, dyes, agrochemicals
etc.

CHISSO CORP 12.05.78-JA-056403
B05 C03 E19 (21.11.79) C07c-45/18

Carbonyl cpd. R₁R₂CO may be produced by subjecting for-
mic acid ester R₁R₂CHO.CO₂H to gaseous phase catalytic
reaction at 200-450°C in the presence of catalyst compris-
ing cpd. of metal selected from Zn, Bi, Fe, Cd and Mn.
In the formulae R₁ is H or 1-10C alkyl or alkenyl, R₂ is 1
10C alkyl, alkenyl or 6-12C aryl or aralkyl; R₁ and R₂ may
be ring of $(-CH_2-)_n$ (n is 3-7).

Carbonyl cpds. i.e. aldehydes or ketones, may be used
as material for prodn. of solvent, perfumes, pharmaceuti-
cals, dyestuffs or agricultural chemicals. 12. 5. 78 as
056403 (4pp69)

YOKK- ★ D23 00938C/01 ★J5 4148-738
2,6-Di:methyl-1,3,7-octatriene-6-ol prepn. - by oxidn. and redn.
process starting from 2,6 di:methyl-1,3,6-octatriene; used as
perfume or perfume intermediate

YOKKAICHI GOSEI KK 13.05.78-JA-056159
E17 (21.11.79) C07c-29 C07c-33/02

2,6-Dimethyl-1,3,7-octatriene-6-ol (I) is prepd. by oxidi-
sing 2,6-dimethyl-1,3,6-octatriene (II) and reducing the
resulting prod. (III). (I) is useful as a perfume or inter-
mediate for other perfume components. It is obtd. in
good yield selectively.

Pref. oxidn. under photo-irradiation is carried out in
the presence of sensitiser such as methylene blue, chlor-
ophyll or the like at -20 to 150°C pref. around room temp.

Reduction is carried out with sodium borohydride, lithium aluminium hydride or lithium borohydride at -20 to 100°C.

In an example, to a soln. of (II) (2.0 g) in methylene chloride (35 g) contg. methylene blue (0.1 g) was introduced oxygen gas under irradiation of fluorescent light at 0°C for 1.25 hrs., whereby peroxide (III) was obtd. in 22%. This procedure was repeated 22 times. To the combined reaction mixt. was added a soln. of sodium borohydride (2 g) in methanol (40 ml) and water (8 g) under ice-cooling, and the resulting mixt. was reacted at room temp. for 8 hrs. The reaction mixt. was worked up several times by chromatography, whereby highly pure (I) (2.7 g) was obtd. 13.5.78 as 056159(3pp104)

TAKS ★ D23 00947C/01 ★ J5 4148-763
Isocamphyl:guaiacol prepn. from camphor and veratrole - by condensing in presence of Friedel-Crafts catalyst and hydrolysing the resulting isocamphyl:veratrole

TAKASAGO PERFUMERY KK 15.05.78-JA-056633
E14 (21.11.79) B01j-27/10 C07c-41 C07c-43/20

Isocamphylguaiacol (I) is prepd. by condensing camphor with veratrole in the presence of a Friedel-Crafts catalyst and hydrolysing the resulting isocamphylveratrole (II).

(I) is useful as a synthetic intermediate for preparing isocamphylcyclohexanol showing strong aroma.

In an example, (1) to a mixt. of camphor (141 g) a veratrole (472 g) was added portionwise anhydrous $AlCl_3$ (30 g) in 30 min. Mixt. was stirred at 60°C for 1 hr. and at 90-100°C for 3 hrs. for isomerisation. Reaction mixt. was poured into a mixt. of ice and hydrochloric acid and shaken with ether to give an oil (630 g), which was distilled twice to give (II) (226 g), b.p. 150-170°C/1 mmHg. A mixt. of (II) (226 g), solid KOH (69g) and n-butanol (500 ml) was reacted at 200°C under 34 kg/cm² for 8 hrs. Reaction mixt. was neutralised with hydrochloric acid and shaken with ether. Evaporation of ether gave an oil (225 g), which was distilled. Fraction b.p. 130-165°C/1 mmHg (174 g) contained 37% of 3-(exo-5-exo-i socamphyl)-6-methoxyphenol. 15.5.78 as 056633(6pp104)

HLSI- D23 38099X/21 = J7 9040-083
Edible oils sepn. into satd. and unsatd. fractions - by adding aq. alkanol, cooling and separating the layers

HLS LTD IND ENG CO 07.02.75-IL-046595
(D13) (01.12.79) *BE-836-683 C11b-07

Process for sub-dividing an edible, esp. degummed or deacidified oil, i.e. of a natural or partly processed animal or plant oil for fat, or their mixts. into a less satd. (liq.) fraction and a more satd. (solid) fraction, takes place by (i) dissolving the oil in a 2-3C alkanol, esp. isopropanol, contg. 2-10(4-6) wt % water, as solvent, and using solvent quantities of 0.5-4(1-2) pts. wt./pt. wt. oil (ii) cooling the soln. and (iii) sepg. the top layer formed, which contains the crystalline solid fraction of the oil in suspension by decantation from a lower layer which contains the liq. fraction of the oil.

Used for prepn. of salad oils, i.e. unsatd. oils having good stability to cooling. Smooth sepn. of liq. and solid fractions is effected by decanting, without need for filtering or centrifuging. 23.10.75 as 128256 (clg. 7.2.75-IL-046595) C11b-7/00 (1.12.79) HLS LTD IND ENG CO. (8pp) (J5 1093912)

HLSI- D23 30222X/17 = J7 9040-084
Edible liquid oil prodn. - from natural oils contg. approximately equal molar proportions of satd. and unsatd. fatty acids

HLS LTD (HLSI-) 22.11.74-IL-046106

(D13) (01.12.79) *BE-835-832 A23d-05 C11b-07 C11c-03/10

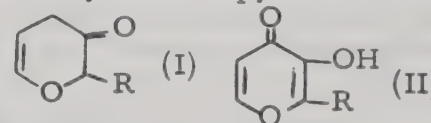
Edible liq. oil is produced from natural or semi-treated animal or vegetable oils/fats, in which the molar ratio of satd. to unsatd. fatty is approx. 1:1, ≥ 90 mole % of the satd. fatty acids contg. ≤ 16 C atoms by (a) reacting a portion of the oil with at least one ester of an unsatd. fatty acid and a 1-3C alkanol, the esters being derived from the same alkanol when ≥ 2 esters are used in the presence of a transesterification catalyst, to form a mixt. (I) of products, (b) distilling (I) at a pressure below 40 torr, to give a distillate (II), which is a mixt. of alkanol esters of satd. and unsatd. fatty acids, and a distilln. residue (III) which

is a liquid edible oil having a higher iodine no. than that of the oil used as raw matl. (c) fractionally distilling (II) at a pressure below 40 torr to give a fraction (IV) contg. esters of satd. fatty acids having a low b.p. and a fraction (V) contg. esters of unsatd. fatty acids having a high b.pt. (d) reacting (IV) with another portion of the oil in the presence of a transesterification catalyst to form another mixt. (VI) of products, (e) fractionally distilling (VI) at a pressure below 40 torr. to give a distillate (VII) which is a mixt. of alkanol esters of satd. and unsatd. fatty acids and a distilln. residue (VIII) having a lower iodine no. than the oil used as raw matls. (f) fractionally distilling (VII) at a pressure below 40 torr to give a fraction (IX) of esters of satd. fatty acids having a low b.p. and a fraction (X) of esters of unsatd. fatty acids having a high b.p. (g) recycling (V) and (X) to stage, (a) and (h) recycling (IX) to stage (d). Enables prods. (III) of the salad oil type to be produced esp. from palm oil. 18.10.75 as 125816 (clg. 22.11.74-IL-046106) A23d-5/00, C11c-3/10, C11b-7/00 (1.12.79) HLS LTD. (11pp) (J5 1084805)

SAKB D23 20775A/11 = J7 9040-551
(3)-Hydroxy-(4H)-pyranone-(4) flavouring agents prepn. - by oxidising (3,4)-di:hydro-(2H)-pyranone-(3) cpds. prepd. from furfural

OTSUKA KAGAKU YAKUHI 16.07.76-JA-085394
E13 (04.12.79) *J53012-865 C07d-309/40

3-Hydroxy-4H-pyran-4-ones (II) are prepd. by oxidising 3,4-dihydro-2H-pyran-3-ones of formula (I).



(where R is H or 1-6C straight or branched alkyl). Starting cpd. (I) is novel and can be prepd. in several steps from

furfural. Oxidn. is carried out at 50-150°C, pref. 70-100°C, for 5-24 hr. according to known oxidising methods such as selenium dioxide method, nitrite/acid method or air oxidn. Aliphatic alcohols, cellosolves or cyclic ethers such as THF or dioxan may be used as solvents. Products (II), useful as flavouring agents, are prepd. economically at lower cost with little pollution.

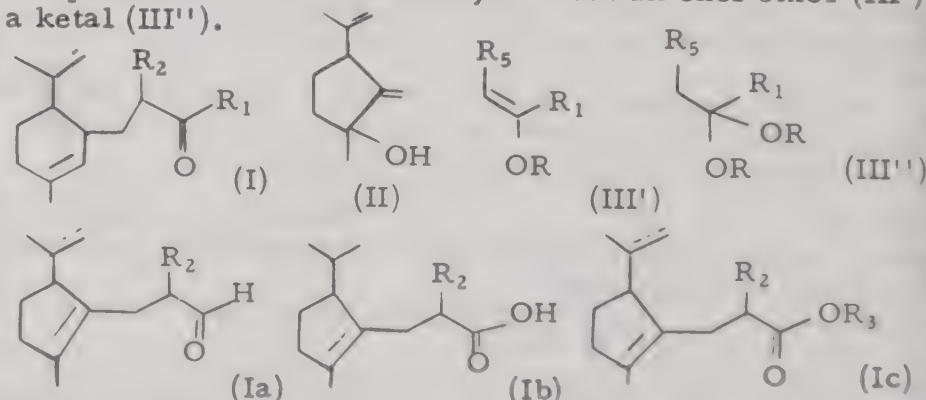
In an example 3,4-dihydro-2H-pyran-3-one (2.94g) and selenium oxide (3.4g) were dissolved in ethanol (20 ml) and water (10 ml) and the soln. was refluxed for 8 hr. Produce selenium was filtered off, and the filtrate was worked up to give pyromeconic acid (2.2g) as colourless crystals. Yield 65.4%. 16.7.76 as 085394, C07d-309/40 (4.12.79) OTSUKA KAGAKU YAKUHI (5pp) (J5 3012865)

GIVA D23 60546U/41 = J7 9040-616
Perfumery compsns - contg 3-isopropyl - or 3-isopropenyl cyclopentene derivs

GIVAUDAN L & CIESA 17.03.72-CH-004040

E15 (04.12.79) *DT2313-017 A61k-07/46 C07c-47/38 C07c-61/38 C07c-69/74

Cyclopentenones having the general formula (I) (where R_1 is H, OH, lower alkyl or lower alkoxy, R_2 is H, lower alkyl or lower alkylidene and the dotted line denotes an opt. bond) are useful as perfumes and ingredients of perfume compsns. They are prepd. by reacting a cpd. having the formula (II) in the presence of an acid catalyst with an enol ether (III') or a ketal (III'').



(in which R_5 is H, lower alkyl or lower alkenyl) and opt. catalytically hydrogenating a 3-isopropenyl cpd. (I) obtd. to the 3-isopropyl cpd. of formula (I) and/or oxidising an aldehyde obtd. of formula (Ia) to the acid (Ib), and opt. converting these to the ester (Ic), (where R_3 is lower alkyl). 15.3.73 as 011379/78 Div. ex. 30475/73 (clg. 17.3.72-CH-004042) A61k-7/46, C07c-47/38, 61/38, 69/74 (4.12.79)

GIVAUDAN & CIE S.A.L. (6pp) (J5 3109957)

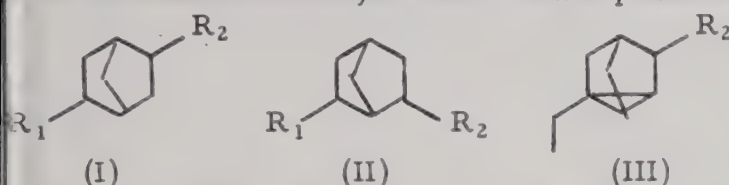
GIVA D23 23100S/13 =NL-162-358

Norbornyl derivs used in perfumery

GIVAUDAN L & CIE SA 06.10.69-US-864158

E15 (17.12.79) *BE-756-583 A61k-07/46 C07c-35/28 C07c-67/04 C07c-69/02 C11b-09 + C07c-27/02

Norbornyl derivs of formula (I), (II) or (III) (where R_1 is ethylidene or ethyl; and R_2 is 1-5C alkanoyloxy or OH) are prepd. by reacting 5-ethylidene-2-norbornene with a 1-5C alkane carboxylic acid in the presence of a proton



active catalyst. The esters produced are hydrogenated and/or saponified in arbitrary order. Specific (I) has R_1 ethylidene and R_2 propionyloxy. The cpds. are new and used in perfume compns.

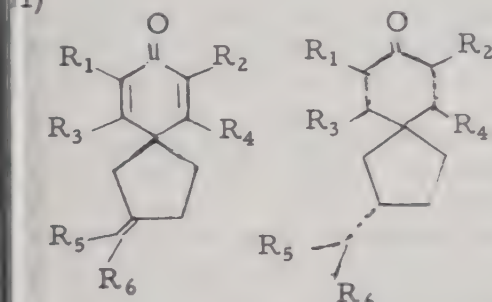
Typically prepn. is effected using as catalyst formic sulphuric, phosphoric, toluene sulphonic acids, BF_3 (etherate or hydrate) or acid resin, as 0.1-50 (1-5) wt. % r.r.t. organic acid. Ethylidene norbornene to acid molar ratio is 1:1-5, with reaction temp. of e.g. 50-100°C. Saponification is effected in refluxing alkali hydroxide (aq. or alcoholic), and hydrogenation in a solvent with a Raney nickel or Pd/active carbon catalyst. 6.10.70 as 014660 (13pp913)

FRIT-★ D23 01164C/01 ★NL7904-306
Spiro:dienone(s) and spiro:cyclic ketone(s) prodn. - useful as perfume components

FRITZSCHE DODGE & O 09.06.78-US-914160

E15 (11.12.79) A61k-07/46 C07c-49/30

(A) Spirodienones and spirocyclic ketones of formula (II) are new (R_1 - R_6) are each H or lower alkyl, provided that R_1 and R_2 may not both be H and R_3 , R_4 , R_5 and R_6 are not all methyl gps.; each dotted line is a C-C or C=C bond, provided that at least one of the dotted lines is a C-C bond).



Prefd. cpds. are of formula (I): (B) intermediates of formula (III) (see "preparation") are also new.

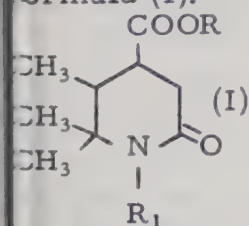
(I) are useful perfume components having a warm, woody, earthy scent. 31.5.79 as 004306 (18pp513)

JYER=★ D23 01280C/01 ★SU-657-023
subst. di:hydro-pyridone medicinal, scent and complexing agents prepd. by reacting carbalkoxy-tri:methyl di:hydro pyrone with alkyl or benzyl amine in xylene

EREVAN UNIV 25.10.77-SU-537095

B03 E13 (18.04.79) C07d-211/90

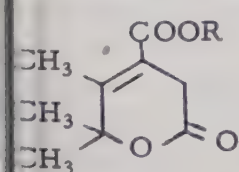
6,6-Dihydro-2-pyridone derivs. are useful in medicine, as fragrant agents or complex-forming agents. They are of formula (I):-



where R is ethyl or butyl and R_1 is butyl, hexyl, or benzyl gps. These cpds. are described as new.

Cpds. (I) are prepd. by reacting 6-carbalkoxy-5,6,6-trimethyl-3,6-dihydro-2-pyridone of formula (II) (where R is as above) with amine of formula: R_1NH_2

where R_1 is as above).



The reaction is conducted in absolute xylene medium at 148-150°C using cpd. (II):amine ratio of 1:1-2. The yield of final prod. is 66%.

Avetisyan, A.A., Karagez, S.Kh., Dangyan, M.T. Bul. 14/15.4.79. 25.10.77 as 537095 (2pp938)

DESI=★ D23 01396C/01 ★SU-657-832
Electrostatic separator - for removing suspended particles from liquids has charged and earthed electrodes separated by insulating sleeving

DES CONS TECHN INST (KDFO) 02.08.73-SU-957556

J01 P41 (28.04.79) B01d-35/06 B03d-05/02

Electrostatic separator, for cleaning liquids, e.g. benzene solutions of micelles of vegetable, cottonseed, and other oils, from solid particles, can be used in the chemical, food and petrochemical inds. It consists of a body with a lid, potential-generating electrodes between which earthed electrodes are placed, these being fastened to a horizontal drive shaft and separated by metallic sleeves, pipes to admit the impure, and withdraw the purified liquids, and means to remove the residues from the electrodes.

Productivity is increased, by adding to the outside of each metal sleeve spacing dielectric sleeves, on to which the potential electrodes are fastened. Dielectric combs are rigidly fastened to the internal surface of the body, into slots in which the ends of the potential and earthed electrodes are fixed. The lid is provided with a seal which is pressed to the last electrode. The inlet pipe has widening-out chambers containing deflecting plates, and have slits, the length of which equals the width of the body.

Aleiner, Yu.I., Zalmanov, B.A., Kizler, E.Kh. et al. Bul. 15/25.4.79. 2.8.73 as 957556 (5pp29)

SCMZ★ D23 01652C/01 ★US 4179-454
hydrogenated fatty acid prodn. from crude glyceride oil - by catalytic hydrogenation then fat splitting

SCM CORP 24.07.78-US-927452

B05 E17 (18.12.79) C11c-01/04 C11c-03/12

Prodn. of hydrogenated fatty acids (I) comprises catalytic hydrogenation of crude glyceride oils (II) until significant increase in saturation has occurred (esp. to iodine value (iv) 0-100). Themixt. is then split in a separate zone to give (I) and glycerine by-prod. which are recovered.

(I) may then be refined e.g. by bleaching, fractional crystallisation and/or distillation. The catalyst is esp. 0.025-0.3% Ni plus 0.2-3% Cu chromite (by wt. of oil) or hydrogenation is in two stages. First to reduce iv to $\geq 10\%$ less than the initial value, then in presence of 0.01-0.3 wt. % Ni only.

(I), opt. after (inter)esterification, polymerisation, etc., are used to makeprods. useful in pharmaceutical, cosmetic, textile and rubber industries. Difficult alkali degumming or refining, and hydrogenation of fatty acids are avoided. 24.7.78 as 927452 (4pp1251)

EAST★ D23 01653C/01 ★US 4179-457
Fatty acid prodn. by saponifying ester(s) in soln. - with two-stage acidification during work-up

EASTMAN KODAK CO 29.12.78-US-974281

E17 (18.12.79) C11c-01/04 C11d-13

Prodn. of fatty acids (I) from corresp. lower alkyl esters (II) comprises first dissolving (II) in a mixt. of water and 25-300 wt. pts. (per 100 pts. water) of lower alkanol (pref. (m)ethanol). The mixt. is then saponified with alkali metal hydroxide (pref. NaOH and/or KOH) then acid added to the mixt. to give pH 5-8 (6-7).

The mixt. is distilled to remove solvent (pref. all of it) then more acid added to give pH 1-4 (1.5-2.5) and the reaction prod. washed to obtain (I). Pref. 15-30 pts. wt. hydroxide are used per 100 pts. (II) and the method is esp. applied to mixts. of methyl and ethyl esters.

(I) are useful in mfr. of plasticisers, surfactants, lubricants, heat and light stabilisers etc. Method achieves efficient saponification without excess foaming during solvent removal or re-esterification. 29.12.78 as 974281 (3pp1251)

See Also

D13 DS 2055036

D24: SOAP; SOAP DETERGENTS

TANA ★ **D24** 01141C/01 ★ J7 9040-639
Preventing mould formation in tobacco - by adding an aminoacid salt of a higher alkyl sulphate cpd.
TANABE SEIYAKU KK (NISB) 01.12.71-JA-097432
E16 P15 (04.12.79) A24b-03
Method comprises adding aminoacid salt of 12-16C alkyl-sulphate (I) to tobacco in a specific step of mfr. of tobacco

(I) is e.g. lauryl sulphate, cetyl sulphate, etc. The amino-acid is e.g. alanine, glycine, lysine, proline, valine, etc.
1.12.71 as 097432, A24b-3/00 (4.12.79) TANABE PHARM-ACEUTICAL KK; JAPAN TOBACCO AND SALT PUB.
(4pp83) (J4 8061694)

D25: OTHER DETERGENTS

PROC/ ★ **D25** C/01 ★ CS 7701-627
High activity detergent
PROCHAZKA K 11.03.77-CS-001627
(31.07.79) C11d-03/20

KOTL/ ★ **D25** C/01 ★ CS 7702-128
4,4-Bis-4-amino-6-anilino-s-triazinyl-amino-2,2 stibene disulphonate
KOTLAN J 31.03.77-CS-002128
E12 F06 (31.07.79) C07c-143/29 D06l-03/12

MORA/ ★ **D25** C/01 ★ CS 7706-610
Prepn. of alkenyl-polyglycol-ether-sulphate - and its mixtures with alkyl-polyglycol-ether-sulphate
MORAK M 12.10.77-CS-006610
A25 (31.07.79) C11d-01/29

KOPA/ ★ **D25** C/01 ★ CS 7802-763
Liquid cleaning and disinfecting agent
KOPAL V 28.04.78-CS-002763
(31.07.79) A23c-07

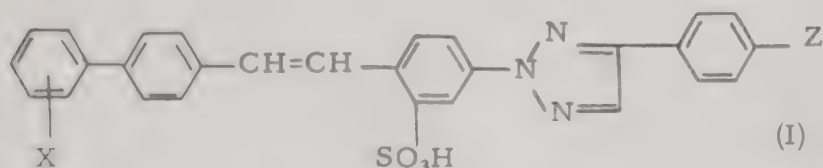
ADLE/ ★ **D25** C/01 ★ CS 7804-812
Anthracene-1-sulphonic acid prepn. - from anthracene-2-sulphonic acid
ADLER G 19.07.78-CS-004812
E14 (31.07.79) C07c-143/24

ADLE/ ★ **D25** C/01 ★ CS 7804-995
Sodium anthraquinone-2-sulphonate prepn.
ADLER G 28.07.78-CS-004995
E12 (31.07.79) C07c-143/24

SVOB/ ★ **D25** C/01 ★ CS 7805-236
Higher unsaturated carboxylic acid esters hydrogenation
SVOBODA P 10.08.78-CS-005236
E17 (31.07.79) C07c-69/22 C11c-03/12

SVOB/ ★ **D25** C/01 ★ CS 7805-237
Higher unsaturated carboxylic acid esters hydrogenation
SVOBODA P 10.08.78-CS-005237
E17 (31.07.79) C07c-69/22 C11c-03/12

CIBA **D25** 51719R/29 = DS 1795-073
Triazole derivs useful as optical brighte - ners
CIBA GEIGY AG 16.08.67-CH-011487
A11 E21 F06 (A24 A64) (20.12.79) *GB1199-680 + C07d-249/06 D06l-03/12
New 4-(4-phenyl-1,2,3-triazol-2-yl)-4'-phenylstilben-2-sulphonic acid cpds. of formula (I)



(where Z is H or Ph and, when Z = H, X is H or SO₃H and, when Z = Ph, X is SO₃H); and their alkali- or ammonium salts.

Cpds. (I) are produced by diazotising cpds. of formula

(II) (II) reducing to the hydrazine cpd; condensing with a cpd. of formula (III); and effecting ring closure to the triazole cpd. under H₂O-cleaving conditions.
(I) are useful as brightening agents in washing agents, esp. for cellulose- and polyamide fibres.
7.8.68 as 795073 (6pp481)

(III) (III)

AIRP **D25** 06220U/05 #DS 2236-120
Aminocarboxylic acid alkali metal salts - prepn from alkali hydroxide and amino alcohol contg at least one primary alcohol gp
usi

AIR PRODUCTS & CHEM INC 19.07.72-BE-786449 (22.07.72-DT-236120)
E12 (20.12.79) *BE-786-449 C07c-99 C07c-101/20
Alkali metal salts of aminocarboxylic acids are prepd. The corresp. amino alcohol contg. ≥1 prim. alcohol gp. is reacted with excess alkali metal hydroxide in the liquid phase in a closed reaction vessel at 199-288°C in the presence of 25-70 wt. % of water and a catalytic amt. of Cd, Ni Pd and/or Zn.

The overhead vapour mixt. of hydrogen and steam is removed from the reaction vessel, cooled and the condensed water recycled. The vapour mixt. is removed so that there is maintained in the reaction vessel a pressure of 7.2-101.1 atm. and a hydrogen partial pressure of <50 %

Reaction may be effected in less than 2 hours and in good yield. 22.7.72 as 236120 (6pp068)

KAOS **D25** 42320X/23 = DS 2551-111
Preventing caking of powdery or granulated detergents - by adding mixt. of polyethylene glycol and dicarboxylic acid, anhydride or salt
KAO SOAP KK 20.11.74-JA-133463
A97 E19 (20.12.79) *DT2551-111 C11d-01

A granular or powdery detergent mixt. contains 1-50 wt. % of a surface active agent with a tendency to agglomerate and contains an alkyl benzene sulphonate (10-16C atoms in alkyl gp.) or a 11-18C linear alkyl sulphate or a 10-20C alpha-olefine sulphonate and/or water soluble alkaline or neutral builders, enzymes, bleach, fluorescent dye, perfume or their mixts.

To prevent agglomeration the detergent contains 0.4-40 wt. % of a mixt. of (a) 0.2-39.8 wt. % of polyethylene glycol of molecular wt. at least 2000 and (b) 0.2-39.8 wt. % of one or more of the following: sulphosuccinic acid and its alkali(ne earth) salts, maleic anhydride, maleic acid and its alkali(ne earth)salts, succinic anhydride, succinic acid and its alkali(ne earth) salts. Components (a) and (b) have a synergistic action to prevent agglomeration. 14.11.75 as 551111 (3pp068)

COLM ★ **D25** 00113C/01 ★ DT 2826-17
Detergent compsns. for cleaning refractory vitreous materials contg. adduct of polar organic cpd. and fluorine cpd.

COLLO GMBH 15.06.78-DT-826174
A97 E16 (20.12.79) C11d-03/24
Detergent compsns. for cleaning vitreous materials exposed to high temps. (esp. ceramic hobs on electric cookers)

tain an adduct of a polar organic cpd. (I) and an F cpd. (J).

The compsns. are capable of removing stains which cannot be removed with conventional detergents (esp. discolouration due to metal oxide deposits on ceramic hobs) without damaging the vitreous surface. 15.6.78 as 826174 (9pp367)

DOY ★ D25 00209C/01 ★DT 2923-364
 Prodn. of surface-active magnesium sulphonate(s) or sulphate(s) - neutralisation in presence of poly:carboxylic acid stabiliser
 LION FAT & OIL KK 09.06.78-JA-069599
 E33 (20.12.79) C07c-139 C07c-141/04 C07c-143/34
 Prodn. of Mg salts is carried out by neutralising an organosulphonic acid or a sulphuric acid ester with Mg(OH)₂ or MgO in an aq. medium in the presence of a stabiliser comprising ethylenediaminetetraacetic acid (EDTA), nitrilotriacetic acid, tartaric acid, succinic acid, gluconic acid, malic acid, maleic acid or their alkali metal or ammonium salts or, if available, the corresp. anhydrides.

The products are useful as components of liq. detergent compsns. They are highly resistant to pptn. of colloidal impurities, esp. when technical-grade Mg(OH)₂ or MgO is used. 8.6.79 as 923364(17pp367)

CHEM- ★ D25 00213C/01 ★DT 2923-510
 Prodn. of alkyl:aromatic-sulphonate detergents - by sulphonation with sulphur trioxide gas in presence of carboxylic acid
 CHEMITHON CORP 12.06.78-US-914535
 E14 (20.12.79) C07c-139 C07c-143/34
 Sulphonation of alkylated aromatic hydrocarbons with an 11-15C side chain is carried out by reaction with a sulphonating agent and neutralisation of the resulting sulphonic acid with an alkali metal hydroxide.

The improvement comprises improving the colour of the product by using gaseous SO₃ as the sole sulphonating agent and adding 0.03-0.3 (pref. 0.1-0.2) wt. % of an anhydrous lower carboxylic acid (I) to the hydrocarbon before reaction with the SO₃.

Addn. of (I) improves the colour of the product (e.g. giving a Klett colour of 20-30), suppresses the formation of H₂SO₄ (e.g. reducing the alkali metal sulphate content of the product by ≥ 20%), increases the active detergent content of the product (e.g. to > 96.5%) and reduces the free oil content (e.g. to ≤ 1.5%). 9.6.79 as 923510(20pp)

UNIL D25 57945Y/33 =GB 1558-481
 Spray dried detergent powder contg. nonionic surfactant - prepd. in presence of cpd. contg. positively charged nitrogen (BE 3.8.77)
 UNILEVER LTD 10.02.76-GB-005122
 A97 (03.01.80) *DT2704-507 C11d-01/66 C11d-03/06

Spray-dried fabric-washing detergent powder, free from water-sol. calcium and magnesium salts, is prepd. by spray-drying a crutcher slurry contg. 4-20wt. % of a nonionic surfactant and 10-60wt. % of a detergency builder.

When the builder consists of solely a phosphate salt, when it consists of anhydrous sodium tripolyphosphate contg. > 15wt. % of phase 1 material, or sodium tripolyphosphate which has been prehydrated. The slurry is sprayed in the presence of 0.25-6wt. % of a cpd. contg. a positively charged nitrogen atom.

The detergent powders prepd. have a reduced tendency to autooxidise, esp. when a quat. ammonium cpd. or imidazolinium salt is used as the N-contg. cpd. 10.2.76 as 005122 (9pp931)

ALBR ★ D25 00444C/01 ★GB 2023-637
 Concentrated liq. surfactant compsns. - contg. mixt. of amphoteric and nonionic surfactants which form a G-phase
 ALBRIGHT & WILSON LTD 29.05.79-GB-018696 (26.05.79-GB-018553)
 (03.01.80) C11d-01/88 C11d-17

An aq. surfactant compsn. contains 20-55wt. % water and an active mixt. contg. at least 5% of a first amphoteric surfactant and at least 5% of at least one nonionic surfactant and/or at least one amphoteric surfactant non-homologous with the first, the mixt. being capable of forming a 'G' phase, and the proportions being such that the compsn. exists mainly in the 'G' phase.

Mobile fluid surfactant compsns. can be formed having much higher concentrations of active components. Although

the individual components may only form a 'G' phase at elevated temps. the mixt. forms a 'G' phase at ambient temps. or lower. 29.5.79 as 018696 (8pp955)

TENG/ ★ D25 C/01 ★IT 1034-506
 Levelling compsn.
 TENG M C 24.03.75-IT-021610
 (10.10.79) C11d

TOYJ ★ D25 00681C/01 ★J5 4147-200
 Prodn. of zeolite used as detergent builder - by crystallisation from mixed solns. of alkali aluminate and silicate
 TOYO SODA MFG KK 10.05.78-JA-054466
 E33 (17.11.79) C01b-33/28

Process comprises mixing an aq. alkali aluminate soln. and an aq. alkali silicate soln. followed by crystallisation, the alkali silicate soln. contg. SiO₂ ≤ 20 (pref. 5-20) wt. %. The solns. are mixed and stirred at 40-70°C within 20 mins. and kept at that temp. for 0.5-2 hrs., then the temp. is raised to ≥ 75°C for crystallisation.

The zeolite obt'd. has high ion-exchange volume and high calcium ion-exchange rate in hard water, and also has superior dispersability. Particle size distribution is narrow. 10.5.78 as 054466(7pp55)

UNIL D25 43455Y/25 =J7 9040-245
 Bleaching compsn. contg. tetraacetyl alkylene diamine and perborate - for washing powders with improved storage stability
 UNILEVER NV 29.03.76-GB-012466 (18.12.75-GB-051857)
 E16 (E34) (03.12.79) *BE-849-539 C11d-03/39

A bleaching detergent compsn. comprising a surfactant, an inorganic persalt, a bleaching activator and optionally other additives contains 5-50% (pref. 7-35%) of surfactant, 1-15% (pref. 5-10%) of an N, N, N', N'-tetraacetyl-(1-6C) alkylenediamino, 1-20% (pref. 7-15% of sodium perborate monohydrate approx. NaBO₂ H₂O₂.

The tetraacetylalkylenediamino is in the form of granules approx. 0.1-3 mm X 0.1 X 15 mm comprising: -60-90 % (pref. 70-90%) of the tetraacetylalkylene diamine, 0.15% (pref. 2-15%) of persalt stabiliser which is EDTA phosphoric acids or mixts. of these and 10-30% of a nonionic surfactant of m. pt. > 35°C.

The compsns. are used in washing powders particularly for low temp. bleaching with compsns. contg. enzymes. The use of the tetraacetyl alkylenediamine bleaching activator comprises the storage stability of the compsn. cf present compsns. 17.12.76 as 151858 (clg. 18.12.75, 29.3.76-GB-051857, 012466) C11d-3/39 (3.12.79) UNILEVER NV (6pp) (J5 2073905)

UNIL D25 70537V/40 =NL -162-427
 Stable liquid textile washing agents for laundries - based on nonionic surfactants and low melting fatty acids
 UNILEVER NV 15.03.73-GB-012512
 (17.12.79) *NL7403-258 C11d-01/66 C11d-09/22

Washing agent mixt. for textiles comprises (a) 5-80 wt. % of a liq. non-inorganic surfactant with a melting/casting pt. of > 25°C, (b) 95-20 wt. % fat acid of melting/casting pt. of > 25°C, which is > 40% neutralised and has 8-22C, and (c) 0-20 wt. % water, with proviso that the mixt. has a pH 4-8. Pref. the acid has a degree of neutralisation of 5-35%.

The washing agent, used in laundries, is a stable liq. which can be easily poured into cold water to form a stable stock soln. which does not gel or solidify so that the 'soap' transport tube do not require blowing-out at the end of each days operation. 12.3.74 as 003258 (4pp913)

DOME= ★ D25 01310C/01 ★SU -657-057
 Hand etc. cleaner for petroleum or paint industry - contg. water and mixt. of organic solvents, with addition of ethoxylated mono- and di:alkyl-phenol derivs. and potassium soap
 DOMESTIC SERV CHEM 07.10.77-SU-539123
 E19 (20.04.79) C11d-03/44

Compsn. for removing from hands any petroleum or paint contamination contg. water, a surfactant and an organic solvent is improved by using a solvent mixt. comprising cyclohexanol, ethylcellosolve and benzyl alcohol, and as a surfactant ethoxylated mono- and di-alkylphenols; liquid 40% potassium soap is added. By this method, the deter- sive properties of the compsn. are improved whilst its

toxicity is diminished.

The compsn. contains (in wt. %) liquid 40% potassium soap 40.45, ethoxylated mono- and di-alkyl-henols 8-10, cyclohexanol 4-5, ethylcellosolve 15-20, benzyl alcohol 8-10; the balance is water.

Pugacheva, L.A., Rozhdestvenskii, D.A. Bul. 14/15.4.79. 7.10.77 as 539123 (2pp70)

HENK D25 33407A/19 = US 4179-268
Machine washing of solid articles - using washing agent contg. little or no phosphate and cation exchanger

HENKEL KG AUF AKTIEN 25.11.76-DT-653479

E36 + P42 P43 (18.12.79) *BE-860-343 B08b-03 C02b-01

Solid soiled materials are machine washed by withdrawing and recycling the wash liquor in contact with the materials through a silicate cation exchange cpd. of formula $(M_2/nO)_x \cdot Me_2O_3 (SiO_2)_y$ of particle size $\geq 10 \mu$ and contg. combined water.

In the formula, M is a cation of valence n exchangeable with calcium, Me is Al or B, x is 0.7-1.5 and y is 0.8-6. The silicate cpd. has a calcium binding power of ≥ 50 mg of CaO per gm. The silicate cpd. is maintained out of contact with the soiled materials for such a time that the recycling liq. passes through the silicate cpd. $\geq$ twice, in the presence of other soluble washing and cleaning cpd. while reversing the direction of flow of the liq. through the silicate repeatedly.

The smaller particle sized aluminosilicates prep'd. enhance the washing effect without clogging the filter pores. 16.11.77 as 852028 (10pp931)

PROC D25 40886B/22 #US 4179-382
Textile softening compsn. - contains cationic textile softener, esp. quat. ammonium or imidazolinium salt, and specified polymeric cationic salt

PROCTER & GAMBLE CO 21.11.77-GB-048377 (27.10.78-US-955559)

A87 E19 F06 (18.12.79) *DT2849-931 D06m-13/26

Textile conditioning compsn. comprises (a) a cationic textile softening agent having either 1 alkyl or alkenyl gp. with $\geq 16C$ or 2 alkyl or alkenyl gps. having 10-22C; (b) 0.001-0.70 wt. % of ≥ 1 polymeric cationic salt (I); and opt. (c) a water-insoluble nonionic textile conditioning agent, in an amt. such that the wt. ratio of component (c), if present, to (a) plus (b) is $\geq 1:10$.

(I) is selected from (i) cationic polysaccharide gums, (ii) cationic starch (derivs.), (iii) polyvinyl pyridine and polyvinyl pyridinium salts and their copolymers, (iv) cationic PVA, (v) cationic polyvinyl pyrrolidone copolymers, (vi) copolymers of dialkylaminoalkyl methacrylate, in which each alkyl has 1-3C, with styrene, or a neutral acrylic ester, (vii) quaternised polyethyleneimines having > 10 ethyleneimine residues in the mol. and (viii) certain specified condensation copolymers, e.g. those having the repeating $[-O-CH_2-CH(-OA)-CH_2-O-C(=O)-R-C(=O)-]$ where R is a 1-6C alkane, hydroxyalkane or alkene residue or an aryl gp. and at least some of the radicals A are quat. N-contg. gps., the remainder being H atoms.

Compsn. is used in the final rinse after a washing operation. It has good softening properties and improved resistance to carry-over of anionic surfactants into the final rinse. 27.10.78 as 955559 (9pp927)

PROC D25 26945A/15 = US 4179-390
Laundering additive contg. an organic peroxide precursor - impregnated on a solid support and released in water

PROCTER & GAMBLE CO 13.05.77-GB-020213 (06.10.76-GB-041491)

A97 E19 (E34) (18.12.79) *BE-859-461 C11d-03/39 C11d-07/54

A laundry additive prod. is prep'd. for use as a bleaching aid by forming a fluid mass contg. an organic peroxy bleach precursor; contacting a flexible solid substrate with the fluid mass; and causing the mass to solidify on the substrate to yield a precursor:flexible solid substrate in wt. ratio of 30:1-1:10.

The peroxy bleach precursor is capable of reacting in aq. washing liquor with an inorganic peroxy bleach to form the organic peroxy bleach of bleaching performance equiv. to the inorganic peroxy bleach. The inorganic bleach is an alkali metal percarbonate, persilicate or perpyrophosphate.

The laundry additive prod. contains the peroxy bleach precursor attached to the flexible substrate and releasable in aq. washing liquor by soln., dispersion, bleaching, softening or melting to react with the inorganic bleach to form the organic bleach. 4.10.77 as 839490 (16pp931)

HENK D25 76322A/43 = US 4179-392
Phosphate free washing powder compsn. contg. aluminosilicate - i admixture with surfactant, alkane poly:phosphonic acid (deriv. complexant and mineral peroxy cpd.

HENKEL KG AUF AKTIEN 22.04.77-OE-002839

A97 E33 (A25 E19) (18.12.79) *BE-866-238 C11d-03/12

A pulverulent, phosphate-free textile detergent is prep'd. contg. 20-40 wt. % of a water-insoluble, finely-divided, crystalline alkali metal aluminosilicate having a calcium binding power of 5-200 mg of CaO/gm on the anhydrous basis.

The detergent further contains 5-20 wt. % of the surface-active anionic, non-ionic, amphoteric or zwitterionic cpd.; 0.05-0.75 wt. % of a water-soluble subst. alkane diphosphonate or triphosphonic acid or their alkali metal salts; 10-35 wt. % of an inorganic per cpd.; and 0-50 wt. % of other conventional detergent ingredients, such as wash alkalis, soil suspension agents, optical brighteners, enzymes, antimicrobial agents, textile softeners, colouring cpds., perfumes, sodium sulphate and water.

The detergent is esp. used at high temps. in the boiling wash procedure. 17.4.78 as 896691 (14pp931)

MOBI ★ D25 01628C/01 ★ US 4179-392
Biodegradable hard water detergent compsn. - consisting of water-soluble beta-to epsilon subst. alkanolic acid deriv.

MOBIL OIL CORP 03.08.73-US-385623 (21.12.70-US-100543)

A97 E12 (A25 E16) (18.12.79) C07c-59/23 C11d-09/26

A detergent compsn. consists of a water-soluble alkali metal or ammonium salt of an alkanolic acid having a polyethylene glycol ether substit. attached to a C atom 2-5 posns. from the carboxyl C, the polyethylene glycol contg. 1-20 ethylene oxide residues. Pref. the compsn. consists of the sodium or ammonium salt of 4-hydroxy tetradecanoic acid or 4-hydroxy eicosanoic acid

The detergents are biodegradable and have improved resistance to precipitation in hard water. They can be used without any additional builders, yet are compatible with such additives (e.g. sodium tripolyphosphate). US 3770643 claimed a biodegradable detergent compsn. contg. a α -subst. alkanolic acid amide. 3.8.73 as 385623 Div. ex. 3770643 (7pp990)

HENK D25 57907Y/33 = US 4179-392
Cleansing and detergent compsns. - prep'd. with stable aq. suspensions contg. dispersants and water-insoluble silicate for bonding calcium (BE 4.8.77)

HENKEL KG AUF AKTIEN 06.02.76-OE-000841

A97 E11 (A25) (18.12.79) *DT2702-979 C11d-01/44 C11d-03/1 + C01b-33/28

Stable, pumpable, aq. suspensions of water-insoluble, calcium-binding aluminosilicates suitable as stock suspensions are claimed having a pH of 7-12.

The prod. comprises 20-55 wt. % of ≥ 1 finely-divided, water-insoluble silicate cpd. of formula $(M_2/nO)_x \cdot Me_2O_3(SiO_2)_y$ having a calcium-binding power of ≥ 50 mg CaO/gm. of anhydrous active substance; 0.2-5 wt. % of ≥ 1 organic dispersing agent; and water. In the formula, M is a cation of valence n, exchangeable with calcium, x is 0.7-1.5, Me is aluminium or boron and y is 0.8-6. The dispersing agent is the lower alkylene oxide or glycidic adduct of an N-higher alk(en)yl-alkylenediamine, the lower alkylene oxide or glycidic adduct of the reaction prod. of ϵ -caprolactam with N-mono- or di-higher alk(en)yl-alkylenediamine, the ethylene or propylene oxide adduct of long chain vicinal aminoalkanols, or the reaction prod. of ethylene glycol and a higher epoxyalkane and their ethylene oxide adducts.

The prod. is esp. used as a household or domestic detergent and contains no phosphates w.r.t. environmental considerations. 2.2.77 as 764854 (17pp931)

MOBI ★ D25 01639C/01 ★US 4179-414
able general purpose cleaning pastes - contg. fatty acid
ethanolamide, sodium bicarbonate, sodium chloride, and water
MOBIL OIL CORP 23.10.78-US-953823
E16 (E34) (18.12.79) C11d-03/10 C11d-17

able paste consists of 50-65 wt. % NaHCO_3 and 50-35 wt.
 H_2O , and contains 5-20 wt. % NaCl based on H_2O and 10-
wt. % (based on H_2O) of a 12-16C fatty acid diethanol-
amide (I).

Pref. (I) is the diethanolamide of coconut oil fatty ac-
s. Opt. the paste may be mixed with a 2nd paste contg.
5-65 wt. % NaCl , 12-16 wt. % of (I), and 19-33 wt. % H_2O
atd. NaCl in wt. ratio 1st paste: 2nd paste = 3:1. The
nd paste has cleaning properties similar to the 1st paste,
ut is pref. used in combination with it.

The paste may be used (full strength) as a much less
abrasive scouring agent for stainless steel, plastic and
bre-glass, and for cleaning crayon and scuff marks.
he paste may also be diluted with H_2O for cleaning floors
nd walls, etc. 23.10.78 as 953823 (3pp478)

See Also

D13 DT 2924663



CPI INDEXES

ALERTING PATENTEE INDEX (II)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

In Country Alerting Bulletin only

M22
*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502-292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or ≠ sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U A97D15M14
*645 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
*654 49862X A88H01Q4
*655 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A-M cumulations of from a quarter up to 5 years are available as COM.

CALI

Nitrile rubber smooth rolled sleeve for well impression packer - also contg natural rubber, hydrated 49862X/26 *US 3963-654
CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01

Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying earth in dams 49433X/26 *DT 2554-327
CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02

CANA

Emulsifying agents of microbial origin - used esp. for oil spills, are made by cultivating a species of 48076X/26 *CA -990-668
CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180
Europe	150
France	740
Germany, W. unexamined	1050
Japan unexamined	845*
Netherlands unexamined	240
PCT	40
Research Disclosure	20
South Africa	100
Sweden	260
United Kingdom unexamined	600 3325

Slow publishing

Canada	450
Germany, E.	100
Germany, W. examined	465
Japan examined	340*
Netherlands examined	60
Soviet Union	1200
Switzerland	260
United Kingdom examined	300
United States	1200 4375

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140
Denmark	120
Finland	60
Norway	80
Portugal	30 430

Slow publishing

Austria	125
Czechoslovakia	180
Hungary	35
Israel	40
Italy	155
Rumania	25 560

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. in the case of, Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MW
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

- *AAZP= 02.02.76 AS AZERB PETROCHEM D15 J01 *SU -656-977
Petroleum extn. from gel obtd. from waste purificn. - 01242C/01
- ABBO 19.10.77 ABBOTT LABORATORIES A60 C02 D22 E13 =DS 2845-408
Bactericidal and fungicidal 2-methyl-1-naphthyl maleimide - 19938B/10
- *ADLE/ 19.07.78 ADLER G D25 E14 *CS 7804-812
Anthracene-1-sulphonic acid prepn. - C/01
- *ADLE/ 28.07.78 ADLER G D25 E12 *CS 7804-995
Sodium anthraquinone-2-sulphonate prepn. - C/01
- *AGEN 25.12.70 AGENCY OF IND SCI TECH D17 (D16) *J7 9040-617
Increasing yields in beet sugar mfr. - 01139C/01
- AGEN 19.11.73 AGENCY OF IND SCI TECH A35 D15 (A14) =J7 9039-666
Treatment of waste water contg. poly-vinyl alcohol type resins - 87381X/47
- AGEN 20.04.74 AGENCY OF IND SCI TECH D15 M25 (D16) =J5 0137-305
Bacteria-leaching of metals from ores - 01054C/01
- *AGEN 20.04.74 AGENCY OF IND SCI TECH D15 M25 (D16) *J7 9039-802
Bacteria-leaching of metals from ores - 01054C/01
- *AGEN 11.05.78 AGENCY OF IND SCI TECH D16 (D17) *J5 4147-994
Bacterial prodn. of beta-amylase and alpha-1,6 glucosidase - 00776C/01
- *AGEN 11.05.78 AGENCY OF IND SCI TECH D16 (D17) *J5 4147-995
Prodn. of beta-amylase and alpha-1,6-glucosidase - 00777C/01
- *AGEN 11.05.78 AGENCY OF IND SCI TECH D16 (D17) *J5 4147-996
Bacterial beta-amylase prodn. - 00778C/01
- *AGEN 12.05.78 AGENCY OF IND SCI TECH D15 *J5 4147-653
Treating waste water from thermal decomposition of solid wastes - 00719C/01
- *AGEN 12.05.78 AGENCY OF IND SCI TECH A96 B07 D22 (A14 A25) *J5 4147-696
Antithrombus elastic body for catheters, blood by/pass tubes, etc - 00723C/01
- *AGRI= 19.09.77 AGRIC ELECTRIF D14 *SU -657-800
Sorting agricultural products - 01387C/01
- *AGRO- 15.06.78 AGROTECHNIKA NP D15 *DT 2924-169
Biological sewage treatment with sludge sepn. by fluid filtration - 00256C/01
- *AIDE/ 21.06.77 AIDER J D15 *US 4179-243
Pump mounted on raft with pipe - 01559C/01
- AIRP 22.07.72 AIR PRODUCTS & CHEM INC D25 E12 #DS 2236-120
Aminocarboxylic acid alkali metal salts - 06220U/05
- AJIN 26.10.70 AJINOMOTO KK B05 D13 E14 =DS 2152-111
Purificn of alpha-l-aspartyl-l-phenylalanine methyl ester - 29561T/19
- AJIN 30.03.74 AJINOMOTO KK B02 D16 =IT 1034-729
Fermentative prodn. of inosine - 04237X/03
- AJIN 09.04.74 AJINOMOTO KK D17 (D15 D16) =IT 1034-944
Mucopolysaccharide flocculating agent - 07940X/05
- *AJIN 26.04.78 AJINOMOTO KK D23 (D15 D16) *GB 2023-118
Palm oil processing effluent treatment - 00347C/01
- *AJIN 08.05.78 AJINOMOTO KK B02 D16 *J5 4148-000
Antibiotic cephamycin C prodn. - 00781C/01
- ALBR 15.03.78 BUSH BOAKE ALLEN LT D13 #FR 2419-682
Flavouring agent pepper cinnamon or turmeric emulsion prepn. - 70165B/39
- *ALBR 26.05.79 ALBRIGHT & WILSON LTD D25 *GB 2023-637
Concentrated liq. surfactant compsns. - 00444C/01
- ALLI- 31.05.78 ALLIBERT EXPLOITATI A92 D13 =BR 7903-236
Cocoa or chocolate prodn. by fermenting cacao beans or cocoa nibs - 89913B/50
- ALUM- 10.04.74 ALUMINIUMWERKE AG D14 =CA 1067-751
Ultra-violet sterilization of food packaging - 58740W/36
- ALUM- 10.04.74 ALUMINIUMWERKE AG D14 =IT 1034-928
Ultra-violet sterilization of food packaging - 58740W/36
- *AMBR/ 14.10.78 AMBRO M D22 F06 *CS 7806-703
Antimicrobial treatment of knitted articles - C/01
- *AMCY 14.08.78 AMERICAN CYANAMID CO A96 D22 F01 (A23) *PT --69-468
Surgical sutures of block copolymers of segmented polyesters - C/01
- AMMA 17.03.78 AMF INC D18 =FR 2419-685
Reconstituted tobacco leaf contg. fibres, partic. hardwood - 52610B/29
- ANDE/ 13.04.78 ANDERSSON B A E D22 E19 =GB 2023-430
Deodorising, disinfectant, liq.-absorbing article - 79314B/44
- *ANTA/ 11.09.74 ANTAL J C03 D13 *CS 7406-234
Balanced feedstuff for calves - C/01
- *APAL/ 07.12.76 APALOVIC R C04 D16 *CS 7607-946
Organic fertiliser prepn. from ligno-cellulose materials - C/01
- *APVC 13.06.78 APV CO LTD C03 D15 E36 J08 (J03) *GB 2023-180
Plate heat exchanger with plates as anode for chlorine generation - 00361C/01
- AQAC 30.01.67 AQUA CHEM INC D15 J08 =J7 9040-510
Vapour compression evaporation with ventcond - 01073R/01
- ASAH 30.03.74 ASAH CHEMICAL IND KK D15 E36 J03 =IT 1034-732
Multistage brine electrodialysis desalination process - 09034X/05
- ASAH 04.04.74 ASAH CHEMICAL IND KK A88 D15 J01 =IT 1034-849
Dialysis appts. with bundles of semi-permeable hollow fibres - 71114W/43
- ASAH 28.04.78 ASAH KASEI KOGYO K D25 E19 =GB 2023-134
Molecular aggregate having an ordered structure - 84395B/47
- *ASBI= 29.05.78 AS USSR BIORG CHEM A96 B04 D16 *WP 7901-137
Stabilisation of immobilised proteins - 01727C/01
- ATLA 10.04.67 ATLAS PACIFIC ENGG CO D14 =NL -162-299
Fruits peeler - 40372R/23
- *AUCO= 09.11.77 AS UKR COLL CHEM D16 F06 (D15) *SU -657-063
Pseudomonas strain for decomposing alkyl sulphate s) in aq. effluents - 01316C/01
- *AUPL= 21.11.77 AS UKR PLANT PHYSIO D11 *SU -657-342
Wheat gluten quality determination - 01376C/01
- AUTO- 15.10.76 AUTO-CHLIOR INC D15 #CA 1068-020
Chlorination and recirculation of swimming pool water - 70588A/39
- AUTO- 09.05.78 AUTOSYSTEMS LTD D12 #DK 7802-038
Appts. for sorting articles esp. chickens on conveyor - 07531B/04
- AUTO- 09.05.78 AUTOSYSTEMS LTD D12 #DK 7802-039
Conveying system for suspended objects has weighing station - 88751B/49
- AUTO- 15.06.78 AUTOLYSATS FRANCAIS C03 D13 =DT 2924-034
Stabilisation of lipid complexes of oats and oat products - 75369B/42
- AVTE- 05.06.72 AVTEX FIBERS INC A96 D22 F04 =NL -162-304
Liquid absorbing fibrous mass - 79979U/52
- *AVTE- 24.11.72 AVTEX FIBERS INC A11 D22 F01 (A14) *US 4179-416
Alloy rayon fibres of high fluid holding capacity - 01640C/01
- BADI 05.08.75 BASF AG C03 D13 E24 =CA 1067-908
Echinenone prepn. by oxidn. of (retro-dehydro)carotene - 09376Y/06
- BANS- 28.10.75 BANSU CHOMIRYO KK B03 D13 E13 =J7 9040-560
Stevioside extraction from dried and ground Stevia stalks and leaves - 40930Y/23
- BARH/ 19.05.78 BARHAM H N C03 D13 =BR 7903-111
Cereal and seed grain modification - 86240B/48
- *BAYE- 08.05.79 BAYERISCHE PFLUGFAB D14 *DS 2918-519
Fodder mixing car - 00031C/01
- BEEC 09.10.74 BEECHAM GROUP LTD B02 C02 D16 =SU -656-522
Clavulanic acids and derivs - 72840W/44
- BEEC 15.03.75 BEECHAM GROUP LTD B04 D16 =US 4179-498
Antibiotic MM 17880 from streptomyces olivaceus - 72175X/39
- BEHW 10.06.75 BEHRINGWERKE AG B04 D16 =CA 1067-843
Stable microbial clumping factor - 96508X/52
- *BEKI 03.06.76 BELORUSS KIROV TECHN INS A97 D22 E16 F09 *SU -656-833
Timber-treating resin compsn. - 01215C/01
- BENS/ 07.06.78 BENSIMON V D22 E34 =DT 2922-586
Brine prodn. by water injection into gravel bed below salt layer - 91499B/51
- BERT- 03.04.74 BERTIN ET CIE D13 =IT 1034-797
Preserved artichoke bases prepn. - 05894X/04
- *BETI/ 19.06.78 BETINA V B02 D16 *CS 7804-008
Citricin antibiotic prepn. - C/01
- *BETT- 17.07.78 BETTCHER IND INC D12 *US 4178-683
Hand held meat knife with rotating annular blade - 01506C/01
- BIBB/ 01.06.78 BIBB M J B04 D16 =GB 2023-612
Streptomyces plasmid useful as DNA vector - 01732C/01
- *BIBB/ 01.06.78 BIBB M J B04 D16 *WP 7901-169
Streptomyces plasmid useful as DNA vector - 01732C/01
- *BIFO- 14.06.78 BIFOK AB D16 J04 *GB 2023-286
Continuous flow analysis device - 00375C/01
- *BILI/ 03.03.78 BILIK V D17 *CS 7801-357
Aldoses liberation from N-phenylglycosyl-amines - C/01
- BIOI- 22.08.75 BIO-INDUSTRIES INC D16 =CA 1067-842
Ethanol from cellulosic fibres - 16278Y/09
- BIOM- 05.07.77 BIOMECHANICS LTD D15 =US 4179-220
Anaerobic digestion tank - 02374B/02
- BIOR- 15.03.78 BIO RES CENT CO D16 E17 =FR 2419-978
Recovering di:basic acids from fermentation broth - 68127B/38
- BLUE- 08.03.76 BLUE WING CORP C03 D13 (C04) =GB 1558-590
Ruminant feed contg. albumin and other proteins - 52220Y/30
- BOEF 28.03.73 BOEHRINGER MANNHEIM GMBH B04 D16 =CA 1067-804
Cholesterol determination - 71173V/41
- *BOEF 12.06.78 BOEHRINGER MANNHEIM GMBH A96 B04 D16 J04 *DT 2825-636
Microbiological test materials e.g. for detecting microorganisms - 00076C/01
- *BOEF 14.06.78 SUDDEUTSCHE ZUCKER D17 E17 *DT 2826-120
Xylitol recovery from residual syrups - 00106C/01
- BOLI 03.05.78 BOLIDEN AB D15 E33 F09 J01 =NO 7901-468
Aluminium sulphate soln. contg. polynuclear complexes - 84603B/47
- BOLI 08.05.78 BOLIDEN AB D15 E31 K07 M25 =SW 7805-209
Selective removal of uranium from substances - 84604B/47
- BOOT 26.03.77 BOOTS CO LTD C01 D22 E12 F06 (F09) =CS 7801-875
Fungicidal metal complexes of (N)-carbamoyl imidazole cpds. - 71158A/40
- BRAS/ 13.06.78 BRASWELL J W D15 #DT 2825-819
Water softener system with automatic regeneration - 85714A/47
- BRET- 03.04.74 CIE BRETONNE ARTICHAUT D13 =IT 1034-797
Preserved artichoke bases prepn. - 05894X/04
- BROV 10.04.74 BBC BROWN BOVERI AND CO D14 =CA 1067-751
Ultra-violet sterilization of food packaging - 58740W/36
- BROV 10.04.74 BBC AG BROWN BOVERI D14 =IT 1034-928
Ultra-violet sterilization of food packaging - 58740W/36

- BRPE 27.11.75 BP CHEMICALS LTD C03 D13 E17 F09 = US 4179-522
Antimicrobial, antifungal aliphatic carboxylic acid compsns. - 38085Y/22
- *BRPE 13.06.78 BRITISH PETROLEUM LTD D23 *GB 2023-634
Solvent extn. of glyceride oils - 00443C/01
- BRTI 15.03.78 TIOXIDE GROUP LTD A91 D15 G01 = FR 2419-743
Stabilising aq. cationic flocculant soln. - 70282B/39
- BRWI 15.06.78 BROWN & WILLIAMSON CORP D18 (D16) = DT 2922-283
Reducing nicotine and nitrate contents of tobacco - 75362B/42
- BUHL 05.04.74 BUHLER GEGR AG C03 D13 = IT 1034-851
Prodn. of animal fodder with balanced protein to carbohydrate ratio - 71836W/43
- *BURI/ 24.02.78 BURIANEK J D17 *CS 7801-182
Starch enzyme hydrolysates - C/01
- *BURI/ 19.04.78 BURIANEK J D13 *CS 7802-525
Cpd. derived from glycidic acid and urea - C/01
- *CABU/ 14.03.78 CABUT A D12 *FR 2419-679
Butchers powered cleaver to split animal carcass partic. pig - 00284C/01
- CADB 25.01.78 CADBURY INDIA LTD D13 #US 4179-455
Cocoa butter substitute - 60958B/33
- CADB 25.01.78 CADBURY INDIA LTD D13 #US 4179-456
Cocoa butter substitute - 60959B/33
- *CALI 19.06.78 CHEVRON RESEARCH CO C02 D13 E13 (D16) *DT 2924-076
Acceleration of cellulose fermentation - 00245C/01
- *CANA/ 03.04.75 CANAVESE P D18 *IT 1034-807
Automatic bags turning out appts. - C/01
- CANC- 08.10.69 INST FOR CANCER RES B05 D16 = DS 2049-515
Vaccine against hepatitis - 26989S/16
- *CARL- 07.06.78 CARLE & MONTANARI D13 *DT 2920-814
Revolving caramel mould with inner eccentric - 00181C/01
- CASP- 04.08.75 CASPANI F LLI SRL D11 = IT 1034-852
Portion distributor for food pastes - 81469W/50
- CELA 13.03.78 CELANESE CORP A88 D18 (A11 A32) = FR 2419-751
Cellulose acetate foam cigarette filter rod - 68589B/38
- CELL- 18.05.72 CELLCO INC D16 = NL-162-430
Cell culture appts - 74974U/49
- CELL- 10.06.75 CELLCOR CORP CANADA A11 D17 F09 G03 (A81 A97)
= CA 1067-898
High pressure and temp modification of starch - 79475X/43
- *CEPE/ 27.10.76 CEPELKA V D16 *CS 7606-918
Cultivation station - C/01
- *CHAR/ 17.03.78 CHARPENTIER Y LG D11 *FR 2419-678
Industrial feeder for slices of bread into toasting oven - 00283C/01
- *CHCC 12.05.78 CHISSO CORP B05 C03 D23 E19 *J5 4148-706
Carbonyl cpd. prodn. from formic acid ester - 00921C/01
- CHEM- 27.03.75 CHEMED CORP A97 D15 = J7 9039-939
Dispersing polymers in water treatment systems - 79608X/43
- *CHEM- 12.06.78 CHEMITHON CORP D25 E14 *DT 2923-510
Prodn. of alkylaromatic-sulphonate detergents - 00213C/01
- CHEM- 12.06.78 CHEMITHON CORP D25 E14 = GB 2023-138
Prodn. of alkylaromatic-sulphonate detergents - 00213C/01
- *CHEM- 15.06.78 CHEMED CORP A97 D15 E11 *DT 2923-718
Organo-phosphonic acid scale inhibitors - 00221C/01
- CHEM- 15.06.78 CHEMED CORP A97 D15 E11 = GB 2023-121
Organo-phosphonic acid scale inhibitors - 00221C/01
- *CHRI/ 14.06.78 CHRIST C D13 (D15) *GB 2023-119
Treatment of sauerkraut mfr. effluent - 00348C/01
- *CHUS 10.05.78 CHUGAI PHARMACEUTICAL KK C03 D22 E16 F09 (E15) *J5
4147-924
Insecticidal compsn. for protection of wood material - 00756C/01
- *CHUS 13.05.78 CHUGAI PHARMACEUTICAL KK B04 D16 *J5 4147-999
Antibiotic dihydroxyabikoviromycin - 00780C/01
- CIBA 16.08.67 CIBA GEIGY AG A11 D25 E21 F06 (A24 A64) = DS 1795-073
Triazole derivs useful as optical brights - 51719R/29
- CIBA 07.06.78 CIBA GEIGY AG A97 D25 (A26) = GB 2023-638
Washing powder contg. silicone oil foam regulator - 91326B/51
- CIBA 07.06.78 CIBA GEIGY AG A97 D25 (A26) = NL 7901-652
Washing powder contg. silicone oil foam regulator - 91326B/51
- *CIBA 15.06.78 CIBA GEIGY AG C02 D15 E13 *DT 2923-794
Cyanuric acid removal from waste waters - 00224C/01
- CIGA 21.04.78 CIGARETTE COMPONENT LTD D18 F07 = PT --69-507
Cigarette filter additives carried on preimpregnated threads - 64740B/36
- COLG 17.03.78 COLGATE PALMOLIVE CO A97 D25 E19 = FR 2419-975
Conc. single phase liq. detergent-softener compsn. - 17866B/09
- COLG 25.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25 E33) = BR 7903-126
Dentifrice paste compsn. contg. calcium carbonate - 71767B/40
- COLG 25.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25 E33) = PT --69-497
Dentifrice paste compsn. contg. calcium carbonate - 71767B/40
- COLG 08.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = DT 2922-992
Throwaway sanitary articles - 73668B/41
- COLG 08.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = GB 2023-069
Throwaway sanitary articles - 73668B/41
- COLG 08.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = NL 7904-540
Throwaway sanitary articles - 73668B/41
- COLG 09.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = DT 2922-988
Disposable absorbent hygienic pad with hydrophobic layers - 75332B/42
- COLG 09.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = DT 2922-993
Throwaway sanitary products e.g. napkin - 73650B/41
- COLG 09.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = GB 2023-067
Throwaway sanitary products e.g. napkin - 73650B/41
- COLG 09.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = GB 2023-068
Disposable absorbent hygienic pad with hydrophobic layers - 75332B/42
- COLG 09.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = NL 7904-541
Throwaway sanitary products e.g. napkin - 73650B/41
- COLG 09.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = NL 7904-543
Disposable absorbent hygienic pad with hydrophobic layers - 75332B/42
- *COLM 15.06.78 COLLO GMBH A97 D25 E16 *DT 2826-174
Detergent compsns. for cleaning refractory vitreous materials 00113C/01
- COOP- 18.01.78 COOPERATION PHARM D13 = J5 4147-978
Ingestible compsn. contg. vegetable fibre and metallic proteinate 52560B/29
- *CORO/ 19.06.78 CORONEOS J H D12 *DT 2918-253
Chopped beef discs possessing high cohesion for roasting - 00173C/01
- CORP 12.05.78 CPC INTERNATIONAL INC A89 B04 D16 = DK 7901-927
Immobilising enzymes, esp. glucose isomerase on supports - 69966B/39
- CORP 12.05.78 CPC INTERNATIONAL INC A89 B04 D16 = J5 4147-992
Immobilising enzymes, esp. glucose isomerase on supports - 69966B/39
- CSIR 15.03.78 COMMONWEALTH SCI AND IND A91 D15 #FR 2419-756
Purificn. of brine water using amphoteric ion exchange resin - 81382B/42
- DAIK 04.03.77 DAIKI ENGG KK C03 D15 E36 J03 = J7 9040-472
Preventing corrosion in sea water electrolysis system - 77341A/43
- DAMO- 20.06.78 DAMON CORP B01 D16 J04 K08 = GB 2023-816
Determin. of biologically active species in protein-contg. sample 77217B/43
- *DAVI/ 20.07.73 DAVIS F F A96 B04 D16 *US 4179-337
Non-immunogenic peptide compsn. - 01597C/01
- DEGS 31.03.78 DEUTSCHE GOLD & SILBER D21 M26 = US 4179-286
Low gold content alloy for baking on dental porcelain - 06146B/04
- *DELB- 17.03.78 DELBAG-LUFTFILTER G D22 J01 *FR 2419-748
Air ducting outlet filter box partic. for hospitals etc. - 00292C/01
- *DESI= 02.08.73 DES CONS TECHN INST D23 J01 *SU -657-832
Electrostatic separator - 01396C/01
- *DEUT- 29.05.78 DEUTSCHER W A PTY D12 *BR 7903-295
Tube clamp - C/01
- DEUT/ 30.05.78 DEUTSCH D H D16 J01 = WP 7901-147
Microporous element with tapered penetrations in each layer 92201B/51
- DEVE- 09.05.78 MACH DEVENTER G BV D15 J01 = DK 7901-888
Appts. for sepg. oil and water - 82928B/46
- DEVE- 09.05.78 MACH DEVENTER GEURTSSEN D15 J01 = NO 7901-489
Appts. for sepg. oil and water - 82928B/46
- DEVE- 09.05.78 MACH DEVENTER GEURTSSEN D15 J01 = SW 7904-082
Appts. for sepg. oil and water - 82928B/46
- DIVE 06.06.78 DIVERSEY CORP A88 D13 J01 (D15 D16) = DT 2922-981
Multielement pipe filter for milk, wine effluent etc. - 73649B/41
- DIVE 06.06.78 DIVERSEY CORP A88 D13 J01 (D15 D16) = NL 7904-442
Multielement pipe filter for milk, wine effluent etc. - 73649B/41
- *DNCS= 20.10.75 DNEPR CONS RES INST D15 J01 M24 *SU -658-091
Cleaning industrial e.g. metallurgical effluent - 01464C/01
- *DOLI/ 11.04.79 DE OLIVEIRA A S D17 *PT --69-469
Conversion of tomato concentrate plants - C/01
- *DOME= 07.10.77 DOMESTIC SERV CHEM D25 E19 *SU -657-057
Hand etc. cleaner for petroleum or paint industry - 01310C/01
- DORO 24.05.78 DORR OLIVER INC D15 J04 = BR 7903-176
Flow distributor for fluid bed reactor - 86324B/48
- *DOUW 23.06.78 DOUWE EGBERTS KON D15 *GB 2023-564
Recovering ice crystals from aq. slurry - 00420C/01
- DOWC 30.05.78 DOW CHEMICAL CO C03 D15 E14 J01 = BR 7903-369
Removing high boiling point organic contaminants from water 89742B/50
- *DRAU/ 13.06.78 DRAUTZ R D11 *DT 2825-772
Pretzel steeping machine - 00088C/01
- DYNA- 11.07.75 DYNATECH LAB INC D16 J04 = CA 1067-792
Sample transfer appts. - 07997Y/05
- DYNO 23.05.75 DYNO INDUSTRIES A/S C03 D15 E16 K04 = CA 1067-912
Nitroglycerin recovery from waste liquids in explosives prodn. 92871X 50
- EAST 11.12.75 EASTMAN KODAK CO A97 B04 D16 = CA 1067-844
Cholesterol oxidase and cholesterol esterase, prodn. - 41723Y/24
- *EAST 29.12.78 EASTMAN KODAK CO D23 E17 *US 4179-457
Fatty acid prodn. by saponifying ester(s) in soln. - 01653C/01
- *EBAR 12.05.78 EBARA MFG KK D15 *J5 4147-653
Treating waste water from thermal decomposition of solid wastes 00719C/01
- *EOCA= 06.01.76 E COAL TAR INST C04 D15 E37 J04 *SU -658-083
Determin. of nitric acid and nitrate(s) - 01462C/01
- ECOR- 14.03.78 ECO-RESEARCH LTD A88 D15 = FR 2419-910
Flexible down pipe in biological sewage treatment plant - 70279B 39

- ELBE-06.06.78 VEB ELBE-CHEMIE A96 D21 #NL 7806-164
Solid dental care agent in powder or tablet form - 56859A/32
- NER-06.04.79 APLICACIONES ENERGIA D16 *PT--69-441
Simultaneous sepn. of alcohol and conc. residues from wine - C/01
- RAP-03.11.76 ELF AQUITAINE PROD D15 H09 M14 =US 4179-348
Cyanide separation from effluent - 33422A/19
- SSW-17.03.78 ESSWEIN SA D15 *FR 2419-909
Indicator warning that water softener needs more regeneration salt - 00299C/01
- XPE-08.10.76 EXPER VETERINARY B04 C03 D16 #CA 1067-824
Vaccine for equine trichophytosis - 50140A/28
- ARB-04.12.75 BAYER AG D15 =CA 1068-018
Gasification of aq. biological material - 39839Y/23
- ARB-12.03.76 BAYER AG C02 D22 E13 =US 4179-277
(4,5)-Dichloro-imidazole (2)-carboxylic acid derivs. - 65000Y/37
- ARB-02.04.76 BAYER AG B03 C02 D21 =CS 7702-151
Amino sugars which inhibit glycoside hydrolases - 70740Y/40
- ARB-26.04.78 BAYER AG B02 C02 D13 E13 (D22) =PT--69-535
Imino-acetamido beta-lactam antibiotic derivs. - 79405B/44
- ARH-24.07.76 HOECHST AG C03 D16 (D13) =DS 2633-451
Bacterial cell mass protein source for nutrition - 08585A/05
- ARH-15.03.78 HOECHST AG D15 J04 =FR 2420-141
Organic cpd. carbon determination in water - 70181B/39
- ARH-10.05.78 HOECHST AG A60 D25 E13 F06 =DK 7901-915
Optical brightening stilbene derivs. - 84282B/47
- ARH-11.05.78 HOECHST AG D25 =DK 7901-954
Washing and cleaning prod., esp. washing powder - 82551B/46
- ARH-11.05.78 HOECHST AG D25 =GB 2023-164
Washing and cleaning prod., esp. washing powder - 82551B/46
- ARH-11.05.78 HOECHST AG D25 =J5 4148-803
Washing and cleaning prod., esp. washing powder - 82551B/46
- ARH-11.05.78 HOECHST AG D25 =SW 7904-128
Washing and cleaning prod., esp. washing powder - 82551B/46
- ARH-26.05.78 HOECHST AG A97 D12 (A11 A21 A92) =BR 7903-267
Tubular packing film, esp. sausage skins - 87852B/49
- ARH-08.06.78 HOECHST AG A60 D22 E14 G06 (E24) *DT 2825-073
Resorcinol derivs. prodn. from delta-keto carboxylate ester - 00050C/01
- ARH-21.06.78 HOECHST UK LTD B04 C03 D16 *GB 2023-420
Vaccine comprising Pasteurella haemolytica antigen - 00385C/01
- BPM-10.09.76 FBP/MECCANICA SNC D18 #GB 1558-367
Hide stacking device for tanneries - 30397A/17
- ELD-16.06.78 FELDMEIER & WIEWELH D14 *DT 2826-385
Potatoes sorting conveyor - 00143C/01
- EPU-25.12.76 FERR METAL EFFL PURIF D15 *SU -657-856
Hydrocyclone flotation unit for clarifying metallurgical aq. effluents - 01412C/01
- FERR/16.06.78 FERRUTI P A96 B07 D22 L01 (B04) =DT 2924-232
Rendering glass non-thrombogenic - 75368B/42
- FERR/16.06.78 FERRUTI P A96 B07 D22 L01 (B04) =GB 2023-022
Rendering glass non-thrombogenic - 75368B/42
- FIND-08.05.78 PROD FINDUS SA D14 =NO 7901-364
Meat and cheese block mincing machine - 86247B/48
- FINL/16.09.77 FINLEY W T D15 =GB 2023-661
Elevating nutrient-rich ocean water from aphotic to photic zone - 25900B/13
- FIRM-11.10.77 FIRMENICH SA B07 D13 E13 (B03) #US 4179-448
Tetra:methyl-oxa-spiro-deca:diene cpds. - 34615B/18
- FIRM-11.05.78 FIRMENICH SA D23 E15 =J5 4148-754
Unsatd. cyclopentenyl ketone perfume components - 84404B/47
- FIRM-15.06.78 FIRMENICH SA B05 D13 E15 (B07) *DT 2924-031
Alpha-di:hydro-ionone used as aroma for foods and pharmaceuticals - 00240C/01
- FLEC/02.03.72 FLECKENSTEIN A J D15 =NL -162-463
Time switch driving mechanism - 50258U/35
- FMC-26.03.75 FMC CORP A97 D25 E34 #IT 1034-628
Solid, free-flowing sodium percarbonate agglomerates - 37936W/23
- FOOD-06.11.75 FOOD TECHNOL PRODUC C03 D13 E12 (D16) =CA 1067-745
Treatment of silage to increase available protein content - 18236Y/11
- FOSS-30.04.75 FOSS N ELECTRIC A/S C03 D13 E16 (E13) =CA 1067-805
Biologically available lysine determination in proteins - 89075X/48
- FRAN/17.05.78 FRANCHINI J C D15 *BR 7803-152
Fountain with ozonised water - C/01
- FRAR-15.05.78 FRARUVI INDE COM D11 *BR 7803-117
Bread dough dividing machine - C/01
- FRES-16.03.78 FRESSENIUS CHEM PHAR B05 D21 E12 =FR 2419-726
Dental disinfectant compsns. - 27948B/15
- FRES-06.06.78 FRESSENIUS CHEM PHAR B04 D13 E13 =DT 2824-694
Determin. of ascorbic acid in test liquids - 89954B/50
- FREU-11.02.77 FREUDENBERG, CARL FA D21 (D16) =US 4179-333
Water-soluble elastin hydrolysates prodn. - 60608A/34
- FRIT-09.06.78 FRITZSCHE DODGE & O D23 E15 *NL 7904-306
Spiro:dienone(s) and spiro:cyclic ketone(s) prodn. - 01164C/01
- FRRR-26.10.72 FERRERO P & CIA SPA D13 =DS 2353-582
Chocolate liqueur centres prodn - 17375V/10
- *FUCH/14.02.78 FUCHS P D15 *CS 7800-928
Catalytic oxidn. of aq. effluents - C/01
- FUJI-11.05.78 FUJISAWA PHARM KK B04 C03 D16 =J5 4147-997
Stable and potent hyaluronidase BMP-8231 - 89715B/50
- *FUSK/20.06.77 FUSKA J B04 D16 *CS 7704-038
Vermistatin antibiotic with cytotoxic activity - C/01
- *GASS=02.09.76 GAS SCRUBBER WORK D15 J01 L02 *SU -656-975
Settling tank to remove suspended solids from liquids - 01240C/01
- GENO-12.06.78 GENERAL FOODS LTD D13 =DT 2923-624
Soluble coffee prodn. from chilled extract - 91490B/51
- GERE-01.05.78 GENERAL REFRACTORIE CO D15 (D25) =J5 4146-300
Synthetic crystalline analcime zeolite useful as water softener - 82831B/46
- *GIDR=21.07.77 GIDROLISFROM DES D16 *SU -657-059
Cultivating yeasts in nutrient medium - 01312C/01
- GILL-31.05.78 GILLETTE CO A96 D21 (A18) =BR 7903-362
Self lubricating safety razor head - 92199B/51
- GIVA-06.10.69 GIVAUDAN L & CIE SA D23 E15 =NL -162-358
Norbornyl derivs used in perfumery - 23100S/13
- GIVA-17.03.72 GIVAUDAN L & CIE SA D23 E15 =J7 9040-616
Perfumery compsns - contg 3-isopropyl - 60546U/41
- GIVA-19.04.74 GIVAUDAN L & CIE SA D23 E15 =IT 1034-605
Perfumes contg crotonoyl gps - 74421W/45
- *GOOD/19.06.78 GOODSON M G D15 *GB 2023-122
Biological treatment of waste water - 00350C/01
- *GORD/19.09.77 GORDON M R D16 *US 4179-338
Microbiological medium sterilisable by ionising radiation - 01598C/01
- GRAF-05.04.74 GRAFE AG C03 D13 =IT 1034-851
Prodn. of animal fodder with balanced protein to carbohydrate ratio - 71836W/43
- HAGG-13.11.69 HAG AG D13 #NL -162-424
Self-oxidation prevention of oil etc using green coffee - 35820R/20
- HAGI/25.05.77 HAGIWARA Y D13 =J5 3145-958
Nutritious sheets - 01140C/01
- *HAGI/25.05.77 HAGIWARA Y D13 *J7 9040-628
Nutritious sheets - 01140C/01
- HAKA/16.02.77 HAKANSSON L A H D15 =US 4179-376
Appts. for industrial effluent flocculation and filtration - 60854A/34
- *HART/21.04.76 HARTMAN P D15 *CS 7602-594
Aq. effluent biological purification appts. - C/01
- HAYB-01.03.73 HAYASHIBARA BIOCHEM A11 B04 D13 (A82 A94 A96 A97) =NL -162-395
Shaped solid bodies e.g. films and coatings - 53764V/30
- HAYB-17.07.74 HAYASHIBARA SEIBUTS D17 (D16) =NL -162-431
Maltose prodn from saccharified starch hydrolysates - 10520X/06
- HENK-28.12.71 HENKEL KG AUF AKTIEN D17 =DS 2164-907
Foam reduction - 39736U/28
- *HENK-00.00.74 HENKEL KG AUF AKTIEN D21 E19 *DT 2826-758
Deodorant compsns. - 00157C/01
- *HENK-00.00.74 HENKEL KG AUF AKTIEN D21 E17 (E15) *DT 2826-759
Deodorant compsns. contg. hydroxy-carboxylic acid ester cpds. - 00158C/01
- HENK-29.03.74 HENKEL & CIE GMBH A11 D21 G03 (A81 A96) =IT 1034-584
New cellulose mixed ethers - 70958W/43
- HENK-16.04.74 HENKEL & CIE GMBH D22 E17 (E15) =IT 1034-972
Anhydrous, deodorising cosmetic prods esp. aerosols - 72481W/44
- HENK-16.04.74 HENKEL & CIE GMBH D21 E17 (E15) =IT 1034-973
Anhydrous, deodorising cosmetic products esp. aerosols - 72482W/44
- HENK-06.02.76 HENKEL KG AUF AKTIEN A97 D25 E11 (A25) =US 4179-393
Cleansing and detergent compsns. - 57907Y/33
- HENK-25.11.76 HENKEL KG AUF AKTIEN D25 E36 =US 4179-268
Machine washing of solid articles - 33407A/19
- HENK-22.04.77 HENKEL KG AUF AKTIEN A97 D25 E33 (A25 E19) =US 4179-391
Phosphate free washing powder compsn. contg. aluminosilicate - 76322A/43
- HENK-20.05.78 HENKEL KG AUF AKTIEN D18 E36 =BR 7903-114
Water-insoluble aluminium silicate used in leather mfr. - 86134B/48
- *HENK-19.06.78 HENKEL KG AUF AKTIEN D21 E33 (E19) *DT 2826-757
Deodorant compsns. contg. acid aluminium salt - 00156C/01
- *HERE/19.05.78 HEREIT F D15 *CS 7803-274
Longitudinal settling vessel - C/01
- *HERE/19.05.78 HEREIT F D15 *CS 7803-275
Dispersion control - C/01
- *HERE/19.05.78 HEREIT F D15 *CS 7803-276
Dispersion control - C/01
- *HESS/16.06.78 HESSELGREN S A96 D21 (A11) *DT 2924-095
Adhesive compsn. for dental prostheses - 00246C/01
- *HIEJ-12.05.78 HITACHI PLANT ENG CONST D15 E36 J01 *J5 4148-190
Activated charcoal regeneration - 00884C/01
- *HITA-12.05.78 HITACHI KK D15 J01 *J5 4147-577
Magnetic separator - 00718C/01

HITF

- HITF 26.09.75 HITACHI SHIPBLD ENGG KK D15 =J5 2040-485
Adjusting salt concn. of brine - 01104C/01
- *HITF 26.09.75 HITACHI SHIPBLD ENGG KK D15 *J7 9040-231
Adjusting salt concn. of brine - 01104C/01
- *HITF 09.05.78 HITACHI SHIPBLD ENGG KK D15 *J5 4146-271
Evaporator for fresh water prodn. from sea water - 00525C/01
- HLSI- 22.11.74 HLS LTD D23 (D13) =J7 9040-084
Edible liquid oil prodn. - 30222X/17
- HLSI- 07.02.75 HLS LTD IND ENG CO D23 (D13) =J7 9040-083
Edible oils sepn. into satd. and unsatd. fractions - 38099X/21
- *HOFF/ 19.02.76 HOFFMAN J B04 D16 *CS 7601-058
L-Asparaginase enzyme purification - C/01
- *HOKK- 25.12.70 HOKKAIDO TOGYO KK D17 (D16) *J7 9040-617
Increasing yields in beet sugar mfr. - 01139C/01
- *HOLL- 17.10.77 HOLLY SUGAR CORP C04 D17 J08 (D14) *US 4179-265
Rotary drum drier operation - 01563C/01
- HOOP- 09.07.75 HOOPMAN ONDERZOEK D14 J02 =GB 1558-407
Rotating drum mixer and spreader for e.g. animal feed - 08747Y/05
- *HOSH- 09.05.78 HOSHINO BUSSAN KK D13 *J5 4147-946
Prepn. of mixed powder for prodn. of rice noodles - 00768C/01
- *HRBK/ 20.01.78 HRBKA A B04 D16 *CS 7800-392
Diagnostic antigen for bonding reaction of complement with mycoplasma - C/01
- HUBE 12.03.75 HUBER J M CORP A60 B06 D21 E36 (D25) =SW 7907-276
Amorphous pptd silica esp for use in tooth-pastes - 74354X/40
- ICIL 29.03.74 IMPERIAL CHEM INDS LTD D17 (D16) =IT 1034-712
Glucose-isomerase enzymes from *Curtobacterium* species - 69270W/42
- ICIL 15.03.78 ICI AUSTRALIA LTD A91 D15 #FR 2419-756
Purificn. of brine water using amphoteric ion exchange resin - 81382B/45
- *IDEK 11.05.78 IDEMITSU KOSAN KK C03 D22 *J5 4147-178
Sublimable compsn. contg. camphane - 00664C/01
- *IDEK 11.05.78 IDEMITSU KOSAN KK C03 D22 *J5 4147-179
Sublimable compsn. based on camphane and endo:tri:methyl:norbornane - 00665C/01
- IMPT 10.10.75 IMPERIAL GROUP LTD D18 =CA 1067-720
Experimental pyrolysis of tobacco - 27509Y/16
- *INFL 22.12.76 INT FLAVORS & FRAGR INC D13 E14 *US 4179-526
2-((Methylthio(methyl)-3-phenyl-2-propenal - 01685C/01
- *INOZ 24.05.72 INOUE JAPAX RES INST D15 *J7 9039-668
Electrolytic appts. for treating effluent - 01043C/01
- INSP 08.06.78 INST PASTEUR D16 =NL 7904-517
Plasmid(s) contg. DNA fragment attached to operon - 91414B/51
- *INTT 24.03.78 INT TELEPH & TELEG CORP D12 *US 4179-021
Animal carcass back fat thickness measurement - 01546C/01
- *ISHI 12.05.78 ISHIKAWAJIMA-HARIMA HEAV A41 D15 E14 J08 (E36) *J5 4148-178
Recovering energy in waste gas from oxidn. reactions - 00874C/01
- *IZHI/ 29.07.77 IZBICKY A D16 *CS 7705-026
Tissue and pulp cultures testing - C/01
- *JASE/ 04.05.77 JASEK A D23 *CS 7702-932
Bone fat prodn. - C/01
- *JATS/ 09.06.76 JATS O D14 *CS 7603-780
Cheese and smoked products packing - C/01
- JETC- 00.00.79 JET-CERAMIC DENTAL D21 =GB 2023-429
Dental prosthesis working model prodn. - 15961B/08
- JOHJ 27.10.77 JOHNSON & JOHNSON D21 L02 =PT --68-650
Low temp. maturing dental glaze - 78140A/43
- *JOHJ 03.04.78 JOHNSON & JOHNSON D22 *GB 2023-431
Diaper with contoured absorbent batt - 00389C/01
- *JOHJ 21.06.78 JOHNSON & JOHNSON A94 D22 F07 (A96) *GB 2023-494
One way absorbent laminate - 00406C/01
- *JUDO- 19.06.78 JUDO WASSERAUFBER D15 *DT 2826-702
Water softener with two ion exchange columns - 00151C/01
- *JURI/ 14.06.77 JURISOVA E D17 *CS 7703-915
Maltose syrups prepn. - C/01
- *KAGR= 04.03.77 KAZA AGRIC ELEC MEC D18 *SU -657-064
Persian lamb skin primary cleaning brush - 01317C/01
- *KANE 13.05.78 KANEBO KK D21 E17 (E13) *J5 4147-937
Hair or skin cosmetics - 00765C/01
- KAOS 20.11.74 KAO SOAP KK A97 D25 E19 =DS 2551-111
Preventing caking of powdery or granulated detergents - 42320X/23
- KAOS 14.10.75 KAO SOAP KK A96 D21 E19 (A26) =DS 2645-282
Hair protective compsn. comprising specified polyol esters - 12819Y/08
- KAOS 10.05.78 KAO SOAP KK D23 E15 =J5 4148-768
Tri:cyclo-alpha,beta-unsatd. ketone derivs. - 84687B/47
- *KASC/ 30.05.78 KASCAK J C03 D13 *CS 7803-483
Shaped feedstuffs binder prepn. - C/01
- *KASM/ 26.01.68 KASMANNHUBER H D17 E13 *DS 1642-534
Plant cellulose hydrolysis using dil. inorganic acid - 00009C/01
- *KASP= 02.02.76 KASPMORNEFT ASSOC CMEM D15 J01 *SU -656-977
Petroleum extn. from gel obtd. from waste purificn. - 01242C/01
- *KDFO 02.08.73 KRASD FOOD IND RES INST D23 J01 *SU -657-832
Electrostatic separator - 01396C/01
- KEMA 11.03.75 KEMANOBL AB A97 D15 F09 =CA 1068-019
Removing colloidal impurities from aq. dispersions - 74363X/40
- KEMP/ 07.06.78 KEMP F W D25 =DT 2922-880
Additive for soap or detergent compsns. - 91524B/51
- KEND 14.04.75 KENDALL CO A96 D22 F07 =CA 1067-777
Supporting bandage for limiting movement of limbs - 66828X/36
- KEPE- 25.09.75 KEPEC CHEM FAB GMBH A82 D18 F08 (A11 A25) =GB 1558-391
Leather dressing emulsions - 25375Y/15
- *KIBU- 09.05.78 KIBUN KK C03 D13 *J5 4147-957
Hydrophilic seaweed prodn - 00770C/01
- *KIBU- 09.05.78 KIBUN KK C03 D13 *J5 4147-958
Hydrophilic seaweed prepn. - 00771C/01
- KIRI 12.05.78 KIRIN BREWERY KK B04 D16 =GB 2023-131
Antitumoural and antiviral substances ks-2-B - 84476B/47
- KIRI 12.05.78 KIRIN BREWERY KK B04 D16 =J5 4148-702
Antitumoural and antiviral substances ks-2-B - 84476B/47
- KLEI/ 10.02.78 KLEIN J A96 B04 D16 (A14) =DS 2805-607
Bio-catalyst prodn. in polymer matrix - 64776B/36
- KOCK 25.04.73 KOCKUMS CHEM AB D16 E17 (D13) =SU -656-527
Enzyme substrate compositions with high activity - 80304V/46
- *KOCK/ 13.02.78 KOCKOVA-KRATOCHVILLO B02 D16 *CS 7800-896
Ergosterol producing yeast cultivation - C/01
- *KOPA/ 28.04.78 KOPAL V D25 *CS 7802-763
Liquid cleaning and disinfecting agent - C/01
- KOPP 15.06.78 KOPPERS CO INC B05 D22 E14 =GB 2023-139
Alkylation of phenolic cpds. - 75367B/42
- *KOSA/ 09.06.76 KOSAR K D15 *CS 7603-812
Poultry droppings processing appts. - C/01
- *KOSA/ 20.03.78 KOSAR J D17 *CS 7801-757
Storage of processed sugar ind. pulp - C/01
- *KOTL/ 31.03.77 KOTLAN J D25 E12 F06 *CS 7702-128
4,4-Bis-4-amino-6-anilino-s-triazinyl-amino-2,2 stibene disulphonate - C/01
- KOTT/ 07.04.75 KOTT R D12 =CS 7602-309
Skinless smoked sausage - 90734X/49
- *KOZL/ 29.05.78 KOZLOV L V A96 B04 D16 *WP 7901-137
Stabilisation of immobilised proteins - 01727C/01
- *KREM= 01.12.76 KREMENCHUG CAR WKS D15 *SU -658-092
Purificn. of recirculating solution for washing engineering products - 01465C/01
- KRFT 20.08.75 KRAFT INC D23 E17 =CA 1067-913
Fatty acid mixt. for preparing dimers - 16732Y/10
- *KRKO/ 09.08.78 KRKOSKOVA B D13 *CS 7805-193
Milk fat fractions prepn. - C/01
- KURK 28.10.75 KURITA WATER IND KK D15 J01 =J7 9040-232
Backwashing reverse osmosis membranes - 40715Y/23
- KURS 02.12.75 KURARAY KK B05 C03 D13 E17 =US 4179-579
Terpenoid intermediate unsaturated alcohol and ketone derivs. - 42033Y/24
- *KURS 25.05.78 KURARAY KK A88 D15 J01 (A14) *DT 2920-762
Microporous PVA (ultra) filtration membrane - 00179C/01
- KYOY 04.06.75 KYORITSU YUKI KK A14 D15 (A97) =J7 9040-116
Polymerising acrylamide using acid chelate with iron - 06608Y/04
- *LEGR/ 16.06.78 LEGRAND C G G R D13 *DT 2924-425
Enrichment of foodstuffs in polyvalent minerals esp. calcium - 00275C/01
- *LENO- 22.06.78 LENOX INST RES INC D15 F09 *GB 2023-444
Appts. for removing floating solids from settling tank - 00395C/01
- LEPE 30.08.74 GRUPPO LEPETIT SPA B02 D16 =NL -162-429
Anti-bacterial rifamycins P, Q, R and U prepn. - 05629X/04
- LESI 31.05.78 LESIEUR COTELLE SA D13 (D23) =GB 2023-635
Treating fats, esp. palm oil - 71796B/40
- LESI 31.05.78 LESIEUR COTELLE SA D13 (D23) =GB 2023-636
Treating fats, esp. palm oil - 71796B/40
- LEWI- 06.10.77 LEWIS REFRIG CO D14 =GB 2023-790
Freezer for food prods. in trays - 31961B/17
- LIFE- 05.05.78 LIFE SAVERS INC A97 D13 =NO 7802-898
Chewing gum with long lasting sweetness - 04517B/03
- LIFE- 05.05.78 LIFE SAVERS INC A97 D13 =SW 7809-015
Chewing gum with long lasting sweetness - 04517B/03
- LIGG- 27.08.73 LIGGETT GROUP INC D18 =US 4179-323
Appts. for making hollow filter rod for cigarettes - 37913Y/21
- LIOY 11.06.76 LION FAT & OIL KK D21 E16 =J7 9040-615
Finishing agent for hair - 09332A/05
- *LIOY 09.06.78 LION FAT & OIL KK D25 E33 *DT 2923-364
Prodn. of surface-active magnesium sulphonate(s) or sulphate(s) - 00209C/01
- *LUKA/ 22.04.77 LUKACSEK P A D16 *US 4179-266
Culturing fungi for microscopic examination - 01564C/01

- MAGN- 16.06.78 MAGNA CORP C03 D22 E17 H01 *GB 2023-123
Stabilising aq. acrolein soln. by lowering pH - 00351C/01
- MAJM- 13.03.78 MAJ SARL D22 =DK 7900-983
Sterilising and vacuum sealing rack - 68510B/38
- MAJM- 13.03.78 MAJ D22 =FR 2419-883
Sterilising and vacuum sealing rack - 68510B/38
- MARG- 14.11.69 MARGARINBOLAGET AB D13 (D23) =DS 2055-036
Pourable margarine - 35667S/21
- MARU- 10.05.78 MARUHO KK B04 D16 *J5 4147-908
Wound treatment compsn. - 00748C/01
- MATS/ 29.02.72 MATSUI H B04 D16 (D13) #IT 1034-695
Medicinal dry baths - 23415T/15
- MATS/ 12.05.78 MATSUSHITA R A97 D13 *J5 4147-952
Preserving citrus fruits - 00769C/01
- MCMI/ 13.03.78 MCMILLAN I D13 *FR 2419-673
Retention of colour in dried biological matter - 00279C/01
- MECC- 31.05.78 MECCANICHE MODERNE D24 =GB 2023-057
Press for moulding cakes of soap and similar materials - 71842B/40
- MERE 19.06.78 MERCK PATENT GMBH D15 E14 J04 *DT 2826-664
Poly:cyclic aromatic hydrocarbon(s), e.g. 3,4 benzpyrene, determ. - 00150C/01
- MERI 10.08.71 MERCK & CO INC B04 D16 =J5 4147-938
Cariogenanases prepn - 11854U/09
- MERI 15.03.78 MERCK & CO INC A97 D13 (A11) =FR 2419-683
Stabilised fruit juice or drink - 63088B/34
- MERS- 22.10.71 VEB APP MERSEBURG D13 =DS 2216-921
Liquid foodstuff preservation - 21235U/16
- MESR 21.06.78 MESSERSCHMITT-BOLKOW-BLO D15 =GB 2023-565
Treating water for drinking using ozone and oxygen - 77237B/43
- METG 26.06.74 DRAVO CORP D15 *US 4179-374
Appts. for treatment of waste water - 01619C/01
- MEYH- 10.05.78 MEYHALL CHEMICAL AG A11 C03 D17 H01 =DK 7901-909
Phosphated locust bean gum soluble in cold water - 61444B/33
- MEYH- 10.05.78 MEYHALL CHEMICAL AG A11 C03 D17 H01 =J5 4146-883
Phosphated locust bean gum soluble in cold water - 61444B/33
- MEYH- 10.05.78 MEYHALL CHEMICAL AG A11 C03 D17 H01 =PT --69-547
Phosphated locust bean gum soluble in cold water - 61444B/33
- MEYH- 10.05.78 MEYHALL CHEMICAL AG A11 C03 D17 H01 =SW 7904-075
Phosphated locust bean gum soluble in cold water - 61444B/33
- MEYN/ 29.06.76 MEYN P D12 =NL-162-296
Extractor for the cloac(s) of fowl carcasses - 07735A/04
- MICU/ 31.03.78 MICULKA Z D18 =CS 7802-065
Thermal treatment of leather - 73808B/41
- MILE 15.09.75 MILES LABORATORIES INC D13 (D12) =DS 2641-333
Textured protein concentrate as meat substitute - 00037Y/01
- MILE 22.06.78 MILES LABORATORIES INC B04 D16 J04 =GB 2023-607
Specific binding assay esp. for thyroid hormones - 77212B/43
- MILK- 14.02.77 MILKFOOD AB D13 #CA 1067-749
Storage stable milk powder prod. - 77748B/43
- MINN 17.03.78 MINNESOTA MINING CO A96 B07 D22 G03 (A14 A81) =FR 2419-733
Control of bleeding of internal mammalian lesions - 79535B/44
- MINN 02.06.78 MINNESOTA MINING CO A96 D21 E11 (A14 A26) =GB 2023-628
Oligomeric methacrylated siloxane prepolymer used in dental filler - 91399B/51
- MIRK- 05.05.78 MIRKOZ DIESEL ES H D15 J01 =NO 7901-491
Flotation separator partic. to skim surface oil from sewage - 68156B/38
- MIRK- 05.05.78 MIRKOZ DIESEL & HUT D15 J01 =SW 7903-871
Flotation separator partic. to skim surface oil from sewage - 68156B/38
- MITD 27.02.76 MITSUI SUGAR KK A88 D17 J01 =J7 9040-390
Treatment of anion exchange resin waste regenerant - 73241Y/41
- *MITO 10.05.78 MITSUBISHI HEAVY IND KK D16 *J5 4147-171
Biological treatment of kitchen waste, e.g. vegetable with anaerobe - 00658C/01
- MITP 09.05.74 MITSUBISHI PETROCH KK A96 D22 (A14 A25) =J5 0152-586
Surgical bandage impregnated with photocurable resin - 01044C/01
- *MITP 09.05.74 MITSUBISHI PETROCH KK A96 D22 (A14 A25) *J7 9039-675
Surgical bandage impregnated with photocurable resin - 01044C/01
- MITU 08.09.75 MITSUBISHI CHEM IND KK B02 D22 =US 4179-437
Antibacterial acylamino benzyl pencillin derivs - 20398Y/12
- MITU 28.10.75 MITSUBISHI CHEM IND KK B05 D16 =J7 9040-637
Glutamylamino hexynoic acid and/or -hydroxy hexynoic acid prodn. - 42310Y/24
- MITU 28.10.75 MITSUBISHI CHEM IND KK B05 D16 E16 =J7 9040-638
Amino acids prodn. - 42311Y/24
- *MITU 08.05.78 MITSUBISHI CHEM IND KK B01 D16 *J5 4147-998
9:Alpha-hydroxy-androst-4-ene-3,17-di:one prodn. - 00779C/01
- MNKN 05.11.75 MINAMI NIPPON RAKUNO KYO D13 (D16) =J7 9040-626
High protein fibrous foodstuffs mfr. - 44412Y/25
- *MOBI 21.12.70 MOBIL OIL CORP A97 D25 E12 (A25 E16) *US 4179-392
Biodegradable hard water detergent compsn. - 01628C/01
- *MOBI 23.10.78 MOBIL OIL CORP D25 E16 (E34) *US 4179-414
Stable general purpose cleaning pastes - 01639C/01
- *MOLI- 27.06.78 MOLINIER SA D22 F04 *GB 2023-678
Knitting elastic dressing bands with chain warps - 00460C/01
- MONS 05.11.73 MONSANTO CO B05 D13 E14 =DS 2452-285
Alpha-L-aspartyl-L-phenylalanine alkyl ester prepn. - 32880W/20
- MONS 01.04.74 MONSANTO CO A97 D15 J01 =IT 1034-772
Sepn of water from aqueous mixts - 67733W/41
- MONS 01.12.75 MONSANTO CO A88 D15 J01 =CA 1067-831
Sepg. neutral organic cpds. from aq. solns. - 39811Y/23
- MORG/ 30.05.78 MONSON A A D15 =BR 7903-276
Sewage treatment and disposal system - 61472B/33
- *MORA/ 12.10.77 MORAK M A25 D25 *CS 7706-610
Prepn. of alkenyl-polyglycol-ether-sulphate - C/01
- MORG 00.00.76 MORINAGA MILK KK B02 D13 E13 (B02 B04 B07) =J7 9040-619
Vitamin B2 removal from whey - 66536V/38
- *MORI- 12.05.78 MORITA KAGAKU KOGYO B03 D13 E13 *J5 4147-976
Improving solubility of refined stevia extract - 00773C/01
- *MORI- 12.05.78 MORITA KAGAKU KOGYO B03 D13 E13 *J5 4147-977
Preventing decomposition of sweet stevia extracts - 00774C/01
- MULL/ 31.05.66 MULLER P A D18 F09 =CS 6703-976
Cigarette filter paper - 62363W/38
- MULL/ 01.04.74 MULLER H D13 (D16) =IT 1034-682
Recovering proteins from starch and cellulose wastes - 69220W/42
- *MUZZ/ 14.06.78 MUZZARELLI R A11 B04 D16 F06 (B07 D13 D22 F09) *DT 2923-802
Chitosan-glucan complex from fungal mycelium - 00225C/01
- *NALC 09.01.76 NALCO CHEMICAL CO A97 D15 F09 (A26) *US 4179-329
Colour removal from paper mill waste waters - 01594C/01
- NALC 12.01.76 NALCO CHEMICAL CO D15 J04 =CA 1067-883
Ozonisation catalyst for treating waste water - 50618Y/29
- *NALC 21.11.77 NALCO CHEMICAL CO A14 D15 F09 (A91) *US 4179-424
Aminomethyl acrylamide polymers prodn. - 01644C/01
- *NALC 23.02.78 NALCO CHEMICAL CO A97 D15 *US 4179-396
Single addn. organic-inorganic blend emulsion breaking compsn. - 01630C/01
- NATY 03.05.78 NABISCO INC D11 =US 4179-527
Prodn. of whole wheat food esp. breakfast cereal - 82918B/46
- *NEOL- 24.01.79 NEOLOY PRODUCTS INC D21 M26 *US 4179-288
Palladium base dental alloy - 01575C/01
- NEST 04.09.72 SOC PROD NESTLE SA D13 =SU -656-456
Continuous milk curd production - 21420V/12
- NEST 17.12.74 MAGGI AG D13 =CA 1067-744
Instantly soluble dehydrated food products - 42010X/23
- NEST 12.02.75 SOC PROD NESTLE SA D13 F01 =J7 9040-622
Highly nutritious proteinaceous fibres prodn. - 69010X/37
- NEST 14.03.78 SOC PROD NESTLE SA D13 J04 =FR 2419-757
Powder agglomerating appts. - 72241B/40
- NEST 16.03.78 SOC PROD NESTLE SA D16 (D13) =FR 2419-976
Stable plasmid- contg. Lactobacillus species culture prodn. - 70242B/39
- NEST 11.05.78 SOC PROD NESTLE SA D13 =SW 7904-010
Protein esp. for children's diets and cheese mfr. - 84384B/47
- NEUM/ 15.03.78 NEUMAIER R C03 D13 (D16) =FR 2419-977
Straw decomposition to protein-contg. feedstuffs - 70187B/39
- NICA 08.04.74 NIPPON CARBIDE KOGY KK A91 D15 =IT 1034-943
Removing acid dyes from waste liquids - 69330W/42
- *NIDE 08.05.78 NIPPON ELECTRIC KK D15 *J5 4146-458
Treating waste water contg. higher valent metals - 00551C/01
- *NIPE- 10.05.78 NIPPON PEROXIDE KK D22 E34 *J5 4147-194
Hydrogen peroxide adduct - 00675C/01
- NIRA 12.04.78 UNITIKA KK A96 B04 D22 =GB 2023-614
Wound healing material - 77682B/43
- *NISB 01.12.71 JAPAN TOBACCO AND SALT P D24 E16 *J7 9040-639
Preventing mould formation in tobacco - 01141C/01
- NISY 11.11.71 NIPPON SYNTH CHEM IND A14 D15 (D16) =J7 9039-665
Treating pva resin-contg waste water - 79190U/51
- *NITL 05.08.70 NITTO ELECTRIC IND KK A96 D22 *J7 9040-606
Plastic sticking plaster - 01137C/01
- NITT 12.02.77 NITTO CHEM IND KK D15 E13 =J7 9039-943
Organic waste water treatment - 73287A/41
- *NITT- 13.05.78 NITTA GELATIN KK D12 *J5 4147-968
Prepn. of edible collagen casings e.g. for sausages - 00772C/01
- *NIUS 15.05.78 NIPPON SUISAN KAISHA A11 B04 D13 *J5 4148-890
Low mol. wt. chitosan prodn. - 01026C/01
- *ODFO= 22.06.77 ODESS FOOD IND TECH D16 *SU -658-166
Grape or berry pulp juice extractor - 01469C/01
- OKAK/ 26.07.77 OKA K D15 E33 =J7 9039-946
Inhibitor for preventing sludge bulking due to Hyphomycetes - 24994B/13
- *OLAV- 22.06.78 OLAVI RASANEN OY D13 *GB 2022-986
Curing, storing and transporting wrapped cheese - 00333C/01
- *OLNE/ 27.03.78 OLNEY A A D12 *US 4178-660
Meat additives injection tube - 01505C/01
- OLYU 02.03.77 OLYMPUS OPTICAL KK A88 D16 =US 4179-339
Fluid feed device for automatic incubator - 65664A/37

OLYU

- OLYU 10.05.77 OLYMPUS OPTICAL KK A89 D16 = DS 2820-441
Enzyme reaction rate measurement - 84424A/47
- *OMNI- 28.02.78 OMNIPURE INC D15 J03 *US 4179-347
Electro-catalytic treatment of waste water - 01603C/01
- OREA 21.04.77 L'OREAL SA A14 D21 (A96) = FR 2419-947
Methacrylate based copolymers - 76295A/43
- OREA 17.03.78 L'OREAL SA B03 D21 E13 (B07) = FR 2419-943
Surface active derivs. of tetra:oxo-cyclododecane - 79372B/44
- OREA 06.04.78 L'OREAL SA D21 E24 = J5 4148-817
Substd. alkoxyalkyl-para-phenylene:di:amine cpds. - 73615B/41
- *OREA 15.06.78 L'OREAL SA A96 D21 *DT 2924-230
Hair cosmetics for dyeing, bleaching or permanent waving - 00261C/01
- *OREA 16.06.78 L'OREAL SA A96 D21 E19 *DT 2924-229
Cosmetics for greasy hair and skin - 00260C/01
- OREA 16.06.78 L'OREAL SA A96 D21 E19 = GB 2023-003
Cosmetics for greasy hair and skin - 00260C/01
- *PARC- 22.06.78 PARCOR B05 C03 D21 *GB 2023-598
Mucolytic S-benzyl-L-cysteine derivs. - 00431C/01
- *PASE 11.05.78 PASSAVANTW MICHELbacher D15 *DT 2820-692
Sewage aeration system - 00034C/01
- *PASE 15.06.78 PASSAVANTW MICHELbacher D15 J01 *DT 2826-281
Light liquid containing effluent purification - 00132C/01
- *PELZ/ 13.12.78 PELZBAUER J B02 C02 D13 E13 *CS 7808-284
Tryptophan prepn. for use in feedstuffs - C/01
- PERF- 13.03.78 PERFETTI SPA D13 = FR 2419-681
Chewing gum contg. liq. flavoured filling - 49043B/27
- *PETL 14.11.74 PETROLITE CORP A14 D15 H01 (A91 H05) *US 4179-549
Polymers for treating water contg. oil or suspended solids - 01692C/01
- PETL 28.11.75 PETROLITE CORP D13 = GB 1558-384
Electrofilter for cleaning edible oils - 40310Y/23
- PETL 28.11.75 PETROLITE CORP D13 = GB 1558-385
Electrofilter for cleaning edible oils - 40310Y/23
- PFIZ 15.06.76 PFIZER INC B03 C02 D22 E13 (D15) = SU -657-746
Antibacterial and growth-promoting quinoxaline 1,4-dioxide derivs. - 00365A/01
- PFIZ 12.11.76 PFIZER INC D23 E13 (D13) = CS 7707-331
Gamma pyrone(s) esp. maltol and ethyl maltol prepn. - 34952A/20
- *POLA/ 10.01.78 POLASEK S D15 *CS 7800-192
Aq. effluent purification and even flow-off - C/01
- POLH 03.04.78 POLYCHROME CORP A96 D21 E19 G02 (A11 A82) = US 4179-304
Non-carcinogenic nail varnish compsn. - 75586B/42
- *PRIB/ 05.12.77 PRIBIK I D13 *CS 7708-074
Fine, edible coating for food products - C/01
- PROC 05.03.75 PROCTER & GAMBLE CO D21 E19 (D24 D25) = CA 1067-786
Toilet soap with skin conditioning activity - 72524X/39
- PROC 06.10.76 PROCTER & GAMBLE CO A97 D25 E19 (E34) = US 4179-390
Laundering additive contg. an organic peroxide precursor - 26945A/15
- PROC 08.02.78 PROCTER & GAMBLE CO D22 = J5 4148-006
Liq. cleaning compsn. with high storage stability - 61820B/34
- PROC 27.10.78 PROCTER & GAMBLE CO A87 D25 E19 F06 #US 4179-382
Textile softening compsn. - 40886B/22
- *PROC/ 11.03.77 PROCHAZKA K D25 *CS 7701-627
High activity detergent - C/01
- QUAK 10.03.75 QUAKER OATS CO D13 = CA 1067-748
Protein film prodn. by drying gelled slurry - 07736B/04
- QUAK 14.08.75 QUAKER OATS CO C03 D13 = CA 1067-747
Moist pet food contg. simulated cottage cheese pieces - 25174Y/14
- RALS 11.12.75 RALSTON PURINA CO D13 = NL -162-436
Modified protein filaments prodn. for aq. slurry - 29049Y/16
- *RANC= 03.05.77 RANCHES MECH ELEC D15 *SU -657-857
Hydraulic cyclone for effluent stock-breeding aq. purificn. - 01413C/01
- REAK- 13.03.78 REAKTOR-BRENNELEM D15 E31 K05 M25 = FR 2419-907
Simplified process for recovering uranium cpds. - 52597B/29
- REAK- 16.03.78 REAKTOR-BRENNELEM D15 E31 K05 M25 = FR 2419-908
Uranium cpds. recovery from waste solns. - 54518B/30
- *REIB/ 05.06.78 REIBENSPIES U B07 D13 *DT 2922-745
Coating apparatus for pharmaceuticals or foodstuffs - 00197C/01
- REIS/ 23.07.77 REISS G A96 D21 = US 4178-686
Artificial tooth root of plastic loaded with a bioactive phosphate - 47821A/27
- RESE 17.07.69 RESEARCH CORP D23 E13 = DS 2034-737
Macrocyclic cpds for cyclic peroxides - 95718R/51
- *RETO 04.12.74 REYNOLDS R J IND INC D16 (D13) *US 4179-335
Microbiological thermostable lactase prepn. - 01596C/01
- *REVI- 13.03.78 USINA REVISIONS MEC D11 *FR 2419-677
Bakery oven loading conveyor with easily removable rollers - 00282C/01
- RHON 14.03.78 RHONE-POULENC INDUSTRIES A35 D15 E36 J02 = FR 2419-754
Contactor for substances in different phases - 68134B/38
- RHON 14.03.78 RHONE-POULENC INDUSTRIES D25 E12 = FR 2419-974
Sequestrant for washing compsns. contg. peracid salts - 68133B/38
- RHON 03.05.78 RHONE-POULENC INDUSTRIES A88 D15 J01 (A25) = J5 4146-279
Semipermeable membrane partic. for ultrafiltration - 80832B/45
- ROHG 11.02.77 ROHM GMBH D21 (D16) = US 4179-333
Water-soluble elastin hydrolysates prodn. - 60608A/34
- ROHG 25.03.78 ROHM GMBH A11 D18 F01 G03 = GB 2023-613
Collagen extn. from ossein, hides and pelts - 75424B/42
- *ROSE/ 03.03.78 ROSE D D23 *GB 2023-507
Making wax foil candle decoration - 00412C/01
- *RYBA/ 24.01.78 RYBAROVA J D16 *CS 7800-465
Yeasts aerobic cultivation - C/01
- SAKB 07.10.71 OTSUKA KAGAKU YAKUHI D21 E19 = J4 8040-945
Hair conditioner - 01138C/01
- *SAKB 07.10.71 OTSUKA KAGAKU YAKUHI D21 E19 *J7 9040-614
Hair conditioner - 01138C/01
- SAKB 16.07.76 OTSUKA KAGAKU YAKUHI D23 E13 = J7 9040-551
(3)-Hydroxy-(4H)-pyranone-(4) flavouring agents prepn. - 20775A/11
- *SAKU/ 09.05.78 SAKURAIT D13 *J5 4147-940
Preventing oxidn. and microbial growth in processed food - 00767C/01
- SALA 11.03.75 SALA INT AB A97 D15 F09 = CA 1068-019
Removing colloidal impurities from aq. dispersions - 74363X/40
- SALK/ 17.03.78 SALKIN N A96 C03 D22 (A14) = FR 2419-946
PVP-halogen complex prepn. as stable aq. soln. - 70288B/39
- SANK- 13.03.78 SANKIO CHEM CO LTD B05 D23 E15 = FR 2419-925
Cis-alkyl cyclohexanol prodn. from alkylphenol - 70384B/39
- SANO 08.06.78 SANDOZ AG B04 C03 D16 (D13) = NL 7904-387
S 54832/A-type antibiotics produced by fermentation - 91346B/51
- *SATT/ 21.02.77 SATTERLEE LD D12 *CA 1067-806
Measuring meat tenderness by determining trace element concn. - 00004C/01
- SAUR/ 17.03.78 SAURIN W D12 = FR 2419-680
Prodn. of sausages etc. with different internal portion - 72187B/40
- SCHD 16.07.76 SCHERING AG B01 D16 = US 4179-336
Androstan-(17)-one derivs. prodn. by fermentation - 06352A/04
- SCHR- 10.02.67 LD SCHREIBER CHEES D13 = NL -162-334
Wrapping individually sliced material - 54928R/31
- SCHW- 12.09.74 SCHWARTZHAUPT KG B04 D16 = SU -657-732
Determination of iso-enzymes of lactate dehydrogenase - 09287X/06
- SCIE 16.02.78 SCIENCE UNION & CIE B04 D16 = DT 2905-678
Compsn. for treating virus diseases - 68496B/38
- SCIE 16.02.78 SCIENCE UNION & CIE B04 D16 = J5 4147-911
Compsn. for treating virus diseases - 68496B/38
- *SCMZ 24.07.78 SCM CORP B05 D23 E17 *US 4179-454
hydrogenated fatty acid prodn. from crude glyceride oil - 01652C/01
- *SEIS 09.05.78 SEISAN KAIHATSU KAGAKU D22 F08 J01 (D15) *J5 4146-862
Porous material prepn. from citrus fruit pith - 00590C/01
- SHEL 12.05.78 SHELL INT RES MIJ BV D23 E15 = J5 4148-765
Ester(s) of (1,5)-di:methyl-bi:cyclo-(3.2.1)octanol-8 - 82556B/46
- SHEN/ 22.10.76 SHENK W D15 = CA 1067-790
Sewage accumulation station with central drywell - 70344Y/39
- SHIE 13.03.78 SHINETSU CHEM IND KK B05 D23 E15 = FR 2419-925
Cis-alkyl cyclohexanol prodn. from alkylphenol - 70384B/39
- *SHIE 15.05.78 SHINETSU CHEM IND KK B05 D23 E19 *J5 4148-704
Organic halogen compounds, e.g. pharmaceuticals or perfumes - 00920C/01
- SHIG/ 02.11.75 SHIGETOMI Y A97 D15 J01 = J7 9040-238
Complex adsorbing agent with high metal adsorbing power mfr. - 55029Y/31
- SHIS 17.03.78 SHISEIDO KK D21 = FR 2419-758
Gel compsn. for cosmetics - 70301B/39
- *SHIS 08.05.78 SHISEIDO KK D21 *J5 4147-936
Prepn. of water- and alcohol-contg. cosmetics - 00764C/01
- SHIS 08.06.78 SHISEIDO KK A96 D21 E17 G02 (A11 A25 A82) = NL 7812-169
Thixotropic nail varnish with stable viscosity - 91322B/51
- SHIS/ 09.09.77 SHISHKOVA Z C03 D16 (D13) #DS 2740-785
Culture media contg. vegetable matter and peat hydrolysates - 26539B/14
- *SHOR- 16.07.76 SHORT J R MILLING C D13 *US 4179-525
Stable aq. dispersions of wheat gluten - 01684C/01
- *SHOW 19.06.78 SHOWA DENKO KK A14 B04 C03 D13 (B07 D15 D21 D25) *DT 2924-663
Stable aq. polymer dispersion prepn. - 00276C/01
- SIGE 02.02.74 SIGRI ELEKTROGRAPHI GMBH D15 E36 J03 = US 4179-289
Passive metal electrode for electrochemical cells - 40967W/25
- SIMM- 11.05.78 SIMMERING-GRAZ-PAUK D16 = DK 7901-326
Preliminary extn. of hops for use in beer prodn. - 52591B/29
- *SIND/ 24.10.77 SINDELAROVA E D15 E31 F06 *CS 7706-866
Preliminary cleaning of aq. effluent in textile industry - C/01
- *SJUN- 05.05.78 SJUNTORP AB D15 J01 *SW 7805-159
Removal of oil from water - C/01
- *SJUN- 05.05.78 SJUNTORP AB D15 J01 *SW 7805-160
Appts. for removal of oil from water - C/01
- *SKLE/ 20.09.77 SKLENAR J D15 *CS 7706-076
Solid chemical metering in pool water treatment - C/01
- *SKUR/ 06.06.78 SKURSKY L B04 D16 J04 *CS 7803-668
Determin. of alcohol-dehydrogenase - C/01

- MHL 22.06.78 SIMON HARTLEY LTD D15 *GB 2023-442
Sludge settling tank weir or scum board - 00393C/01
- MIT/ 11.08.77 SMITH A J D15 *US 4179-375
Aeration of waste in septic tank - 01620C/01
- NAM 09.04.75 SNAMPROGETTI SPA B04 D16 J04 = IT 1034-957
Modifying proteins by reaction with quinones - 79729X/43
- NAM 15.07.75 SNAMPROGETTI SPA A97 B02 D16 = SU -656-520
Adenosine derivs. with 8-omega-carbonyl side chain and prepn. - 06130Y/04
- NAM 12.05.78 SNAMPROGETTI SPA A96 B04 D16 = DK 7901-824
Reduction of phenylalanine levels in blood and other media - 82559B/46
- NAM 12.05.78 SNAMPROGETTI SPA A96 B04 D16 = J5 4147-909
Reduction of phenylalanine levels in blood and other media - 82559B/46
- NAM 24.05.78 SNAMPROGETTI SPA D14 J01 (D23) = BR 7903-269
Continuous solid-liq. extrn., esp. of vegetable material - 85965B/48
- NLE 24.05.72 STANLEY ELEC KK D15 = J4 9009-851
Electrolytic appts. for treating effluent - 01043C/01
- NLE 24.05.72 STANLEY ELEC KK D15 *J7 9039-668
Electrolytic appts. for treating effluent - 01043C/01
- OIL= 21.11.75 SOIL INST D16 *SU -657-344
Soil nitrate or nitrite reductase determination - 01378C/01
- OLL- 22.06.78 SOLLICH SPEZ MASCH D13 = GB 2023-483
Sweetmeats in rod-or bar-form from bands - 91317B/51
- SPOR= 08.05.78 SPORT CAMPING ARTIC A97 D18 (A11) *J5 4147-185
Waterproofing agent for leather - 00669C/01
- SPOR= 09.05.78 SPORT CAMPING ARTIC A97 D18 (A11) #NO 7801-640
Waterproofing agent for leather - 00669C/01
- STAE/ 22.05.78 STAEHLER T D15 = BR 7903-185
Aerobic sewage treatment - 86284B/48
- STAH 24.04.74 STANDARD OIL CO (OHIO) D15 E16 J01 = IT 1034-767
Eliminating urea from aqs effluents - 74095W/45
- STAL 24.02.75 STALEY A E MFG CO D13 = CA 1067-750
Starch product for canned tapioca type sweets - 66764X/36
- STAR- 25.02.76 STAR-KIST FOODS INC C03 D12 #CA 1067-746
Canned pet food - 26392X/14
- STAU 02.10.69 STAUFFER CHEMICAL CO A60 C03 D22 E14 *US 4179-523
Controlling bacteria or fungi - 01682C/01
- STAV 08.04.75 STATNI VU MATERIALA TECH D15 J01 #IT 1034-941
Monolithic thermoplastics filter supports and frames - 16969X/10
- STIC- 02.09.76 STICHT INST MEC ARB D22 J01 = GB 1558-533
Washer for exhaust air from animal sheds - 19965A/11
- STOR- 16.07.74 STORCK A KG D13 = IT 1034-667
Filled centre sweet-forming rotary moulds - 44426W/27
- STRK 31.10.77 STORK GAMCO INC D12 *US 4178-659
Transfer turntable for poultry carcasses - 01504C/01
- STRU- 30.05.78 STRUTT AGENCIES LTD D15 *GB 2023-116
Appts. for magnetic treatment of liquids - 00346C/01
- STUD 23.06.73 STUDIENGES KOHLE MBH D23 *DS 2332-038
Deodorising fat and oil - 00011C/01
- SUDD 12.05.78 SKW TROSTBERG AG A23 D13 E12 (A97) = J5 4148-721
Over-acid solid metal lactate for food additive use - 86066B/48
- SUMO 05.09.73 SUMITOMO CHEMICAL KK A97 D15 F01 J01 (A17) = J7 9039-831
Waste-water treatment - 67471X/36
- SUMO 17.03.78 SUMITOMO CHEMICAL KK A88 D15 J01 (A14 D13) = FR 2419-742
Acrylonitrile polymer semi-permeable membrane treatment - 70294B/39
- SUMO 10.05.78 SUMITOMO CHEMICAL KK B04 D16 *J5 4147-993
Extraction of urokinase from human urine - 00775C/01
- SUMO 12.05.78 SUMITOMO CHEMICAL KK B04 D16 = DK 7901-950
Fibrinolytic enzyme urokinase lyophilisate stabilisation - 86170B/48
- SUMO 12.05.78 SUMITOMO CHEMICAL KK B04 D16 = J5 4147-916
Fibrinolytic enzyme urokinase lyophilisate stabilisation - 86170B/48
- SUMV 28.10.77 SUMITOMO DUREZ CO D15 E14 = US 4179-365
Treating phenol-contg. waste liquor - 48068B/26
- SUNZ 08.05.78 SUN STAR HAMIGAKI K D21 E33 (E32) *J5 4147-939
dentifrice compsn. for removing nicotine stains etc. - 00766C/01
- SUPE- 08.05.78 SUPERFORNI RINALDI D11 = NO 7901-487
Continuous electric oven for cooking pizzas on plates - 64747B/36
- SUPE- 07.06.78 SUPER IRIDE SPA D22 J04 = DT 2922-470
Hygienic clothing, e.g. sanitary towel, absorbent wad or undergarment - 71761B/40
- SUPE- 07.06.78 SUPER IRIDE SPA D22 J04 = NL 7904-300
Hygienic clothing, e.g. sanitary towel, absorbent wad or undergarment - 71761B/40
- SUTU 04.04.75 SUTURES INC A23 D22 F01 = US RE30-170
Hydrolysable copolymers - 72276T/45
- SVOB/ 10.08.78 SVOBODA P D25 E17 *CS 7805-236
Higher unsaturated carboxylic acid esters hydrogenation - C/01
- SVOB/ 10.08.78 SVOBODA P D25 E17 *CS 7805-237
Higher unsaturated carboxylic acid esters hydrogenation - C/01
- SVTU= 01.09.76 SVERD TUBERCULOSIS B04 D16 *SU -657-826
Mycobacterium tuberculosis in blood or sputum determ. - 01393C/01
- TAIK- 04.03.77 DIAKI ENGG KK C03 D15 E36 J03 = J7 9040-473
Electrolytic ferrous ion producer in sea water utilisation system - 77342A/43
- TAKE 07.11.77 TAKEDA YAKUHI KOGY D14 J01 = GB 2023-448
Sealable container for preserving food and flowers - 58509B/32
- *TAKE 04.05.78 TAKEDA CHEMICAL IND KK D15 *J5 4146-455
Removing phosphoric ion from aq. soln. - 00550C/01
- *TAKS 15.05.78 TAKASAGO PERFUMERY KK D23 E14 *J5 4148-763
Isocamphyl:guaiacol prepn. from camphor and veratrole - 00947C/01
- TANA 01.12.71 TANABE SEIYAKU KK D24 E16 = J4 8061-694
Preventing mould formation in tobacco - 01141C/01
- *TANA 01.12.71 TANABE SEIYAKU KK D24 E16 *J7 9040-639
Preventing mould formation in tobacco - 01141C/01
- TAXA- 24.01.76 TAX ADMIN AGENCY D13 E13 = J7 9040-629
Synthetic cpd. having coffee- or curry-like flavour - 64156Y/36
- TECD 14.03.78 TECHNICON INSTRUMEN A89 D16 J04 = FR 2420-140
Carbohydrate enzyme substrate immobilisation on carrier e.g. alumina - 72069B/40
- *TECN- 16.06.78 TECNAL SA B07 D14 J04 *DT 2924-216
Feed regulator for liq. or pasty food or pharmaceutical prods. - 00258C/01
- *TENG/ 24.03.75 TENG M C D25 *IT 1034-506
Levelling compsn. - C/01
- TETR- 05.05.78 TETRA W BAENSCH D15 = J5 4146-275
Treating water for aquariums using cation exchanger - 66384B/37
- TETR- 05.05.78 TETRA W U BAENSCH D15 = SW 7903-905
Treating water for aquariums using cation exchanger - 66384B/37
- *THET- 21.02.78 THETFORD CORP D15 *US 4179-616
Appts. for sanitising liquid using ultraviolet radiation - 01715C/01
- THOM 08.02.71 THOMAE K GMBH B03 D22 E13 = J4 7035-147
Uv absorbing 1-phenyl-3-(3-pyridyl)-1,3-propan-diones - 55213T/35
- THOM 08.02.71 THOMAE K GMBH B03 D22 E13 = J7 9040-613
Uv absorbing 1-phenyl-3-(3-pyridyl)-1,3-propan-diones - 55213T/35
- *TILL/ 30.05.78 TILLIE E D15 H03 *BR 7903-365
Treatment of surface layers of pollutants, esp. hydrocarbons - C/01
- *TOKS- 15.05.78 TOKYO SUPPLY KK A32 D21 (A14 A96) *J5 4148-860
High strength, heat resistant cyanoacrylate polymer mouldings prodn. - 00999C/01
- TOXN 10.05.78 TOYO JOZO KK B04 D16 = J5 4148-701
Macrolide antibiotics with antibacterial and anti:mycoplasma activity - 84686B/47
- *TOYJ 10.05.78 TOYO SODA MFG KK D25 E33 *J5 4147-200
Prodn. of zeolite used as detergent builder - 00681C/01
- TURE/ 15.05.78 TUREAUD K E A96 D21 (A14) #BR 7803-042
Plastic jaw impression spoon - 48082A/27
- TURR/ 14.03.78 TURROQUES G D12 = FR 2419-863
Sausage string knotting attachment - 72062B/40
- *UCOA= 25.10.76 UKR COAL CHEM RES D15 *SU -656-976
Ammonia water processing in coking industry - 01241C/01
- *UJEC/ 08.12.78 UJEC J D11 *CS 7808-139
Baking oven air recirculation system - C/01
- UNIC 27.03.74 UNION CARBIDE CORP D12 = IT 1034-629
Shirred sausage casing stick with end plug - 47636W/28
- UNIC 18.11.74 UNION CARBIDE CORP D15 = US 4179-366
Biological effluent treatment plant - 20880X/12
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = DK 7901-900
Wrapping for food products esp. sausages - 82545B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = J5 4147-969
Wrapping for food products esp. sausages - 82545B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = J5 4147-970
Conc. aq. smoke flavour compsn. for coating tubular food wrapping - 82544B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = NO 7901-521
Conc. aq. smoke flavour compsn. for coating tubular food wrapping - 82544B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = NO 7901-522
Wrapping for food products esp. sausages - 82545B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = SW 7903-958
Conc. aq. smoke flavour compsn. for coating tubular food wrapping - 82544B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = SW 7903-959
Wrapping for food products esp. sausages - 82545B/46
- UNIL 10.02.70 UNILEVER NV D13 = NL -162-297
Margarine compsn which spreads smoothly at low temps - 55592S/34
- UNIL 15.03.73 UNILEVER NV D25 = NL -162-427
Stable liquid textile washing agents for laundries - 70537V/40
- UNIL 18.12.75 UNILEVER NV D25 E16 (E34) = J7 9040-245
Bleaching compsn. contg. tetraacetyl alkylene diamine and perborate - 43455Y/25
- UNIL 10.02.76 UNILEVER LTD A97 D25 = GB 1558-481
Spray dried detergent powder contg. nonionic surfactant - 57945Y/33
- UNIL 18.10.77 UNILEVER NV A96 D22 (A25) = PT --68-666
Particulate absorption material with improved wettability with blood - 31891B/17
- UNIL 13.03.78 UNILEVER NV D13 = DK 7901-026
Spray stencilling design on food prod. esp. ice cream - 68123B/38

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- UNIL 13.03.78 UNILEVER NV D13 =FR 2419-768
Spray stencilling design on food prod. esp. ice cream - 68123B/38
- UNIL 14.03.78 UNILEVER NV D13 =FR 2419-684
Jojoba oil coating agent for foods - 68612B/38
- UNIL 10.05.78 UNILEVER NV A97 D25 E19 (E34) =J5 4146-809
High sudsing fabric washing powder - 84695B/47
- UNIL 11.05.78 UNILEVER NV D25 (D24) =SW 7904-130
Prepn. of spray dried soap contg. washing powders - 82563B/46
- UNIL 31.05.78 UNILEVER LTD D13 =GB 2023-163
Fat mixt. for low temp.-spreadable margarines, etc. - 87596B/49
- *UNIV 06.05.76 KANSAS STATE UNIV B03 D13 E13 *US 4179-445
Prepn. of 5,6-isopropylidene-l-ascorbic acid 2 phosphate ester(s) - 01648C/01
- UPJO 03.01.72 UPJOHN CO B03 D22 (D16) =NL -162-428
7- α -demethylcelestinine derivs - 45992U/33
- UPJO 08.09.75 UPJOHN CO B03 C02 D22 F09 (D15) =CA 1067-899
Antibacterial D-glycosyl analogues of neamine and their esters - 96105X/51
- UPJO 15.05.78 UPJOHN CO B03 D22 E13 F09 (D15) =GB 2023-135
Alpha-amino-3-chloro-alpha-isoxazoline-5-acetic acid and analogues - 84158B/47
- UPJO 15.05.78 UPJOHN CO B03 D22 E13 F09 (D15) =J5 4148-781
Alpha-amino-3-chloro-alpha-isoxazoline-5-acetic acid and analogues - 84158B/47
- USDC 26.05.78 US SEC OF COMMERCE D13 E23 =WP 7901-128
Stable coloured food and beverage compsn. - 82486B/45
- *UUKR 20.10.75 UKR UKRGIPROMEZ METAL D15 J01 M24 *SU -658-091
Cleaning industrial e.g. metallurgical effluent - 01464C/01
- UYAL- 07.10.76 UNIV OF ALABAMA B04 D16 =GB 1558-538
Maltase prepn. which can hydrolyse maltotetraose slowly - 13830A/07
- UYCO- 14.03.78 UNIV OF CONNECTICUT D21 M26 =FR 2419-715
Orthodontic device made of beta-titanium alloy wire - 72072B/40
- *UYDA- 15.03.78 UNIVERSITE DE DAKAR B04 D16 *FR 2419-727
Prepn. of polyvalent anti leprosy vaccine - 00288C/01
- *UYER= 25.10.77 EREVAN UNIV B03 D23 E13 *SU -657-023
Substd. di:hydro-pyridone medicinal, scent and complexing agents - 01280C/01
- *UYMA- 12.06.78 UNIV MALAYA D23 (D15) *GB 2023-120
Palm oil processing effluent treatment - 00349C/01
- VEKE- 15.06.78 VER KESSELWKE AG D15 =GB 2023-117
Sludge conditioning system - 54644B/30
- *VEND 19.09.77 VENDING EQUIP RES DES D14 *SU -657-800
Sorting agricultural products - 01387C/01
- VEOS 05.04.74 VER OSTERR EISEN & STAHL D15 J01 =IT 1034-734
Continuous oil sepn from aq emulsions - 71094W/43
- *VOLS 19.06.78 VOLKSWAGENWERK AG D15 J01 *DT 2826-798
Solar panel contg. desalination plant - 00161C/01
- *VOTE= 06.06.77 VORO TECHNOL INST D16 (D11 D13) *SU -657-060
Activating pressed yeasts for use in bakery or confectionery - 01313C/01
- WAGB 19.05.78 WAAGNER BIRO AG D16 =BR 7903-175
Preserving yeast culture during continuous alcoholic fermentation - 71748B/40
- *WALL/ 30.10.78 WALLOSCHKE E D15 *DS 2847-229
Container for sewage treatment filter bed - 00024C/01
- WATA/ 25.01.74 WATANABET D15 E35 (E36) =J5 0104-778
Device for sepg. volatile substance from water - 01069C/01
- *WATA/ 25.01.74 WATANABET D15 E35 (E36) *J7 9039-833
Device for sepg. volatile substance from water - 01069C/01
- WEAR- 06.02.78 WEAR-EVER ALUMINUM D13 =US 4178-843
Portable popcorn appliance - 60190B/33
- WEIR- 16.11.68 WEIR WESTGARTH LTD D15 J01 =NL -162-307
Distillation apparatus - 36641R/20
- WELA 27.05.78 WELLA AG D21 E12 (E33 E34) =BR 7903-210
Solid hair-straightening compsns. - 87896B/49
- WERN 19.05.78 WERNER & PFLEIDERER D11 =PT --69-517
Dough mixing and kneading machine - 87795B/49
- *WILL/ 28.04.78 WILLIS R M D15 *US 4179-368
Hydraulic flocculation in multistage appts. - 01615C/01
- *YALO= 12.03.76 YALOVENY AGR IND AS A97 D13 (D16) *SU -657-035
Stabiliser for treating drinks prepn. - 01292C/01
- *YALO= 06.09.76 YALOVENY AGR IND AS D16 *SU -657-061
Maturing sherry by actinic irradiation and contact with oak wood - 01314C/01
- YAMS 21.07.72 YAMASA SHOYU KK B04 D16 =DS 2334-314
Polynucleotide prepn from nucleoside diphosphates - 11783V/07
- YAMS 23.10.73 YAMASA SHOYU KK D16 =J7 9040-636
Culturing of mould, e.g. Penicillium, Rhizopus or mucor - 15114A/08
- YAWA 04.12.74 NIPPON STEEL CORP D15 E14 M21 (M24) =J7 9040-082
Treatment of sludge produced in hot rolling of steel - 72967X/39
- *YOKK- 13.05.78 YOKKAICHI GOSEI KK D23 E17 *J5 4148-738
2,6-Di:methyl-1,3,7-octatriene-6-ol prepn. - 00938C/01
- *YOTS/ 09.05.78 YOTSUYA J D15 *J5 4146-297
Prodn. of slaked lime for treating waste water - 00545C/01
- ZAID 01.07.74 ZH BISEIBUTSU KAGAKU KEN B05 D16 =US 4179-573
Peptidase-inhibitor bestatin - 09548X/06
- *ZHIV/ 30.08.76 ZHIVOV LG D15 *SU -656-663
Magnetic processor for aqueous system - 01189C/01

01073-R DJ	ZA 7007-670 T32	DS 2239-252 A01	11783-V BD	HU T016-958 B36+	SW 7503-575 W47	71094-W DJ	IT 1034-729 C01
ES 3488-261 R01	US 3682-656 T34	CS 7205-409 A51	DT 2334-314 V07	CA 1067-804 C01+	NO 7501-064 W48	DT 2513-173 W43	
IL -147-039 W44	CA -924-572 U18	CS 7606-048 A51	FR 2193-878 V17		DK 7501-308 X02	J5 1013-384 X12	05629-X BD
ES 1642-435 Y43	GB 1333-938 U42	DS 2265-327 B20	J4 9030-594 V31	80304-V DE	SF 7500-926 X04	DL -117-867 X18	BE -832-921 X04
1032-002 B39	J7 5019-620 W31	J5 4147-938 C01	US 3849-249 V48	NL 7405-543 V46	BR 7501-797 X04	OE 7402-883 X24	NL 7509-998 X12
7 9040-510 C01	CH -567-370 W46		GB 1394-843 W21	DT 2419-444 V48	FR 2274-224 X14	GB 1463-022 Y05	DT 2537-902 X13
	NL -160-153 B22	21235-U D	CA -990-671 X26	NO 7401-465 V50	ZA 7501-927 X17	HU T014-617 A15	SW 7509-571 X17
	DS 2055-036 C01	DL -95-970 U16	J7 7004-633 Y09	SW 7405-199 V51	SF 7602-396 X52	CH -598-851 A24	NO 7502-973 X18
820-R D		DT 2216-921 U19	DS 2334-314 C01	DK 7402-231 V52	SF 7602-395 X52	CS 7502-345 B33	SF 7502-417 X22
BE -741-806 R20	55592-S D	CH -566-725 W43		SF 7401-253 W06	CH -590-613 Y36	J7 9020-193 B33	DK 7503-790 X23
IL 6917-080 S21	BE -762-777 S34	DL -95-970 A43	17375-V D	FR 2227-531 W08	GB 1495-342 Y50	IT 1034-734 C01	FR 2282-878 X24
R 2070-292 S49	NL 7101-787 S35	DS 2216-921 C01	BE -806-463 V10+	J5 0046-888 W25	DK 7704-012 A01		J5 1051-590 X25
B 1275-129 T21	DT 2106-127 S37		NL 7314-408 V20+	GB 1463-422 Y05	CH -596-772 A15	71114-W ADJ	DL -119-818 X28
S 3663-581 T23	J4 6003-266 S44	39736-U D	DT 2353-582 V20+	CA 1021-674 Y50	DT 2560-018 A49	DT 2514-763 W43	PT -64-229 X36
IH -534-487 U22	FR 2080-976 T07	BE -793-419 U28	FR 2204-362 V35+	IT 1019-594 A11	OE 7502-319 B09	FR 2266-531 X04	ZA 7504-951 Y04
IL -162-424 C01+	ZA 7100-725 T41	NL 7216-134 U29	DL -107-584 V42+	DS 2419-444 A15	CA 1052-619 B20	GB 1500-945 A07	GB 1470-426 Y15
641-R DJ	US 3746-551 U32	DT 2164-907 U30	ZA 7307-824 V43	CH -605-581 A41	CA 1055-770 B25	GB 1500-945 B05	OE 7506-392 Y22
IL 6917-166 R20	GB 1341-752 U52	FR 2166-092 U43	J4 9133-555 W08+	SU -656-527 C01	CA 1055-771 B25	IT 1034-849 C01	US 4042-683 Y34
T 1957-224 R22	CA -970-624 W30	GB 1371-731 V43	SW 7314-523 W25+		OE 7800-005 B35		J5 2111-502 Y44
R 2023-464 R48	NL -162-297 C01	CH -576-800 X29	CH -563-121 W30+	32880-W BDE	IT 1034-629 C01	71836-W CD	IL -47-897 A14
B 1272-940 T18		DS 2164-907 C01	GB 1405-813 W37+	DT 2452-285 W20		NL 7504-034 W43+	SU -578-014 A38
S 3684-662 T35	23415-T BD	45992-U BD	CA -989-244 X23+	BE -821-825 W21	58740-W D	DT 2513-221 W44+	CS 7505-931 A38
T 1957-224 U25	NL 7118-183 T15	NL 7217-796 U33	US 3962-473 X25+	NL 7414-280 W21	BE -827-699 W36	SW 7503-823 W48+	HU T015-882 B02
IL -162-307 C01	BE -780-000 T36	BE -793-630 U33	SU -656-468 B51+	SW 7413-807 W26	NL 7504-149 W44	FR 2266-461 X04+	CA 1054-959 B23
	DT 2165-663 T36	DT 2262-626 U40	DS 2353-582 C01+	NO 7403-957 W27	DT 2425-026 W44	CH -595-049 A09	NL -162-429 C01
0372-R D	J7 2046-340 T48	J4 8077-091 U52		J5 0071-642 W32	NO 7501-206 W49	IT 1034-851 C01+	
R 1585-006 R23	FR 2121-192 T50	FR 2181-648 V05	21420-V D	DK 7405-736 W32	SW 7503-959 W49		05894-X D
B 1224-204 S08	GB 1377-286 V50	US 3817-979 V26	DT 2344-383 V12+	FR 2249-872 W34	DK 7501-463 X04	72481-W DE	FR 2266-463 X04
B 1224-203 S08	CH -564-349 W34	US B424-462 W06	NL 7312-118 V12+	ZA 7407-077 X03	FR 2267-245 X05	BE -827-905 W44	IT 1034-797 C01
B 1224-205 S08	US 3929-997 X02	GB 1388-459 W13	ZA 7307-146 V40	US 3933-781 X05	BR 7502-118 X06	NL 7503-335 W44	
A 7003-661 S16	CA -983-856 X10	CA -978-119 W49	FR 2197-507 V22	BR 7409-198 X22	CH -572-415 X15	DT 2418-362 W47	07940-X D
S 3610-303 S44	NL -156-045 A13	US 3920-522 W49	US 3899-595 W34+	GB 1464-140 Y06	ZA 7502-222 X24	SW 7503-217 W49	FR 2267-372 X05
IL 7512-480 X07	DS 2165-663 B41	CH -588-556 Y29	GB 1410-289 W42+	GB 1464-139 Y06	GB 1460-134 Y01	FR 2267-757 X06	GB 1475-263 Y22
IL -148-226 X09	IT 1034-695 C01+	NL -162-428 C01	FR 2256-718 W43+	HU T013-004 Y14	IL -47-044 A06	OE 7502-773 X10	J7 7030-595 Y35
T 1782-898 X36+			CA -980-711 X03	CA 1020-159 Y46	OE 7502-636 A26	BR 7502-277 X46	US 4059-572 Y48
S 1782-898 Y29+	29561-T BDE	50258-U D	US 3945-310 X14+	SU -544-367 A04	US 4121-107 A43	US 4005-189 Y06	J5 0132-187 Y50
S 1757-573 A07+	DT 2152-111 T19	BE -796-193 U35	CH -577-794 X34+	SW 7710-696 A08	US 4175-140 B48	GB 1487-293 Y39	IT 1034-944 C01
IL -162-299 C01	NL 7114-488 T19	DT 2310-189 U39	NL -154-092 Y37+	IT 1025-399 A42	IT 1034-928 C01	CH -595-838 A12	
	CH -533-598 U19	CH -562-163 W25	SU -656-456 C01	CH -605-678 A48	CA 1067-751 C01	CA 1050-892 B13	09034-X DEJ
1719-R ADEF	GB 1326-473 U33	GB 1429-071 X13		DS 2452-285 C01		DS 2418-362 B19	US 3933-610 X05
B 1199-680 R29	US 3798-207 V13	NL -162-463 C01	53764-V ABD		62363-W DF	IT 1034-972 C01	BR 7501-778 X05
CA -847-352 R30	J7 4041-425 V49		BE -811-583 V30	37936-W ADE	DS 1632-183 W38		IT 1034-732 C01
7 0037-195 R47	CA -974-230 W39	60546-U DE	DT 2409-665 V37	DT 2453-659 W23+	CS 6703-976 C01	72482-W DE	
S 3579-511 S21	DS 2152-111 C01	DT 2313-017 U41	NL 7402-806 V38	BE -822-431 W23+		BE -827-906 W44	09287-X BD
R 1603-050 S35		NL 7302-559 U41	SW 7402-553 V44	NL 7415-173 W24+	67733-W ADJ	NL 7503-336 W44	BE -833-348 X06
S 1795-073 C01	55213-T BDE	FR 2176-786 V01	FR 2219-951 V52	SW 7414-668 W29+	DT 2514-094 W41	DT 2418-338 W48	NL 7510-277 X14
	DT 2105-672 T35	J4 9011-850 V14	US 3870-537 W12	J5 0084-500 W36+	BE -827-329 W42	SW 7503-216 W49	DT 2443-741 X15
4928-R D	BE -779-057 T35	GB 1379-874 W02	J4 9112-954 W17	FR 2252-294 W37+	NL 7503-699 W42	FR 2267-756 X06	NO 7503-119 X19
CA -847-652 R31	NL 7201-620 T35	CH -565-728 W38	GB 1419-483 X01	BR 7409-804 X24+	J5 0140-379 X02	OE 7502-774 X10	SW 7510-130 X19
S 3542-570 R46	FR 2124-571 U01	CH -572-013 X12	CH -591-525 Y41	US 3984-342 X42+	FR 2265-686 X03	GB 1453-266 X43	SF 7502-550 X22
GB 1226-989 S12	US 3816-611 V25	CH -572-742 X15	CA 1020-937 Y48	CA 1035-549 A33+	GB 1483-563 Y34	US 4010-253 Y10	DK 7504-064 X24
T 1611-891 T09	GB 1376-248 V49	US 3963-675 X26+	J7 8015-542 A25	IT 1025-864 A46+	IL -46-983 Y51	CH -595-839 A12	FR 2284-882 X26
IL -162-334 C01	IL -38-700 W15	US 4031-132 Y26+	DS 2409-665 A41	IT 1034-628 C01+	CA 1035-705 A33	DS 2418-338 A40	J5 1056-289 X27
	CH -565-558 W38	US 4068-084 A04+	NL -162-395 C01		US 4142-966 B11	CA 1041-016 A45	DL -120-296 X32
5718-R DE	DS 2105-672 B41	J5 3109-957 A44		40967-W DEJ	IT 1034-772 C01	IT 1034-973 C01	BR 7505-850 X34
BE -752-356 R51	J4 7035-147 C01	DS 2313-017 B29	66536-V BDE	BE -824-754 W25+			ZA 7505-704 X37
IL 7009-054 S01	J7 9040-613 C01	NL -160-800 B31	DT 2402-272 V38	DT 2405-010 W33	69220-W D	74095-W DEJ	DS 2443-741 X39
IL 7009-414 S04		J7 9022-968 B36	NL 7401-384 V39	NL 7417-054 W34+	DT 2513-230 W42	BE -828-141 W45	US 4003-795 Y05
T 2034-737 S11	72276-T ADF	NL 7904-191 B41	SW 7400-564 V45	DT 2412-828 W39	J5 0140-690 X02	NL 7504-477 W46	HU T014-266 Y50
R 2056-341 S33	ZA 7107-572 T45	J7 9040-616 C01	DK 7306-699 V46	SW 7501-094 W39+	FR 2265-284 X03	DT 2512-718 W46	GB 1527-243 A40
GB 1283-296 T30	DT 2162-157 T52		FR 2220-529 W01	NO 7404-435 W40+	DK 7502-007 Y03+	J5 0139-549 X01	OE 7506-670 B01
CA -913-110 T45	FR 2140-368 U13	71601-U ADE	J4 9116-256 W20	J5 0109-176 W43+	GB 1465-428 Y08	FR 2268-759 X07	US 4157-279 B25
CH -530-353 U04	US 3773-737 U48	US 3770-643 U47	GB 1407-313 W39	FR 2259-921 W47+	CH -585-021 Y16	CA 1046-665 B05	IL -48-071 B32
U -355-795 U29	CH -543-554 V03	US 4179-392 C01	US 3907-777 W40	DT 2420-011 W47+	OE 7502-380 Y22	IT 1034-767 C01	SU -657-732 C01
7 5005-186 W13	CA -959-990 W02		CA 1004-671 Y07	ZA 7500-399 X13	US 4056-636 Y45+		
CS 7005-067 X14	GB 1401-760 W31	74974-U D	SW 7612-077 Y13	DS 2405-010 X28	IT 1034-682 C01	74421-W DE	09548-X BD
DS 2034-737 C01	CA 1013-886 Y30	NL 7306-659 U49	DT 2402-272 Y28	GB 1443-502 X30+		DT 2516-696 W45+	DT 2528-984 X06
	US RE30-170 C01+	BE -799-675 U49	J7 7038-106 Y42	OE 7409-558 Y05	69270-W D	BE -828-137 W45+	J5 1007-187 X10
3100-S DE		DT 2319-120 U51	J5 2117-445 Y45	US 4029-566 Y25	DT 2513-903 W42	NL 7504-571 W45+	FR 2276-818 X17
BE -756-583 S13	06220-U DE	DL -103-925 V15	J7 9040-619 C01+	US 4078-988 A15	DK 7501-371 W52	J5 0148-333 X03+	US 4029-547 Y25
IL 7014-660 S15	BE -786-449 U05	J4 9041-579 V25		CA 1040-137 A43+	BE -827-348 W42	BR 7502-306 X13+	US 4052-449 Y41
DT 2048-970 S22	NL 7209-408 V04	US 3821-087 V28	70537-V D	IT 1031-341 B37+	NL 7503-703 W42	FR 2296-614 X45+	J5 2116-435 Y45
FR 2064-990 S41	DT 2236-120 V08	US 3883-393 W21	NL 7403-258 V40	CH -613-995 B45+	SW 7503-543 W47	FR 2296-611 X45+	GB 1510-323 A19
CA -893-143 T09	FR 2192-555 V14	GB 1395-291 W21	GB 1415-719 W48	US 4179-289 C01	J5 0132-176 W51	US 4006-108 Y06+	DS 2528-984 A44
GB 1286-169 T34	J4 9031-613 V21	CH -564-086 W34	ZA 7401-661 X03		FR 2265-859 X03	US 4018-718 Y17+	CA 1051-801 B17
CH -548-972 V26	CA -972-380 W34+	J7 9006-634 B17	US 3953-351 X19	44426-W D	ZA 7501-898 X17	CH -587-792 Y27	J7 9039-477 B51
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IL -162-358 C01	DT 2239-252 U11	79979-U ADF	DT 2316-637 V43+	BR 7501-524 X30	DT 2515-175 W42	CH -604-717 A41	FR 2278-768 X19+
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GB 2020-656 B47	DT 2854-109 B51	00173-C D	00361-C CDEJ	00765-C DE		01506-C D	
DT 2918-747 B48	NL 7812-169 C01	DT 2918-253 C01	GB 2023-180 C01+	J5 4147-937 C01	01138-C DE	US 4178-683 C01+	
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CENTRAL PATENTS INDEX CLASSIFIED ALERTING BULLETIN



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ABSTRACTS

INDEXES

II - PATENTEE

V - BASIC NUMBER

VII - PATENT NUMBER

Section D:

FOOD
DETERGENTS

COUNTRY	PUB DATE(S)	NUMBER RANGE
BRAZIL	18 DEC 79	7,800,903 - 7,905,596
CANADA	18 DEC 79	1,068,051 - 1,068,450
SWITZERLAND	14 DEC 79 + 28 DEC 79	611,108 - 612,067 614,582 - 615,063
DENMARK	10 DEC 79	7,800,422 - 7,902,190
W. GERMANY		
-DAS	3 JAN 80	1,543,579 - 2,900,617
-OLS	3 JAN 80	2,803,280 - 2,926,482
EUROPE		
-Unexamined	9 JAN 80	6,089 - 6,588
-Granted	9 JAN 80	0,010 - 1,257
FRANCE*	19 OCT 79 (BOPI 23 NOV 79)	2,420,285 - 2,420,906
UNITED KINGDOM	9 JAN 80	1,558,591 - 1,559,040 2,023,981 - 2,024,580
ISRAEL	30 NOV 79	45,244 - 56,597
JAPAN		
-Unexamined	— 22 NOV - 29 NOV 79	47,004,832 - 54,012,285 54,149,101 - 54,152,100
-Examined	6 DEC - 12 DEC 79	79,040,921 - 79,042,200
NETHERLANDS	17 DEC - 23 DEC 79	7,806,372 - 7,904,810
NORWAY	10 DEC 79	7,801,654 - 7,903,473
AUSTRIA	15 DEC 79	7,105,008 - 7,905,763
RUMANIA	MAY 79	63,755 - 68,935
SOVIET UNION	—	204,202 - 659,664
SWEDEN**	17 DEC 79	7,803,969 - 7,909,137
UNITED STATES		
-Reissues	25 DEC 79	Re30,175 - Re30,182
-Patents	25 DEC 79	4,179,752 - 4,180,866

*Printed patents actually published mid December, 1979

**Includes numbered Basics from Week B46

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Other Classes	Main CPI Class for Section	Latest Priority	Earliest Disclosure Basic Patent	Earliest Priority	Patent No
		Publication Date			Accession No		IPC
MEDA-			A89		69369W/42		=US 3964-992
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)							
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)							
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26							

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

WEE- ★ D11 02040C/02 ★EP ---6-290
Vacuum cooling moisture-contg. foodstuff - with control based on dimensional changes of the article under vacuum
TWEEDY BURNLEY LTD 12.05.78-GB-019104
(09.01.80) A21d-15/02 A231-03/02
D/S: E(DT, GB, OE, SW).

A moisture-contg. foodstuff is cooled by placing it in a chamber and evacuating the chamber. The evacuation is controlled in response to dimensional change of the foodstuff during the cooling operation.

The control is effected by a transducer which is operated by a dimensional change detector. An actuator controlled by the transducer regulates the pressure within the chamber in response to transducer output signals.

Vacuum cooling rates are controlled, particularly for certain breads, esp. rye breads. Control of the vacuum cooling operation avoids destructive expansion of the bread.

11.5.79 as 300810 (23pp1044).

(E) ISR: DT2507003; GB1504745; GB1461279.

IMO/ ★ D11 C/02 ★IL --47-506
Proofing device for Pitah loaves - includes serpentine conveyors for carrying loaves during proofing and moulding rolls
SIMONE B 18.06.75-IL-047506
(30.11.79) A21b-01/42 A21c-07/* A21c-13/02

ODB- ★ D11 03399C/02 ★SW 7803-568
Cake icing machine with rotating nozzle - through which icing is extruded while cake remains stationary
GODBITEN KONDITOR 30.03.78-SW-003568
(29.10.79) A21c-15 A21c-16

REA= ★ D11 03023C/02 ★SU -510-889
Protein enriched bread prodn. - includes addn. of protein concentrate to dough before shaping etc.
BREAD-BAKING RES 30.09.74-SU-064105
(30.06.79) A21d-02 A21d-08

Bread prodn. includes prepg. nutrient mix for the leaven (flour and water); stirring and fermenting the leaven; mixing together the flour, the leaven, a protein-contg. component and water to form the dough; leaving the dough aside; forming the dough and baking.

The process is accelerated and the quality of bread is improved by adding a protein-contg. substance to the nutrient mix for the leaven, and introducing into the fer-

mented leaven a yeast suspension (contg. pref. 2-4% of yeasts).

Patt, V.A., Shcherbatenko, V.V., Nemtsova, Z.S. et al
Bul. 24/30.6.79. 30.9.74. as 064105 (4pp70)

MOFO= ★ D11 03170C/02 ★SU -658-373
Tubular pasta e.g. macaroni drying - using live steam and followed by hot air at specified flow rate and temp.
MOSC FOOD IND TECH 23.12.77-SU-548631
Q76 (25.04.79) A231-01/16 F26b-03/06

To increase the product quality and reduce the drying time, prior to drying with hot air the pasta is dried with live steam at 120-140°C and 1.6-2.5 m/sec. until the product humidity is 23-18%. The pasta is retained in the satd. steam media for 5-15 min.

After 5-15 min. hot air with following parameters is supplied to the chamber: temp. 60-80°C, relative humidity 60-80% and velocity of 0.5-2.0 m/sec. The articles are dried to a balanced condition for 300-315 min. After the drying process end the pasta is treated again with the humid steam for 1-2 min.

Thus the total drying period is reduced whilst the high product quality is retained.

Nazarov, N.I., Tsivitsivadze, G.V., Kabanov, V.T. et al.
Bul. 15/25.4.79. 23.12.77. as 548631 (2pp110)

MOFO= ★ D11 03029C/02 ★SU -586-886
Die-held pastry blanks stripper - has split-cylinder grippers articulated on common shaft and controlled by cam
MOSC FOOD IND TECHN 18.06.76-SU-375633
(06.01.78) A21b-05/02

The stripping of pastries from dies, in simplified and the distortion in the blanks is prevented using grippers which are articulated on a common shaft. Their control mechanisms comprise rods held on the platform and guided by the cam grooves.

When the conveyor of the oven stops, the platform is lifted to align the dies with the cutout blanks of pastries just beneath the grippers. The half-cylinders of the grippers surround the dies perimeter, and when the platform starts descending the grippers are slightly shifted followed by displacement of rods by the cams to press against the dies.

Machikhin, S.A., Peregudov, I.F., Ryabov, O.A. et al
Bul. 1/5.1.78. 18.6.76. as 375633 (4pp89)

See Also

D16 OE 7807613

D12: MEAT; FISH PROCESSING

KARA/ D12 58015X/31 =DS 2501-820
Animal carcass suspension hook - with lug in hook gap for strap loop preventing unhooking by dynamic jolts
KARASS TJ 17.01.75-DT-501820
Q38 (03.01.80) =DT2501-820 B66c-01/36

Hook for running along a rail whilst supporting a side of beef or bacon, etc. via a band forming a sling, has a hanging section with lugs holding the rollers, from which the hook section extends, with a flat zone between the hanging section and the hook, in the form of a letter 'J'. The length of the flat section corresponds to the breadth of the sling, and a pointed boss projects towards the tip of the hook leaving a passage less than the breadth of the sling in its width.

The hook is of simple design, easy to handle and displace, whilst irrespective of the vibration and shaking set up, the load cannot be displaced from the hook accidentally. 17.1.75 as 501820 (8pp1045)

HOFM/ D12 07807Y/05 =DS 2529-446
Water binding capacity of meat determination - by expulsion from a porous body under load
HOFMANN K 02.07.75-DT-529446
R16 (03.01.80) *DT2529-446 G01n-33/12

The amount of water which penetrates as a result of capillary action into a porous body brought into contact with meat to be tested, during a predetermined period of time, or the air expelled thereby, is determined in a process for the measurement of the capacity of meat to combine water into its structure.

The porous body is brought into contact with the meat to be tested either under the load of a weight or by piercing the meat with a hollow rod contg. the porous body.

The process provides a method of measurement which is quicker and simpler than that using filter paper, so that a high throughput under economical conditions can be maintained. 2.7.75 as 529446 (4pp1045)

KYOW ★ D12 01977C/02 ★DT 2926-089
Pickled meat prod. prodn. - using pickling soln. contg. nitrogen di:oxide, ascorbic acid and ascorbinase
KYOWA HAKKO KOGYO 30.06.78-JA-078698
(03.01.80) A23b-04/02

Prodn. of pickled meat prod. comprises treating fresh mesh with a pickling soln. contg. NO₂ and ascorbic acid (I) and/or its alkali salts, in presence of ascorbinase (II). Pref. the soln. contains NO₂ or NaNO₂, opt. together with NaNO₃, and is used to provide 10-200(10-50)ppm. as NO₂ per kg. meat. (I) is pref. 100-600ppm. and (II) 100-1000 U per kg. meat, and the meat is esp. pickled as an emulsion of pH 5-7.

Used for the prepn. of hams, sausages, bacon, etc. Pickling time is reduced and the required colour is developed quickly. The amt. of potentially harmful NO₂ needed is much reduced. 28.6.79 as 926089 (16pp1251).

MEYN/ ★ D12 02098C/02 ★EP ---6-410
Weighing and grading fowls hanging from shackles - of moving overhead conveyor using balance arms adapted to catch and lift shackles

MEYN P 05.07.78-EP-200082
P43 R13 (09.01.80) A22c-21 B07c-05/18 G01g-19/06
D/S: E(BE, CH, DT, FR, GB, LU, NL, SW).

Weighing appts. for fowl hanging from shackles of a continuously moving overhead conveyor includes balance arms extending radially outwardly from a central shaft. The outer end of each arm is adapted to grip and lift a shackle so that it is no longer supported by the conveyor. The inner end of each arm cooperates with a load cell located in the axis of the central shaft.

The shape of the pick-up member may be adapted to the shape of the shackle and so can be used with almost any type of shackle. Since the pick-up member moves along with the conveyor no special rollers are necessary and all relative movement between the shackle and pick-up member which would cause friction and dragging is eliminated.

5.7.78. as 200082 (11pp1044).
(E) ISR: US 3997013; US 3918587; US 3642130.

LAMA/ ★ D12 02166C/02 ★FR 2420-306
Scalding cabinet for poultry, partic. geese - uses low pressure steam to scald the bird without soaking
LAMARQUE C 24.03.78-FR-009007
(23.11.79) A22c-21/04

A scalding cabinet for poultry in which the prod. is processed in an atmos. of low pressure steam, pref. contains a supporting pillar from which a bird or birds can be suspended above a reservoir of water which is evapd. by locating the cabinet over a source of heat. A removable hood pref. holds the vapour around the suspended poultry.

As a safety measure, to prevent the poultry contacting the hot water, a grill is pref. interposed between the suspended poultry and the surface of water in the reservoir. Heating beneath the reservoir can be provided by a gas burner, oil burner, electric heating elements, solid fuel hearth etc. The heater can be fixed beneath the cabinet to travel with it as a self-contained unit. 24.3.78 as 009007 (5pp448)

META- ★ D12 02167C/02 ★FR 2420-307
Multi-needle machine to inject brine into meat - maintains constant injection pressure when adjusted to large or small deliveries
METALQUIMIA SA 20.03.78-ES-468071
(23.11.79) A23b-04/02

The machine is of the type in which needles extend from a manifold which is fed with brine by a reciprocating piston pump. The piston is driven by direct coupling to the ram of an hydraulic power cylinder.

Displacement of the ram, and hence the piston, is controllable by an hydraulic regulator, partic. one which can apply actuating fluid to either face of the ram as required. This provides control of the volume of brine delivered by the piston pump without varying the pressure at which the brine is injected.

Given constant pressure ram actuation, the pump delivers at constant pressure no matter whether max. vol. is

injected or only a small proportion of that vol. 20.3.79 as 006964 (8pp448)

RHEE ★ D12 02227C/02 ★GB 2023-990
Device for feeding ribbon of sausage clip loops - to clip attachment appts. with reciprocating drive pin mechanism
RHEEM MFG CO 03.07.78-US-921251
(09.01.80) A22c-11/12

Appts for feeding a continuous ribbon of loops to a clip attachment appts also separates a individual loop from the ribbon on proper positioning w.r.t. the clip attachment appts.

Appts. includes a guide track for the ribbon and a movable ribbon guide pin. A follower and cam track are used to position the pin transversely to the guide track and to move it into and out of engagement with a ribbon in the guide track. A reciprocating drive incrementally advances the pin which engages the ribbon to drive it from a null to an advance position, and then disengages the pin and retracts it to the null position.

Appts is used partic to advance a ribbon of clips to a sausage clipping appts. Process is fully automated. 23.5.79 as 018026(8pp295).

FLET- ★ D12 02229C/02 ★GB 2023-992
Method and apparatus for washing animal bungs - by engagement on radial support supplying wash water
FLETCHER W&R NZ 30.06.78-NZ-187739
(09.01.80) A22c-13

Animal casing such as a bung is washed by placing the casing on a support which extends through its interior. A duct in the element introduces washing liq into the interior of the casing under pressure.

Pref. there are a series of supports projecting radially from a hub to which is supplied the washing liq. The hub rotates and carries the casings from a loading station, through a wash station to a discharge station where pref the casing are turned inside out.

Used for mechanically washing animal bungs eg sheep bungs, from which the crowns have been severed. Method permits the processing of large numbers of casings on a prodn-line basis. 21.6.79 as 021682(9pp295).

LEME= ★ D12 03224C/02 ★SU -659-122
Meat prod. e.g. sausages, handling unit - has frame traverses with lugs in vertical and inclined sections for hanging pins
LENGD MEAT DAIRY 06.01.77-SU-441316
(30.04.79) A22c-15

Handling of sausages for heat treatment is mechanised with each traverse bevelled at its ends between vertical and horizontal sections. It has nests for the passage of manipulator grippers, and supports for rods carrying the sausages.

The vertical and the inclined sections have lugs for pins, and the width of the lugs in the inclines exceeds maximum diameter of pins, while the lugs of the vertical section are of the same size as the pins.

Kozlov, Yu.A., Kulinich, V.V., Bashilov, I.S. Bul. 16/30.4.79. 6.1.77. as 441316 (4pp89)

FARE= ★ D12 03225C/02 ★SU -659-123
Fish dresser knife setter - has variable frequency generator with contacts connecting stepping motor and sensor
FAR-E POLY 11.03.74-SU-004383
(30.04.79) A22c-25/14

Change-over of setting ensuring accurate dressing of fishes is controlled by a variable frequency pulse generator connected to the motor and the feeler.

The setting is carried out to match the length of the handled fishes, and the displacement of the disc knife opening up the belly is determined by a formula which takes into account the length of the fish.

The knife is fed by a stepping motor whose angle of turn is controlled by the pulses of the generator with contacts closed by the feeler sensing the fish.

Proskurenko, I.V., Sobchenko, V.V., Tokmakov, V.M. et al. 11.3.74. as 004383 (3pp89)

IRE = ★ D12 03226C/02 ★ SU-659-124
 h processing machine decapitating unit - has one stationary and
 e movable on base cutter guides controlled by separate drives
 ing photodiodes acting as limit switches
FAR-E POLY 13.10.75-SU-181437
(30.04.79) A22c-25/14
 mproved efficiency of the fish decapitating unit, and low-
 power intake for the drive of the cutter are due to two
 lides, one of which is stationary while the other one is
 movable on the base. The shift is controlled by a separ-
 e drive.

The head of the fish placed on the chute is clamped by
 presser plate so that the gill cover of statistically
 average fish is in line with the disc knife.

The fish is pushed against the flap carried by the shaft
 resolver the output of which is proportional to the size
 the fish to control the position of the cutter. The sett-
 ing is dependent on signal of two photodiodes acting as
 limit switches, and interacting with a flap so that the
 mean position of the cutter coincides with the two limit
 switches in the off-state.

obchenko, V.V., Tokmakov, V.M., Tokmakova, L.I.
al. Bul. 16/30.4.79. 13.10.75. as 181437 (3pp89)

IKH = ★ D12 03227C/02 ★ SU-659-126
 sh dresser setting unit - comprises size sensor on vertical rod
 articulated to bell crank and slotted lever
TEKHRYBPROM PRODN 01.03.77-SU-457354
(30.04.79) A22c-25/14

The range of fish sizes handled by the unit when aligning
 along the line of head cut, is increased and its design
 and reliability are improved if the pusher and the size
 feeler are interlinked.

The feeler is carried by the vertical rod which is
 connected to the pusher by two articulated levers, one in
 the form of a bellcrank. The other lever has a slot for
 pin of the adjustable support, and the ratio of lever arms
 corresponds to the ratio of length and width of the fish.

avrentev, B.F., Kharibov, L.A., Markov, V.F. et al.
ul. 16/30.4.79. 1.3.77. as 457354 (3pp89)

EMR = ★ D12 03228C/02 ★ SU-659-127
 our coater for fried fish prodn. - has cascade with bottom
 perforated chute contg. profiled guide plates
TEMRYUK FISH CANNIN 22.12.76-SU-432807
(30.04.79) A22c-25/22

mproved coating of fish with flour and removal of excess
 flour are achieved with a perforated chute attached to the
 lower trough in the cascade.

The end of the perforated chute having profiled plates

om of the door when closed. The door has a handle.. When
 the press cycle is completed the door is automatically rai-
 sed.

Pref. the door can be releasably secured in its open
 position by a spring latch. The appts. can be used on bacon
 presses, and is hard-wearing and easy to clean. 22.11.78
 as 908536(10pp1376)

HARB/ ★ D12 03405C/02 ★ US 4179-772
 Poultry picking machine - has drum and disc picking assemblies on
 opposite sides of picking path
HARBEN G S 03.02.78-US-874844
(25.12.79) A22c-21/02

The machine comprises a drum picking assembly and a
 disc picking assembly, both carrying flexible picking fin-
 gers, disposed on opposite sides of a picking path along
 which the poultry are conveyed in a head lowermost posi-
 tion. The picking finger extends transversely of the picking
 path and the drum picking assembly rotates about an axis
 parallel to the picking path while the disc picking assembly
 rotates about an axis normal to the picking path.

The combination of drum and disc picking assemblies
 provides efficient defeathering of the poultry. The picking
 assemblies engage the poultry on opposite sides with diff-
 erent motions to carefully cushion the poultry and a void
 damaging it. 3.2.78 as 874844(9pp67)

CASH- D12 88129B/49 = US 4179-987
 Safety device for bacon press - has vertically moving transparent
 guard door which is released to drop under own weight and
 activate press in lowered position
CASHIN SYSTEMS CORP 22.05.78-US-908536
Q68 + P71 (25.12.79) *GB2021-725 + B30b-15/32 F16p-07

Safety appts. for a press has a door which actuates the
 press when moved to its closed position in which position
 access to the moving parts is blocked. The press is actu-
 ated by two switches which are located at the top and bott-
 om of the door when closed. The door has a handle. When
 for distributing the floured fishes. The plates are trape-
 zoidal and set symmetrically with respect to the axis and
 inclined in opposite senses. The third plate is triangular
 and fitted between the two former plates below the chute
 plane with a clearance exceeding the maximum portion of
 the handled fish.

Timoshkin, V.P., Fisik, V.I. Bul. 16/30.4.79.
22.12.76. as 432807 (4pp89)

See Also

D25 US 4180468

D16 EP 0006181

D17 DS 2545110

D13: OTHER FOODSTUFFS

REN- D13 51285S/31 #DS 2044-890
 agglomerating dehydrated potatoes
FRENCH R T CO (FRE -) 08.09.70-ZA-006094 (10.09.70-DT-
044890)
(03.01.80) *ZA7006-094 + A231-01/21

fluid in the form of droplets free from overlap is allowed
 to fall on to a moving bed of potato granulate having a hum-
 idity of 12-28%. The dia. of the droplets, the distance
 through which they fall, the thickness of the bed and the
 particle size of the starting material, are all selected so
 that discform agglomerates develop from the bed.

They are restrained laterally, temporarily to consolid-
 ate them, and they are separated finally by screening. The
 dehydrated final prod. is so porous that for its reconstitu-
 tion it is only necessary to agitate the mixture gently. It
 is also so uniform that it can be dispensed in the smallest
 quantities for use domestically. 10.9.70 as 044890 (8pp)

NEST D13 65237X/35 = DS 2512-583
 Epsilon (gamma-glutamyl)-lysine prodn. - by thermal
 rearrangement of lysine glutamate
SOC PROD NESTLE SA 07.02.75-CH-001536
B05 E16 (03.01.80) *DT2512-583 C07c-103/50

Prepn. of E- N-(γ-glutamyl)lysine comprises heating ly-
 sine glutamate in the presence of an inert gas or liquid

heat transfer agent, at above 120° (pref. at 135-150°) for
 at least 5 hr. (pref. 16-48 hr.). A pref. solvent is n-amyl
 alcohol.

The prod. is used in dietetic prepn., as a substitute
 for lysine or peptides and proteins rich in lysine, esp. in
 foodstuffs. 21.3.75 as 512583 (4pp047)

HAIM ★ D13 01823C/02 ★ DT 2827-257
 Continuous cottage cheese mfr. - in coagulator and processor
 trough with moving belt transporter
ALPMA ALPENLAND-MAS 21.06.78-DT-827257
(03.01.80) A23c-19/02

Cottage cheese is mfd. by cutting coagulated milk to
 curds of an appropriate size and passing the curd-whey
 mixt. in a continuous flow through all subsequent stages.
 The granular texture is maintained by stirring and the
 mixt. is fritted by heating it. After extraction of the whey
 the curds are washed and cooled by water sprays.

This simplifies the mfr. of cottage cheese. It saves
 both time and labour. 21.6.78 as 827257 (15pp39).

AMAT/ ★ D13 01894C/02 ★DT 2914-916
Continuous curds mfr. - in trough with endless conveyor for preheated whey and coagulant

AMATO C 13.06.78-IT-024522

P13 (03.01.80) A01j-25 A23c-19/02

A plant for the continuous mfr. of curds consists of a U-shaped, thermostatically heated trough where the coagulant and whey are introduced at one end. An endless conveyor with rectangular plates suspended on two chains moves the material gently to the discharge end where a belt conveyor transfers it to a chute.

This plant has a high output and operates with a min. of labour cost. It turns out a very homogeneous prod. 12.4.79 as 914916 (12pp39).

THAL ★ D13 01907C/02 ★DT 2922-783
Drying and sterilising protein contg. suspensions - in fluidised bed granulator with long residence time

VEB SCHWERMASCH THALMANN 14.06.78-DL-205979

C03 Q76 (D16) (03.01.80) A23j-01 A23k-01 F26b-03/08

Method for drying, and rendering hygienic, protein suspensions comprises introducing a suspension of pH 3-9 and solid content 5-60 wt. % into a conventional fluidised bed appts. fitted with a classifying outlet and inlet nozzle for the suspension.

The solid granules in the fluidised bed are kept > 60°C and the residence time of the suspension is > 1 min. Before drying, physiologically acceptable acids or bases can be added to the suspension to give the required pH.

Used esp. for slurries contg. microorganisms (e.g. from biological processing of waste animal prods. or waste waters) for use in human or animal nutrition. Dust-free granules easy to handle and process are prepd. and the long residence times obviates the need for a separate treatment stage to make the prod. acceptable hygienically. 5.6.79 as 922783 (7pp1251).

KIBL/ ★ D13 02075C/02 ★EP ---6-369
Heat treatment of foodstuffs etc. - in sealed steam chamber operating at sub atmospheric pressure with cooling in situ (BR 4.12.79)

KIBLEUR P P M 17.05.78-FR-014549

+P34 (09.01.80) A23b-04 A23b-07 A23l-03 A61l-02/06

D/S: E(BE, CH, DT, GB, IT, LU, NL, SW).

Continuous thermal treatment of bulk, loose, prepacked or packaged prods. uses a sealed treatment chamber. Before introducing the goods to be treated, the walls of the container are heated above the temp. to which the goods are to be heated. The prods. are then introduced into the vessel, which is then sealed and placed under vacuum. Steam is then introduced at subatmospheric pressure, which is maintained until the desired treatment has been achieved. The pressure is then reduced until the desired utilization temp. has been attained.

The process can be used for precooking, pasteurisation, sterilization or blanching of foodstuffs and other prods. The process allows thermal treatment of meat, poultry, vegetables, etc., followed by rapid cooling in the same sealed chamber, thus preventing intermediate contamination of the prod. and avoiding the prodn. of large volumes of polluted water, as in prior art processes.

16.5.79 as 400307 (12pp513)

(F)ISR: BE-448635; FR-887518; FR-980077; FR-940097; GB-814524; FR2326869; FR1574817; NL7710692; US3966980; US3741563; US3911156; FR2282815; FR-155070; FR1600886; FR1370360; US2163628.

FROM ★ D13 02082C/02 ★EP ---6-380
Cheese flavour protein concentrates - prepd. by adjusting solids and fat content of protein concentrate, homogenising, sterilising and inoculating with lactic ferment or enzyme

FROMAGERIES BEL-LA VACHE 08.06.78-FR-017177

(09.01.80) A23c-19/02 A23l-01/23

D/S: E(BE, DT, GB, IT, LU, NL).

Cheese flavoured protein concentrates are made from concentrated protein material made by ultrafiltration, dialysis or preparative chromatography. The dry solids content and fat content of the concentrates are first adjusted and the material is then homogenized under

press. and sterilised. The material is then subjected to at least one treatment chosen from enzyme treatment and inoculation with flavour-producing ferments, for a time sufficient to develop the required flavour.

The process can be used with protein concentrates obtd. from milk, milk serum or vegetable proteins such those obtd. from soya and oilseeds.

7.6.79 as 400371 (15pp513)

(F)ISR: US3840672; US3689286; US3100153; GB1361817.

INRG ★ D13 02084C/02 ★EP ---6-38

Arthrobotrys irregularis 1141 b nematophage - used to control meloidogyne nematodes, by colonisation in soil

INST NAT RECH AGRON 13.06.78-FR-017624

C03 (09.01.80) A01n-63 C12n-01/20

D/S: E(BE, CH, DT, GB, IT, NL).

Nematophage for control of nematodes of the genus Meloidogyne comprises Arthrobotrys irregularis 1141 b strain. This strain is a fungus of the class Hyphomycete and is deposited at the Institut Pasteur Mycothèque under the number 1166-78 (deposited 2.6.1978).

The nematophage is used for control of Meloidogyne nematodes in market gardens, plant nurseries etc. by incorporation of the 1141 b strain into the soil, pref. about 30 days before planting. The invention avoids the use of costly and toxic nematocides previously added to the soil.

11.6.79 as 400377 (25pp395)

(F)ISR: FR1329396; GB-857161; 4 Journal References.

FIND- ★ D13 02109C/02 ★EP ---6-455

Frozen fried vegetables - made by coating vegetable pieces with a compsn. contg. starch, blanching in steam, deep frying and freezing

PRODUITS FINDUS SA 13.06.78-CH-006423

(09.01.80) A23b-07/06 A23l-01/21 A23p-01

D/S: E(BE, DT, FR, GB, IT, NL).

Fried vegetables are made by coating vegetable pieces with a compsn. contg. starch, then blanching the coated pieces in steam and finally deep frying the treated pieces. The vegetables may be raw or frozen potatoes, carrots, onions, turnips, swede, celery, parsnip, red beet, aubergines, courgettes, cauliflower, brussels sprouts and mushrooms. The coating compsn. is e.g. a mixt. of cereal flour and starch.

The process gives fried vegetables, esp. French fried potatoes, which can be frozen and which on reheating retain their crisp texture, their flavour and nutritive content such as vitamins.

28.5.79 as 101623 (24pp513)

(F)ISR: —

THOM ★ D13 02133C/02 ★EP ---6-532

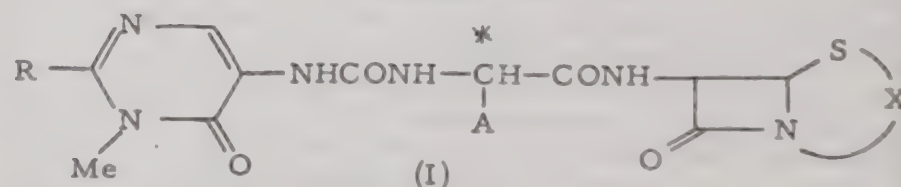
Pyrimidyl:ureido:acetamido-penicillin and cephalosporin cpds. - used as antibacterials, feedstuff additives and preservatives

THOMAE K GMBH 28.06.78-DT-828261

A60 B02 C02 (D22) (09.01.80) A61k-31/43 C07d-499/64 C07d-501/36

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

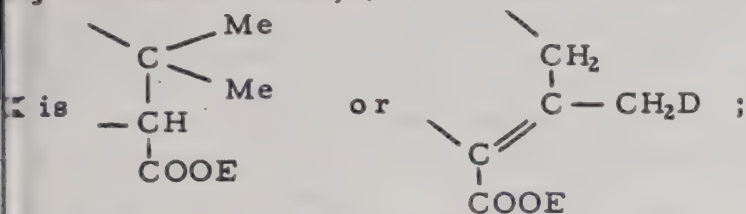
β-Lactams of formula (I) and physiologically acceptable salts of (I; E = H) with bases are new:



(A is phenyl, 4-hydroxyphenyl, thienyl, furyl, cyclohexyl, cyclohex-1-enyl, cyclohexa-1,4-dien-1-yl or 3,4-disubstd. phenyl in which the substituents are same or different Cl, OH or OMe;

R is H, opt. unsatd. 1-4C hydrocarbyl, Ph, PhCH₂, 3-7C cycloalkyl, OH; 1-4C alkoxy, alkylthio, alkylsulphinyl or alkylsulphonyl; SH; NH₂ (opt. mono- or disubstd. by 1-8C alkyl); 1-4C hydroxyalkylamino, 3-7C cycloalkylamino,

4-hydroxycyclohexylamino, PhCH_2NH , PhNH , morpho-
 lino, N-acetylpiperazino, N-formylpiperazino, NHCOR_1 ,
 NHSO_2R_2 or $\text{N}(\text{Me})\text{COR}_3$;
 R_1 is 1-6C alkyl, 2-6C alkenyl, 3-7C cycloalkyl, Ph,
 PhCH_2 , H, CF_3 , 1-6C alkoxy, PhCH_2O , 3-7C cycloalkoxy,
 NH_2 (opt. mono- or disubstd. by 1-8C alkyl), 3-6C
 cycloalkylamino or PhCH_2NH ;
 R_2 is 1-6C alkyl, 3-7C cycloalkyl, PhCH_2 , Ph or tolyl;
 R_3 is H or 1-3C alkyl;



D is H, acetoxy, carbamoyloxy or S-Het;
 Het is 3-methyl-1,2,4-thiadiazol-5-yl; 5-methyl-1,3,4-
 oxadiazol-2-yl; 1,3,4-thiadiazol-2-yl; 5-methyl-1,3,4-
 thiadiazol-2-yl; tetrazol-5-yl; 1-methyl-tetrazol-5-yl;
 1,2,3-triazol-4-yl or 4-methyl-oxazol-2-yl;
 E is H or a protecting gp. which is easily cleaved in
 vitro or in vivo).

(I) are broad-spectrum antibacterial agents.

(I) can also be used as animal feedstuff additives for
 promoting growth and improving fodder utilisation, and
 as preservatives, e.g. for polymers, lubricants, paints,
 fibres, leather, paper, wood and foods.

2.6.79 as 101909 (61pp941).

(G) ISR: DT2714214; FR2370052; US4038271; US4068074.

GEVA/ D13 76403A/43 =EP---6-575
 Machine for cooking and expanding cereal prod. - uses fluid power
 cylinders to apply die pressure and to load and discharge mould
 cavity

GEVAERT O 22.06.78-BE-868361 (22.06.78-BE-188771)
 (09.01.80) *BE-868-361 +A21b-05/02 A231-01/18 A23p-01
 /S: E(CH, DT, FR, GB, IT, LU, NL, OE, SW).

measure of cereal to be cooked is mechanically fed into
 the cavity of a heated mould. A die is advanced to close
 the mouth of the cavity and to pot the cereal under press-
 ure while it is cooked, die movement and pressure being
 derived from a fluid power cylinder. Die pressure is
 relieved by retracting the piston of the fluid power cylind-
 er, but the die is held in position to close the mould by a
 locking device. The locking device is released, the mould
 opened and expanded prod. is mechanically discharged.

The appts. is used for prodn. of expanded, pressure
 cooked cereal foods. The use of a fluid power cylinder to
 displace the die obviates the previous cam mechanism
 which was prone to rapid wear so that mould closure and
 cooking pressure became unreliable, with consequent loss
 of prod. quality. The fluid power operation provides a
 machine which is cheaper to mfr. and to maintain than
 previous machines employing cam mechanisms.

0.6.79 as 102042 (19pp448).

(F) ISR: FR2303488; US-557299; FR2059810; FR2305448;
 US3511899; FR-578984; US2334082; GB-945694;
 FR2194564.

DIGE/ ★ D13 02168C/02 ★FR 2420-308
 Machine to open eggs individually and collect contents - combines
 hygiene with industrial scale capacity
 DIGEOS J 21.03.78-FR-008194
 (23.11.79) A23j-01

The machine is of the type in which each egg is held in a
 vertical position while the tip of its base is cut off. The
 top of the egg is then perforated and low pressure air blown
 in to discharge the contents through the hole in the base.

The improvement is that the holding device to convey
 eggs through the machine comprises a flat plate with a
 number of spaced, egg-locating holes. The dia. of each
 hole is such that the egg can sit almost half-way down into
 the hole without passing through. On the egg-receiving
 side of the plate, spaced, spring gripper blades rise around
 each hole. The blades are inclined slightly inwards towards
 the axis of the hole.

Used for breaking eggs for industrial bakeries and con-
 fectionery factories. Eggs are handled individually and

contents do not contact shell exterior. This ensures main-
 tenance of hygiene standards combined with industrial
 scale productive capacity. 21.3.78 as 008194 (17pp448)

AIRL ★ D13 02188C/02 ★FR 2420-542
 Preparing immobilised rennet type enzymes for cheese mfr. - using
 synthetic resin of specified pore dia.
 AIR LIQUIDE L' 20.03.78-FR-007933
 A97 (A16) (23.11.79) A23c-19/02 C07g-07/02 C08f-212/08
 C08g-08/10

The process using an industrial enzyme of the rennet type
 by adsorption on an insoluble organic support comprises
 fixing the rennet in soln. on a macroporous adsorbing syn-
 thetic resin of food quality, the average pore dia. of which
 is above 500Å.

The prod. is used in cheese mfr. to treat milk continu-
 ously in a fixed bed column or in a fluidised bed. The pro-
 cess is simple giving a prod. which is both stable in enzy-
 matic activity and is satisfactory for food use.

The average pore dia. is pref. $\geq 1,300$ Å. Pref. resins
 are cation exchange and strongly acid such as styrene/dir-
 inyl benzene copolymer, specifically with 20% divinyl ben-
 zene and SO_3^- as the functional gp.; or a phenalic resin.
 20.3.78 as 007933 (10pp597)

APIL- ★ D13 02204C/02 ★FR 2420-761
 Enzymatic test for detecting cows milk in goats milk - based on
 reaction of xanthine and a tetrazolium salt
 API LAB RECHERCHE 24.03.78-FR-009968
 R16 (23.11.79) G01n-31/14 G01n-33/04

The test is based on colorimetric evidence of xanthine oxi-
 dase, the concn. of which in goats milk is about a hundred
 times less than that in cows milk. The pref. test is based
 on reaction of xanthine and a tetrazolium salt in the pre-
 sence of the enzyme resulting in reduction of the salt to
 a strongly coloured formazan cpd. together with uric acid.

The method is fast (about 15 mins.), cheap and does not
 require special equipment unlike previously proposed
 methods. Specified salts are 3-(4,5-dimethyl-2-thiazolyl)-
 2,5-diphenyl-2H-tetrazolium bromide and 3,3'-(3,3'-
 dimethoxy-4,4'-biphenylene)-bis-(2-p-nitrophenyl)-5-
 phenyl-2H) tetrazolium chloride, the latter being pref. use
 used in the presence of phenazine methosulphate as react-
 ion reinforcing agent. 24.3.78 as 009968 (6pp597)

USDC D13 60530A/34 =GB 1558-958
 Fractionation of tallow by crystallisation - to give three portions
 including cocoa butter analogue
 US SEC OF COMMERCE 14.04.77-US-787660
 (09.01.80) *BE-865-992 C11b-07
 Tallow is fractionated into 3 distinct fraction comprising a
 hard, high-melting solid fraction; a plastic solid having the
 physical and thermal properties of coca butter; and a liq.
 oil fraction.

Fractionation is achieved by dissolving the tallow in a
 suitable solvent, feeding the soln to ≥ 1 crystalliser, cir-
 culating the soln. through the crystallisers at a preselect-
 ed steady-state crystallisation temp range, and crystalli-
 sing out the hard, high-melting solid. The crystallisation
 filtrate is circulated through the crystallisers at a second
 preselected steady-state crystallisation temp range, and
 the plastic solid crystallised out. The solvent is removed
 from the filtrate obtd to form the liq. oil fraction.

The process continuously feeds solubilised tallow to the
 crystallisers and removes the crystallised prod. The no-
 minal residence time of a soln. in the crystallisers at any
 preselected steady state crystallisation temp is limited $\leq$
 10 mins. 12.4.78 as 014364 (7pp931).

NATT ★ D13 02228C/02 ★GB 2023-991
 Prepn. of dispersible chocolate liquor - as e.g. stable powder, by
 extrusion of melted chocolate liq., starch, and water
 NAT STARCH & CHEM CORP 03.07.78-US-921528
 (09.01.80) A23g-01

Dispersible chocolate liquor (I) is prepd by first combining
 a mixt of melted (I) and starch (II) (ratio 10:2.5-15) with
 5-25% H_2O (by total wt of mixt). Mixt is passed through a
 heated extruder at high pressures/110-135° for long enou-
 gh to partially hydrate (II). Finally the mixt is extruded.

Method affords a stable, highly H_2O -dispersible, choco-
 late liquor prod (usually as a free-flowing powder) which is

partic. suitable for use in dry food mixes etc. In addn the prod. has much greater chocolate aroma and taste than drum-dried prods. 15.6.79 as 020867(6pp478).

KIBU-★ D13 02688C/02 ★J5 4151-143
Frying mixed ingredients in stringy form (Kakiage) - by two-stage addn. of ingredients to heated edible oil in a cylinder, while making the ingredients fall downwards
KIBUN KK 17.05.78-JA-057546
(28.11.79) A23I-01/17

The method comprises stirring starch, egg, water, sodium casein, glucono- δ -lactone and sucrose fatty acid ester with flour; allowing the obtd. fluid mixt. to fall down a cylinder laid in heated edible oil; injecting the ingredients halfway down the cylinder; and then completing the drying.

The mixt. falls through a screen, etc. in the form of strings. The ingredients of the fried prod. are bonded by the stringy coating. The frying can be rapidly completed with good heat transmission without forming flour lumps. When frozen and defrosted, the prod. can be easily and quickly cooked. 17.5.78 as 057546 (4pp5)

KAOS ★ D13 02689C/02 ★J5 4151-153
Peeling of fruit or vegetables - by immersing in aq. alkaline soln. contg. fatty acid

KAO SOAP KK (TOXO) 15.05.78-JA-057429
(28.11.79) A23I-01/21

The method comprises immersing fruits or vegetables in the aq. alkaline soln., in which 10-18C fatty acid is combined.

Fruits (e.g. orange, peach, apple, plum, grape, pear, persimmon, etc.) and vegetables (e.g. tomato, cucumber, raddish, etc.) can be peeled smoothly at relatively low temp. in a short time with high yield and low broken rate. Peeled fruits or vegetables excellent in tissue, shape and colour can be obtd. The waste water can be pretreated easily through Ca-pptn. process and the pretreated water can be easily treated by activated sludge process.

Usually the acid is combined in amt. of 0.005-1.0 wt. % (0.1-1.0 wt. %) in the aq. alkaline soln. which contains (e.g. NaOH in amt. of 0.1-3 wt. %, pref. 0.2-0.5 wt. %). Usually the immersion is practised at 80-85°C for 1.5-3 mins. 15.5.78 as 057429 (4pp5)

KAOS ★ D13 02690C/02 ★J5 4151-154
Peeling process for fruit and vegetables - by immersing in aq. alkaline soln. contg. (un satd. fatty acid and nonionic surfactant

KAO SOAP KK (TOXO) 15.05.78-JA-057430
(28.11.79) A23I-01/21

The method is effected by immersing fruits or vegetables in the aq. alkaline soln., in which (a) 10-18C satd. or un-satd. fatty acid and (b) ≥ 1 nonionic surfactants having HLB 6-18 selected from polyoxyethylene-sorbitan fatty acid ester, sucrose fatty acid ester, sorbitan fatty acid ester, glycerin fatty acid ester and propyleneglycol fatty acid, are combined.

Fruit (e.g. orange, peach, apple, plum, grape, pear, persimmon, etc.) and vegetables (e.g. tomato, cucumber, raddish etc.) can be smoothly peeled at relatively low temp. in a short time with high yield and low breakage rate, and the peeled fruit and vegetables have excellent tissue shape and colour. Further having high alkali concn. the waste water from conventional peeling processes has been difficult to treat by activated sludge process. The waste water from the peeling process described can be pretreated by calcium-precipitation process and the pretreated waste water can be easily treated by activated sludge process. 15.5.78 as 057430 (5pp5)

KAOS ★ D13 02691C/02 ★J5 4151-155
Peeling fruits and vegetables - by immersing in aq. alkaline soln. contg. an opt. unsatd. fatty acid and a phosphorus cpd.

KAO SOAP KK (TOXO) 15.05.78-JA-057431
(28.11.79) A23I-01/21

Method comprises immersing fruits or vegetables in an aq. alkaline soln., in which (a) 0.005-1.0 (0.1-1.0) w/w% of 10-18C (un)satd. fatty acid and (b) 0.005-1.0 (0.1-1.0) w/w% of ≥ 1 P cpd. selected from orthophosphate, metaphosphate and the condensed phosphate having 2-6 P atoms.

The fruits and vegetables are effectively peeled by immersing them in the aq. soln. contg. the fatty acid and

phosphate. As orthophosphate, M_3PO_4 , M_2HPO_4 and MH_2PO_4 (M is Na, K or NH_4) are used and as metaphosphate $NaPO_3$ or KPO_3 are used. As the 2-6P condensed phosphate -alkali metal pyrophosphate, sodium trimetaphosphate, sodium hexametaphosphate or sodium tripolyphosphate are used. The aq. alkaline soln. is prepd. so that it contains alkali (e.g. NaOH) 0.1-1.0 (0.2-0.5) w/w% and the conc. used is lower.

Fruits (e.g. orange, peach, apple, plum, grape, pear, persimmon, etc.) and vegetables (e.g. tomato cucumber, raddish, etc.) can be smoothly peeled efficiently at relatively low temp. in a short time and the peeled fruits or vegetables excellent in flavour, gloss and tissue, are obtd. 15.5.78 as 057431 (5pp5)

KIMU/★ D13 02692C/02 ★J5 4151-162
Water-soluble and dispersible para-caseinate prepn. - by treating para-casein obtd. from calcium caseinate or rennet casein with alkali metal salt and hydrogen peroxide and drying

KIMURA M 17.05.78-JA-057602
(28.11.79) A23I-03/02

The method comprises treating (a) paracasein obtd. by treating water soluble and dispersible calcium caseinate with rennin or (b) rennet casein with aq. mixed soln. contg. neutral alkali metal salt and a little H_2O for absorbing the soln. 20-30% in (a) or (b), with swelling, and drying 200-300°C in a pneumatic dryer. The drying can be practised using more efficient pneumatic dryer and prod. can be prepd. more economically. Specifically, the pneumatic drying is operated at 200-300°C with an air stream velocity of 20-40 m/sec. under reduced pressure. Paracaseinate can be dried economically in 1-5 seconds with high efficiency. The aq. 2% soln. of thus obtd. neutral alkali salt of paracasein shows ~ 100 times larger viscosity than that of the aq. 2% soln. of neutral alkali salt of acid casein. The powdery paracaseinate is almost germfree, tasteless, odorless and white substance. 17.5.78 as 057602 (3pp5)

KUMA/★ D13 02693C/02 ★J5 4151-172
Pasty foodstuff prodn. - by treating shiitake with enzyme, heating, stirring, filtering and concentrating filtrate

KUMABE K 15.05.78-JA-057275
(28.11.79) A23I-01/28

Prepn. of pasty foodstuff which has solids content 45 $\pm$ 5% and contains 3-10 mg/g polysaccharide, 100-300E260 m_μ O.D./g erytadenine and its deriv., 140-200E 670 m_μ O.D./g double chain RNA, < 2 ppm As and < 10 ppm heavy metal, is described. Process comprises (a) treating 'shiitake' with enzyme; (b) inactivating the enzyme by heating; (c) stirring the mixt. to dissolve out effective ingredients; (d) filtering the extract; and (e) concentrating the filtrate.

Foodstuff has good taste and flavour and contg. interferon-inducing soluble RNA it can be properly used for preventing and curing geriatric diseases. It can be combined in dough for crackers, etc., and in seasonings, drinks, etc. 15.5.78 as 057275 (8pp5)

AJIN ★ D13 02758C/02 ★J5 4151-577
Natural system aggregating agent for use in food industries - comprises juice obtd. from fruits of manilkara zapota

AJINOMOTO KK 22.05.78-JA-060771
(28.11.79) B01d-21/*

The agent consists of a juice obtd. from fruits or manilkara zapota.

In an example, 818 g of fruits of manikara zapota were divided with a knife to remove 11 g of seeds and filter-pressed through a gauze filter to obtain 500 ml of a juice. The juice was filtered with a paper filter, and aged in a dark place at room temp. for 1 month to obtain an aggregating agent. 0.4 ml of the agent was added to glutamic acid fermented liq. to obtain 100 ml of a soln. The soln. was set for a while to settle bacteria therefrom.

A supernatant liquor high in its transparent extent can be obtd. 22.5.78 as 060771 (2pp51)

WAFI-★ D13 03002C/02 ★NL 7806-402
Concn. of polymers in liq. medium - by membrane filtration in the presence of fluidised particle bed to maintain high permeation rate

WAFILIN BV 13.06.78-NL-006402

A31 J01 (17.12.79) A23I-01/16 B01d-13 B01d-31 B01j-08 20

the concn. and opt. sepn. of macromolecular materials and their monomers and/or oligomers from liq. media through a tubular filtration membrane under pressure and collected as a permeate. The filtration is carried out in the presence of a fluidised bed of particules which are pert to the liq. medium.

The process is esp. useful for recovering whey proteins from liq. whey. Use of the fluidised particle bed allows maintenance of high permeability rates through the membrane tube without the necessity for frequent cleaning of the membrane, or for using high passage rates through the membrane, as in prior art processes. This reduces energy consumption and improves the economics of the process. 13.6.78 as 006402 (12pp513)

ZZA = ★ D13 03034C/02 ★SU -605-597
Sweet confection e.g. candy mass prodn. - includes spraying sugary syrup in hot air stream and using second hot air stream to create turbulent conditions

KAZAN ZARYA 07.06.76-SU-369415
(15.04.78) A23g-03

Sweet confection is produced by spraying a sugary syrup in a stream of heated air.

This process is intensified and the quality of the product is improved by introducing the first air stream contg. fine syrup droplets (aerosol) into a second air stream (or another gas), whose velocity does not exceed that of the first stream (usually is much less). As a result, a turbulent air stream is formed in which water is rapidly evaporated from the syrup droplets (in a fraction of a second).

Mukin, E.N., Oleinikova, A.Ya., Khubulava, Z.I. Bul. 7/5.5.78. 7.6.76. as 369415 (3pp70)

EAU ★ D13 03047C/02 ★SU -651-315
Efferous confectionary products e.g. chocolate prepn. - includes heating in vacuo and cooling in stages at specified temp. and pressure

OMSK PETROCHEM PROC 01.11.77-SU-539899
R26 (07.03.79) G05b-15

Means of controlling a servo mechanism with the aid of computing means can be used as a back-up process for direct digital control of a technical operation, and represents an improvement on Parent Cert. No. 560209.

The improvement consists of introducing means of distinguishing polarity as well as level of the useful difference signal, making the unit more versatile in practical applications where polarity frequently varies. Threshold comparator receives feedback information from slave sensor and instructions from calculating unit, and in turn from simple on-off type regulator where unit works to a more complex control law. Both these receive commands from setter.

The innovation consists of introducing a polarity discriminator into the output from controlling comparator, to decide whether the plus or minus output to adder is required. Adder has one add input from regulator; the function of calculating unit (3) is to decide whether outputs together require addition or subtraction for the best approximation to the optimum law.

Unit gives this command to the control input of selector gate and one or other line to adder results in addition or subtraction. The result goes via converter, producing a non-electrical signal, to slave device which is the object of the optimum-law servo action. Izvekov G.I., Nechaev V.G., Bul. 9/5.3.79. 1.11.77 as 539899 Add to 560209 (3pp140)

AGRO = ★ D13 03192C/02 ★SU -658-428
Laboratory sampler for pulp of potato tuber - contains small removable tubular collecting cell, and jacket-trap mounted on turntable bracket

AGROPRIBOR SCIE RES 15.06.76-SU-377268
R16 (25.04.79) G01n-01/02

Improved reliability of the sample of pulp from the potato tuber taken for assessment of its quality and properties in the laboratories of scientific research institute and plant breeding stations where potatoes are analysed by biochemical methods to determine their protein and sugar contents, as well as by hydrolytic methods to de-

termine their starchiness, is ensured by the following features of the design of the sampling apparatus. The apparatus contains turnable bracket with holder for removable sample-collecting cell having tubular shape with longitudinal inlet slot. It also contains jacket-trap for catching pulp particles thrown by grating disc and not falling into the cell.

Yachmenev, Yu.T., Khabi, G.S., Sycheva, S.B. et al.
Bul. 15/25.4.79. 15.6.76. as 377268 (4pp135)

PROV = ★ D13 03223C/02 ★SU -659-117
Continuous butter and margarine forming unit - has elevator tip above flight of auger in air and moisture sepn. chambers

PROVIS EQUIP RES 09.06.77-SU-496092

P13 (11.06.79) A01j-15/12

The efficiency and the quality of the butter or margarine produced continuously are improved with the outlet of the elevator set above the flight of the auger in the air drawing off chamber. The elevator connects the moisture sepn. chamber from the latter, and the ratio of turns of auger flight at the start and end of the moisture sepg. chamber is 1:2, while in the air drawing chamber it is 1:3.

The curd mass is fed to the moisture separating chamber where the rotating augers are, and where the buttermilk is extracted. The butter mass is transferred to the air drawing off chamber for final extraction of buttermilk, washing and mechanical treatment by the augers, the pitch of the latter decreasing at the end. The blade frame separates ropes of butter in the elevator for transfer to the flights of augers featuring a longer pitch. Elagin, V.I., Vinogradov, A.A., Kuzmin, Yu.N. et al. Bul. 16/30.4.79. 9.6.77. as 496092 (2pp89)

BAZI/ ★ D13 03229C/02 ★SU -659-128
Dried agglomerated milk prodn. appts. - where fluidised, vibrated, moist powder layer on conveyor is discharged through lump removing mesh

BAZIKOV VI 29.03.77-SU-470086

(30.04.79) A23c-01/04

The installation claimed in Parent Certificate No. 507295 comprised a housing with air distributor, spray-head, conveyor with perforated surface, imperforate discharge section and gas box, and a hollow reflector plate. Vibration of a moist powder layer gave an agglomerated product.

Now in order to reduce burning and lumping of the product, the conveyor imperforate section is located below the level of the perforated surface and below a mesh plate, while the end wall and roof of the housing are hollow and communicate with the interior of the reflector plate for throughflow of temp. controlled air.

The powder layer is fluidised by hot air passed through the gas box and is moved downstream by the vibration to pass through the mesh plate which holds back and breaks up any lumps before they reach the discharge section.

Bazikov, V.I., Kharitonov, V.D., Granovskii, V.Ya. Bul. 16/30.4.79. 29.3.77. as 470086 (4pp1358)

ASBI = ★ D13 03230C/02 ★SU -659-129
Preserved dry tea prod. contg. milk prodn. - includes two-stage extrn. of tea leaves with water and milk addn. in sealed vessel, filtration and drying

AS USSR BIOCHEM 30.12.76-SU-436720

(30.04.79) A23c-09/10 A23f-03

Preserved tea product is prepd by introducing hot milk into a tea extract, keeping the mixt. aside for some time, and then preserving it.

The quality of the product is improved by cooling it, before the preservation, to 8-10°C over 30-60 min; keeping it at this temp. for 4-5h; and filtering. All the operations before the filtration are carried out under hermetic conditions.

The tea is extrd. with water at 97-100°C (the ratio tea: water is 1:10 to 1:13). Natural milk heated to 90°C is then introduced. The mixt. is cooled to 8-10°C and kept at this temp. for 4-5h. to effect the second stage extraction of the tea.

The product is sterilised and preserved in hermetically sealed containers. Alternatively, the product can be

concentrated or fully dried by sublimation. The milk can be partly replaced by a juice, e.g. beetroot, carrot, strawberry or apricot juice.

Luzhnov, L.N., Skobeleva, N.I., Radaeva, I.A. et al.
Bul. 16/30.4.79. 30.12.76. as 436720 (3pp70)

HETO ★ D13 03231C/02 ★SU-659-130
Whipped cream substitute for cake filling etc. - contg. milk mixt.
protein, sugar, edible acids, vegetable oil, flavouring
HETEROORG CPDS AS USSR (MOSW) 19.01.77-SU-437026
(30.04.79) A231-01/04

Whipped cream, e.g., for cake filling, is prepared by dissolving proteins, sugar and edible acids in water, adding a vegetable oil, taste- and aroma-improving agents, a permitted dye, and an acid polysaccharide; two-stage whipping is performed.

The biological value and the taste of the product is improved by mixing an acid polysaccharide with gelatin, heating the mixt. to 40-60°C, and introducing it into the compsn. before the second stage whipping.

The pref. acid polysaccharide is pectin or sodium alginate. In the case when the cream is used for filling baked cups, the ratio gelatin: acid polysaccharide is pref 1:1 to 5:1; for other uses, this ratio is 2:1 to 9:1.
Chumak, Zh., Ya., Mukhin, M.A., Tolstoguzov, V.B.
et al. Bul. 16/30.4.79. 19.1.77. as 437026 (4pp70)

IONI D13 29388B/15 =US 4180-451
Concn. of whey protein - by electrodialysis and forced flow electrophoresis

IONICS INC 19.04.78-US-897834 (02.01.79-US-000454)
(25.12.79) *US4146-455 B01d-13/02

Liq. treatment appts. comprises an electrodialysis membrane cell for desalting the liq. having alternating desalting and concentrating chambers in combination with a forced flow electrophoresis membrane cell having alternating feed and permeate chambers. Conduits are present to pass the desalted liq. from the electrodialysis cell the the feed chambers of the electrophoresis cell while the desalted liq. is under hydraulic pressure.

Pref. the membranes of the electrodialysis cell comprise cation and anion permselective membranes arranged in alternating fashion. The membranes of the electrophoresis cell may be cation permselective and electrically neutral microporous diffusion membranes arranged in alternating fashion.

Used esp. to improve the quality of the liq. whey by demineralisation and lactose sepn. A prod. with high solids content can be obtd. 2.1.79 as 000454 Div.ex 4146455(5pp)

SHON- D13 35206A/20 =US 4180-590
Liq. condiment of high nitrogen content - prepd. from maize protein, by starch and protein decomposition and alcoholic fermentation

SHONO DENPUN KK (FUKU/) 28.10.76-JA-129758
(25.12.79) *DT2748-572 A231-01/23

A seasoning liquor is produced by saccharifying starch contained in the raw material of a corn protein aq. soln. or dispersion by the addition of an amylolytic enzyme at 50-60°C for 20-50hrs.

Lactic fermentation is performed by adding lactic acid bacteria to adjust the pH of the raw material liq. from 4.0-5.0, deactivating the enzyme and pasteurising the bacteria by heat treatment. Protein and starch are then decomposed by an alcoholic fermentation in the presence of NaCl at 25-33°C for 25-35 days by adding koji yeast. The koji added contains the substrates of ≥ 2 members of corn starch, wheat, wheat bran or soybean. Koji is added in amt. to 1-3 times the wt. of protein in the liq., and the NaCl concn. is 5-6% after koji addition.

The seasoning liq. prepd. has an excellent seasoning effect with high N- and alcohol content. Fermentation and ripening can be finishes within 25-35 days. 26.7.77 as 819203(4pp931)

SHON- D13 35206A/20 =US 4180-591
Liq. condiment of high nitrogen content - prepd. from maize protein, by starch and protein decomposition and alcoholic fermentation

SHONO DENPUN KK (FUKU/) 28.10.76-JA-129759
(25.12.79) *DT2748-572 A231-01/23

A light-coloured seasoning liquor of high-N and alcohol content is produced by the lactic fermentation of a corn protein aq. soln. or dispersion contg. starch using lactic acid bacteria, raising the pH of the raw material liq. from 4.0-5.0.

The raw material liq. is then pasteurised by heat treatment, and the protein and starch decomposed for 24-48 h by adding a conc. enzyme soln. to the fermentation prod. further decomposition by alcoholic fermentation takes place at 20-30°C for 20-35 days by adding yeast. The conc. enzyme soln. is prepd. by extracting the enzyme contained in koji, soaking it in a 2-4 fold amt. of 20-30 wt.% saline soln. at 0-5°C for ≥ 24 hrs. The extraction is repeated at least twice, and the extract liqs. conc. by ultrafiltration to 0.25-0.5 vol.

The light-brown seasoning prepd. is esp. used as a sauce, having good savour and buffer capacity. 26.7.77 as 819204(4pp931)

MRSC D13 10232A/06 =US 4180-592
Protein foodstuff prepd. from blood - by decolourising with oxidising agent, esp. peroxide and decomposing excess peroxide

MARS LTD 02.08.76-GB-032169

C03 (25.12.79) *BE-857-359 A231-01/06 A231-01/31

A food prod. is mfd. from whole blood, blood derivs. contg. red cells or animal tissue contg. such blood, by (i) treating the blood or deriv. or tissue with an oxidising agent in excess of the amt. necessary for complete decolourising reaction; and (ii) decomposing the residual oxidising agent remaining by adding blood, red blood derivs. or blood contg. animal tissue such as liver.

The prod is incorporated in foodstuffs and animal feedstuffs and is sealed in cans. 1.8.77 as 820890 (5pp982)

COHA/ ★ D13 03557C/02 ★US 4180-593
Round blown bead food prod. mfr. - in which hot expanded beads are rapidly quench cooled after spray-drying

COHANAN 29.04.77-US-792384

Q76 (25.12.79) A231-01/30 F26d-03/12

Food prods. in the form of free flowing spherical beads are prepd. by (a) preparing a sprayable mixt. contg. an edible film forming material, sufficient liq. to make the mixt. fluid, and a blowing agent; (b) spraying the compsn.; to form beads; (c) heating the beads in a heated zone to expand and dry them; (d) rapidly cooling the beads in a cold zone.

The prods are e.g. edible bulking agents, food flavourings, colourings, dehydrated drinks e.g. tea, coffee etc. Rapid quenching in a cold zone limits the period of exposure to high temps, reducing degradation of the flavours, dyes etc. and gives having strong wall.s The bulk density of the prod. can be controlled and made uniform. 29.4.77 as 792384(5pp955)

NEST D13 49735A/28 =US 4180-594
Cereal-based food prod. contg. whey powder - which economically supplements the prod. with aminoacid(s)

SOC ASSIST NESTLE 07.02.77-CH-001450

(25.12.79) *BE-862-770 A231-01/16

A hard, granulated cereal-based prod. is produced by dry mixing 40-70 wt.% of cereal flakes, 5-25 wt.% of sugar and 10-20 wt.% of whey powder. The mixt. is worked in a continuous malaxator with blades, 5-10wt.% of edible oil is added, then 3-10 wt.% of moisture at 110-150°C to produce hard fragments.

The fragments obtd. are cooled then broken into granulates. Pref. the cereal flakes used are flakes of oats, barley, wheat, rye or maize. The sugar is sucrose, unrefined or invert sugar, and the edible oil is almond oil, sunflower oil, sesame oil, corn oil or coconut oil.

The prod. contains sugar acting as a nutritive and sweetening agent, giving the granulates a certain mechanical strength. The prod. may further be enriched with soya, coconut or almond protein. 1.2.78 as 874351(1pp931)

LAUR/ ★ D13 03558C/02 ★US 4180-595
Nutritious liquid food compsn. - based on Irish moss, gum arabic, and linseed with milk sweetener and flavourings

LAUREDAN B 29.06.78-US-919503

(25.12.79) A231-01/04 A231-02

An edible seamass compsn. contains 1.0-1.6 pts. sea-

mass comprising Irish moss, 0.5-0.8 pts. gum arabic, 0.5-0.8 pts. dry linseed 10-40 pts. milk 8-15 pts. sweetener, and 5-20 pts. flavouring agent, all parts per 100 parts water. Also claimed is the prepn. in which water, gum arabic, seamoss and linseed are combined and boiled till a slightly brown texture (sic) is obtd. The soln. is filtered, combined with a premix of the milk and sweetener, and then the remaining ingredients are added.

The compsn. is a tasty nutritious drink having a long shelf life under refrigeration. 29.6.78 as 919503(3pp955)

ENNA D13 00475B/01 = US 4180-633
Prepn. of insoluble PVP homopolymers or copolymers - by reacting the soluble polymer with an acid chloride

GAF CORP 24.06.77-US-809943 (23.08.78-US-936019)
A14 B04 (A96 A97) (25.12.79) *GB2000-156 C08f-08/18

Prepn. of insoluble homo- or co-polymers of vinylpyrrolidone (I) comprises refluxing uncrosslinked PVP or copolymer of (I) with an acid chloride of phosgene or oxalyl chloride, in a liq. medium at ca. 75-140°C to obtain a ppte. of crosslinked PVP or copolymer of (I).

Pref. the liq. medium is a solvent for the acid chloride. Pref. the solvent is also a solvent for the PVP (copolymer) Pref. acid chloride is phosgene and reaction temp. 90-120 °C. The prods. are useful as components of pharmaceutical compsns. and in the beverage industry. 23.8.78 as 936019 Div.ex 4139688(3pp924)

D14: FOODSTUFF MACHINERY

ERO- ★ D14 C/02 ★ BR 7803-850
Combined mixer and grinder

PEROZIN A & FILHOS 16.06.78-BR-003850
J02 (18.12.79) A23n-17 B01f-07/24

IBA ★ D14 01750C/02 ★ CH -614-865
Agglomeration of solid substance e.g. pigment - from system of miscible liquids in presence of a salt

CIBA GEIGY AG 20.10.76-CH-013258
E24 J04 (28.12.79) A23f-01/08 B01d-43 B01j-02 C09b-67

In the parent patent substance is agglomerated from a liquid system consisting of >2 liquids which form a one-phase system at 20°C. In the addn. agglomeration is effected in presence of >1 salt.

The granulate obtd. is more easily wetted than the powder form of the substance (I), dissolves more rapidly and is more easily ("instantly") dispersed. It is non-dusting and free flowing, and has a high bulk wt. and high mechanical stability. The yield is up to 100%. The process is esp. used for isolating and drying a solid from a suspension (I) may be (in)organic, and include dyes, pigments, optical brighteners, textile and paper auxiliaries, pharmaceuticals, tabletting compsns, pest control agents, foods (e.g. coffee or milk powder, and flour), antimicrobials and bacterials, animal feeds, plant protective agents, detergents, photographic chemicals, leather chemicals, polymers and polymer additives, explosives, building materials, coal, ores, chemicals and catalysts, and raw materials for powder metallurgy. 20.10.76 as 013258 Add to 604879 (5pp510)

WYSS D14 66516B/37 = DS 2810-507
Calendar with stack of flexible sleeve cylinders - has nip forming cylinders disposed above coating cylinders provided with gravity correcting fluid throttle valves (NL 4.9.79)

ESCHER WYSS GMBH 01.03.78-CH-002197
A32 J02 P41 Q62 + P51 Q76 (03.01.80) *DT2810-507 B02c-04/36

The pressure chambers of the thrust elements of four deflection compensating bowls arranged in pairs, opposing each other across the three nips formed, in a calendar, are connected to a common source of pressurised hydraulic fluid, the pressures of which can be adjusted independently of each other.

In the pressure chambers of two bowls at the same height the same pressure prevails, whilst when one bowl is higher than the other, the pressure is regulated so as to allow for the action of gravity on the upper bowl.

The calendar thus conforms to the most rigorous demands as regards the uniformity of the pressure along the pressing lines, and it can be used for a wide range of applications extending to the processing of foodstuffs, pigments, synthetic materials, etc. 10.3.78 as 810507 (6pp)

SCHN/ D14 77233B/43 = EP ---6-529
Rotary food mincer with trap for metal foreign bodies - which are centrifuged out of axial flow of prod.

SCHNELL K 22.06.78-DT-827369
P41 (09.01.80) *BE-877-150 B02c-18/16
ID/S: E(CH, FR, NL, SW).

A machine for mincing, chopping or similarly size-reducing a prod, partic. a food prod., employs a rotary cutting or pressing tool. To reach the tool, the prod. has to be passed through axial holes in a centrifugal rotor keyed coaxially to the tool shaft. The rotor has an annular collecting channel surrounding the axial holes and is designed to catch items flung outwards by the centrifugal rotor, esp. metal inclusions.

The collecting channel is pref. located on the circumference of the centrifugal rotor. The channel is pref. integral with the rotor, e.g. in the form of a channeled flange around the circumference of the rotor.

The machine is a rotary mincer, chopper, etc., for size-redn. of food prods., partic. meat.
12.6.79 as 101901 (12pp448).

(G) ISR: DS-130500; DT1932515; DS1153597.

AGRI= ★ D14 03175C/02 ★ SU -658-378
Agricultural prod. e.g. vegetable and flower seed dryer - has crumpling rollers between conveyor drive and plate sepn. roller and system of brush rollers

AGRIC ELEC RES INST 17.02.77-SU-453402
Q76 (25.04.79) F26b-17/26

The dryer contains a drying chamber which contains several air permeable platforms and endless conveyor provided with a drive.

To increase the drying quality, the chamber is additionally provided with crumpling rollers placed between the platforms and connected to the conveyor drive. The dryer is also provided with separation roller with a stationary deck, placed under the platforms, and a system of brush rollers fitted on the conveyor.

The humid seed from the bunker is supplied to the upper drying platforms through the batching distributor. The seed is continuously displaced by the conveyor to the lower drying platform and is then unloaded.

Roslov, Yu. A., Eliseev, N. N., Goldman, V. O. et al.
Bul. 15/25.4.79. 17.2.77. as 453402 (2pp110)

NCAU= ★ D14 03232C/02 ★ SU -659-131
Fruit comminuting appts. - has shaft carrying discs with knives and spiral guide blades, under guides and pressure strips

N-CAUCASUS ORCHARDS 01.03.77-SU-457995
(30.04.79) A23n-01/02

The appts. comprises a receiving hopper and a casing with a vertical shaft carrying a rotatable disc with comb-shaped knives and auxiliary discs of similar shape and mounting blades in a spiral around the edges. Over each disc are guides and strips in planes parallel to the plane of the discs and displaced relative to the knives.

The guides are at an angle to the discs and the height of the knives of each disc reduces along the fruit path of travel. The strips are pref. displaced by 5-75° relative to the knives.

The blades provide better transportation of the fruit, while the strips prevent the fruit rotating together with the discs and press them against the knives.
Chudakov, G. M. Bul. 16/30.4.79. 1.3.77. as 457995 (4pp1358)

PLAV= ★ D14 03257C/02 ★SU -659-193
 Centrifugal separator for suspensions - has discharge openings lined with inserts made from hard and wear-resistant material
 PLAVSK SMYCHKA 26.04.77-SU-481437
 J01 P41 (30.04.79) B04b-01/10

Improved efficiency of separation and increased reliability of operation of the centrifugal separator for the food and the microbiological ind. is ensured by provision of self-cleaning discharge nozzles. The latter, rectangular or segmental in cross-section, are located at uniform distances along the periphery of the moveable plunger which forms the bottom of the rotor's chamber and is normally pressed against the sealing ring on the rotor's lid. The openings of the discharge nozzles consist of grooves in the inserts fixed into the wall of the plunger. The inserts are made from wear-resistant material, pref. hard alloy. The top of the opening is formed by the surface of the sealing ring into which can also be fixed inserts from material more wear-resistant than the material of the sealing ring. In the separators for some non-abrasive suspensions, the discharge nozzles can be made in the plunger without hard inserts.

Kalugin, V. M., Paramonov, V. A., Kalugin, D. M. et al.
 Bul. 16/30.4.79. 26.4.77. as 481437 (3pp135)

MCCL/ ★ D14 03419C/02 ★US 4179-904
 Home-made ice cream freezer - with sealable food container insertable in rotatable outer container holding refrigerant
 MCCLENNY CO 05.04.77-US-784780 (23.03.73-US-344122)
 (25.12.79) A23g-03

Freezer or cooler comprises an outer container with a sealing closure, and a sealable food container with no internal movable elements, a length of depth to dia. or width ratio of 0.5-2.5, and ≥ 1 pair of parallel walls.

Food container can pass through the outer container aperture to be in intimate contact with refrigerant placed in the outer container. The food container is sealable and is rotated end-over-end by rotating the outer container so that the liq. in the food container sloshes back and forth between the parallel walls. 5.4.77 as 784780(7pp1358)

FMCC D14 28857A/16 =US 4179-980
 Pressure vessel steriliser for batches of canned food prods. - recycles limited quantity of heat transfer water to immerse batch
 FMC CORP 16.12.76-US-751923
 +P28 P43 Q31 (25.12.79) *BE-861-779 A23I-03/02

A low liq. vol. retort system has a pressure vessel having a tunnel in which containers are supported during heat treatment, a circulating system for heating liq., an inlet for gas to maintain the tunnel at superatmospheric pressure, an overflow at the outlet of tunnel for discharge of the heating fluid to a shallow pool outside the tunnel but in the vessel from where it is recirculated. The overflow is above the height of the containers.

The fluid is pref. heated in the pool and then further heated by steam injection.

Containers can be uniformly treated. 16.12.76 as 751923(8pp1376)

D15: WATER TREATMENT

CSIR D15 74209S/47 =DS 2122-045
 Phase sepn process
 COMMONWEALTH SCIENT ORG 04.05.70-AU-001083
 A97 J01 +P41 Q42 (03.01.80) *DT2122-045 B01d-21 +B03c-01

Separating the phases of a suspension of particles in a liq. comprises providing a filtering medium comprising a layer of a wettable, synthetic, ferromagnetic, polymer partic. (size 0.1-500 μ); conveying the suspension (opt. admixed with further ferromagnetic material) through a top layer upon the filter medium in order to separate suspended particles and ferromagnetic material from the liq. phase; and finally magnetically separating, the ferromagnetic material from the particles.

The ferromagnetic particles are (partly) embedded in PVA, or urea- or melamine/formaldehyde resin. The ferromagnetic polymer is a sleeve (sic) graft polymer comprising an inert PVA, urea- formaldehyde or melamine-formaldehyde core with a sleeve (sic) of polyacrylic acid, polyacrylamide, polymethylacrylate or polymeric quaternised amino cpd. grafted on it. 4.5.71 as 122045 Div. in 2167145, 2167146 (6pp267)

DAGM- D15 61611X/33 =DS 2559-651
 Carbonated drinks mfr and distribution - by mixing water contg. carbon dioxide with chosen flavoured syrup when required
 DAGMA DEUT AUTOMATE 29.07.75-US-600063 (21.03.75-US-560797)

P28 +P27 Q39 Q75 R29 (03.01.80) *BE-839-758 C02d-01/02

The whole of the cooled water contg. CO₂ in solution, delivered by a soft drink dispensing machine, is passed through the cylindrical wall of ice on the cooling coil in two concentric streams. Close to the bottom of the vessel an agitator arranged in the zone of the central body of water, maintains a relatively more intense forced flow on one side of the cooled surface than on the other.

The CO₂ is introduced under pressure through a porous distributor, directly into the more intense flow, whilst a riser pipe with a control valve draws off from the other. Cooling and carbonating of the water are accelerated and intensified so that a machine of relatively small proportions can quickly supply large amts. of satd. water without much energy being necessary for the cooling. 12.12.75 as 559651 Div. ex 2556067 (8pp1045)

VALC D15 15857A/08 =DS 2656-683
 Ammonium vanadate prodn. - by treating vanadium ore powder with alkali metal salt, leaching with water and pptn.
 VER ALUMINIUM WERKE AG 15.12.76-DT-656683
 E31 M25 (03.01.80) *ZA7701-354 C01g-31

Ammonium vanadate (I) is produced from ores or slags contg. vanadium by mixing and pelletising the finely-ground starting material with an alkali salt; sintering the pellets at 900-1300°C; leaching out the sintered prod. with H₂O; and pptg. out (I) from this.

The waste H₂O (II), obtd. after pptn. of (I), is recycled into the ore- alkali salt mixt. for pelletisation. (II) has a temp. of 45-80°C, a content of ammonium of 15-50 g/l. and is recycled in a proportion of 10-10%, based on wt. of starting material. Pref. recycled (II) contains ≤ 4 g/l. Process is rapid and environmentally safe. 15.12.76 as 656683 (4pp481)

FARH ★ D15 01796C/02 ★DT 2826-631
 Filtration of suspensions, esp. for drinking water - by filter bed in suspended element permeable all round
 HOECHST AG 19.06.78-DT-826631
 J01 (03.01.80) B01d-23/12

A filtration medium is filled into a sack-like, suspended element forming part of an arrangement for the filtration of suspensions. The element is permeable to fluids all round, and is formed by a fabric woven from a material which is chemically and mechanically highly resistant. The suspension is delivered via a pipeline which opens into the middle of the element and dips into the filtration medium. The penetration of the pipe outlet is adjusted so that the height of the filter bed below it is at least half the dia. of the filter bed.

Used to make the filtration more efficient and to provide technical conditions which are more favourable. The filter bed does not choke so readily and the medium does not have to be changed so frequently. Backwashing requires less water and when the filter bed has to be changed it can be taken out as a unit. 19.6.78 as 826631 (8pp1045).

DJ/ ★ D15 01837C/02 ★DT 2827-755
 Solar energy powered sea water desalinator - produces drinking water without requiring other extraneous power
 HADJERIL 08.06.78-DT-827755
 (03.01.80) C02b-01/04

Desalination plant comprises a wing-shaped evaporator and condenser which operates on a partial vacuum and receives a periodical supply of hot air to convert sea water to fresh water. This plant requires no additional power supply. It operates solely under the effect of solar energy and causes no costs for operation or for maintenance.

Sea water is admitted in the daytime into the unit up to the max. level and the air from the 6m. long wings is replaced through the release valve. Solar radiation removed more air from the air preheating chamber. Evapn. begins when a part of the water is discharged from the V-shaped base. The vapour satd. air is drawn into the condensn. chamber through a valve. Hot air enters the unit through the inlet valve. Air released by the condensn. is drawn into the preheating chamber and enters the empty hot air chamber. The drinking water produced is drawn off into the line provided. 8.6.78 as 827755 (7pp39)

EEI- ★ D15 01849C/02 ★DT 2828-115
 Toxic refuse dump effluent - purified by precipitation and decanting in segmented circuit tank
 STEINMANN & ITTIG G 27.06.78-DT-828115
 (03.01.80) C02c-01/26 C02c-05/02

Toxic effluent which has seeped through refuse dump heaps is treated by a pptn. reaction followed by decanting. Fe(III) salts and activated carbon are admixed as precipitant and stirring continues for an adequate reaction time. The decanted fluid can be discharged to the drainage system or to a biological sludge treatment.

This results in optimum cleaning efficiency, e.g. from over 2000mg. KMnO_4 per litre to under 200mg. The aerobic method is beneficial to a subsequent biological treatment. 27.6.78 as 828115 (12pp39).

URK ★ D15 01885C/02 ★DT 2838-386
 Dewatering slurries contg. organic material - after acidification and heating with oxidising agent
 KURITA WATER IND KK 20.06.78-JA-074564
 (03.01.80) C02c-03

Method of dewatering slurries contg. organic material comprises (a) adjusting solids contents to 0.5-8 wt. %; (b) adjusting pH to ≤ 5 ; (c) heating (pref. to 70-95°C); (d) adding an oxidising agent which is effective under acid conditions, then (e) transferring to a dewatering device, opt. after cooling.

Pref. solids content is adjusted to 4-8 wt. % by adding an Fe salt (coagulant) and the oxidising agent is esp. H_2O_2 or persulphate. The pH may be adjusted with an acid or Fe^{3+} salt and is esp. readjusted to 5-7 before dewatering.

Used for slurries from waste water treatment or industrial wastes. By concentrating the slurry, the vol. of material to be treated and consumption of heat and chemicals are reduced. The treated slurry is easier to dewater after oxidative treatment. 2.9.78 as 838386 (32pp1251).

AGG ★ D15 01892C/02 ★DT 2908-592
 Electrolytic removal of ions of chalcophile elements from aq. soln. - by suspending sulphur in catholyte to give easily filtered sulphide ppt.

NAT RES INST METAL 23.06.78-JA-075488
 J03 M25 (03.01.80) C25b-01
 Removal of chalcophilic elements (I) from an aq. soln. contg. (I) in the form of ions is effected by electrolysis. The soln. as catholyte under acid conditions in the presence of suspended S powder to ppt. (I) in the form of sulphide, which is sepd. from the soln. The S is suspended in the catholyte, in an amt. of 50-300g/l. so that it collides with the surface of the cathode when the catholyte is stirred. It contains a small amt. of adhering (I) sulphide. There is a diaphragm sepg. the catholytic from the anolyte, which contains no (I) ions.

The process is useful for the removal of e.g. Hg, Cu, Pb, Ni, Cd, Fe, Zn, Ag, As, Sb and Bi from waste liquors from metal refining and processing and material in-

dustries to prevent environmental pollution. The residual metal concn. of the treated soln. is very low, whilst the sulphide ppt. can be filtered easily and has a low water content. 5.3.79 as 908592 (23pp016).

KATS/ ★ D15 01961C/02 ★DT 2925-591
 Treating agent for waste water contg. dyes - made by heating mixt. of insoluble calcium salt and aluminium (hydr)oxide
 KATSUKAWA H 03.03.79-JA-026349 (27.06.78-JA-077045)
 (03.01.80) C02c-05/02

Compsn. for treating waste water contg. dyes and/or other organic substances is made by mixing (a) ≥ 1 water-insoluble Ca salt with (b) Al hydroxide and/or oxide at mole ratio 3:1-1:3, then heating the mixt. at 100-450°C, pref. after granulation.

Esp. (a) is a sulphate, phosphate, carbonate, oxalate and/or fluoride and (b) is pref. a slurry derived from eloxation of Al. Water to be treated is passed downwards through a column of the granulated material while an inert gas (esp. air) is introduced at the bottom. An appts. for this process is also new.

Used esp. for treating water of high COD from textile factories. Purification is achieved in a single adsorption-oxidation stage in only about 20 min. (cf. 500 min. for conventional methods) and the process can be operated continuously. 25.6.79 as 925591 (24pp1251).

CART/ ★ D15 01992C/02 ★EP ---6-101
 Reducing BOD and increasing hexavalent chrome recovery - in tannery primary treatment, by incinerating alkaline-treated chrome bearing sludge in presence of hot air and carbonate
 CARTIER JE 19.06.78-US-916464
 (D18) (09.01.80) C02f-09 C14c-03/32 C22b-34/32
 D/S: E(DT,FR,GB,IT)

BOD loading in tannery primary treatment is reduced, while the efficiency of hexavalent chrome recovery from it is increased, by (i) alkaline-treating skins or the like to unhair them; (ii) separating out a filtrate and a substantial portion of the resulting alkaline solids; (iii) applying the filtrate to an alkaline equalisation tank, mixing the same with trivalent chrome acid and feeding the mix to a sedimentation tank; (iv) removing the resulting sludge from the sedimentation tank and applying to it sufficient of the alkaline solids to raise the pH to 11.5-12; (v) dewatering the sludge; and (vi) incinerating the resulting solids in the presence of hot air and carbonate to recover chrome ash in the hexavalent state.

1.12.78 as 300725 (20pp914)
 (E) ISR: DS-955806; US3968756; DT2223402; GB-568883; US3510256; 10 Journal References.

RHON ★ D15 02076C/02 ★EP ---6-370
 Water soluble polymer prepn. for use as flocculant - by irradiating unsatd. monomer aq. soln. film contg. polyhydroxy additive
 RHONE-POULENC INDUSTRIES 09.06.78-FR-017858
 A91 (A14) (09.01.80) C08f-02/50
 D/S: E(BE,DT,FR,GB,IT,LU,NL,SW).

Water soluble polymers for use as flocculants are prepd. by subjecting to radiation of wavelength 150-500 nm pref. 300-450 nm a thin layer deposited continuously on a mobile support, of an aq. soln. of olefinically unsatd. monomers contg. a photopolymerisn. promoter and a photopolymerisn. adjuvant (I) comprising a polyhydroxy cpd. contg. ≥ 2 and pref. ≥ 3 secondary alcohol gps.

Process gives good quality polyacrylic flocculants even when the starting monomers are not very pure and does not require very high pH in the monomer aq. soln. which is being polymerised. The flocculants do not contain water-insoluble fractions. The adjuvants facilitates the solubilisation of the flocculants without reducing their mol. wt.

18.5.79 as 400314 (13pp950).
 (F) ISR: FR2084010; FR2348227.

RHON ★ D15 02079C/02 ★EP ---6-376
 Determn. of toxic material in aq. liquids - by mixing with aerobic bacterial culture, passing down plug flow reactor and measuring oxygen content
 RHONE-POULENC INDUSTRIES 15.06.78-FR-018489
 R16 (09.01.80) C02f-03 G01n-33/18

D/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

In a process for detecting and/or measuring the toxicity of aq. liquids, a fraction of a stable preformed aerobic bacterial suspension is added to the liq. to be tested, which has previously been satd. with an oxygenated gas. The mixt. is introduced into a plug flow reactor and the amt. of O_2 present in the liq. at the outlet of the reactor is measured.

The plug flow reactor is pref. a tube with a smooth inside surface having a length/dia. ratio of > 300 , pref. 5000-50000, and the residence time of the mixt. in the tube is 30 sec.-15 mins., pref. 1-5 mins.

The process is continuously-operating, simple to operate, and sensitive. It gives accurate indications of pollution resulting e.g. from heavy metals such as Cd^{++} , Hg^{++} etc.

5.6.79 as 400360 (23pp513)

(F) ISR: DT 2634846; US 4073692; DT 2513650; FR 2321128; DT 2651896.

LOPE/ ★ D15 02097C/02 ★EP ---6-409.
Inlet and outlet valve block for water treatment column - has single column connection and hydraulic operation for automatic valve sequence

LOPEZ F 26.06.78-EP-200060

(09.01.80) B01j-47 C02f-01/42

D/S: E(BE, CH, DT, GB, LU, NL).

An inlet and outlet valve block to control operational and regenerative processes of a water treatment column, esp. a demineralisation column employing ion exchange resins, fits on top of the column. The block comprises three associated valve chambers each contg. an hydraulically displaceable piston valve.

Taking each valve chamber in turn, valve displacement effects flow control as follows. First is a water distribution chamber in which water to be treated can be directed either to a hydro-injector or to a changeover chamber. Next is a changeover chamber, receiving water to be treated from the first chamber, or regenerant from the hydro-injector; these received liqs. are delivered in counter-current directions through the column. Finally a discharge chamber receives effluent from the changeover chamber and turns regenerant liq. to drain or treated water to prod. outlet. Water from the column can also be turned to drain for a rinsing phase.

Correct sequence of valve operations is ensured for water treatment, regeneration and rinsing.

26. 6.78. as 200060 (36pp448).

(F) ISR: US 2504816; US 3169110; FR 1578371; US 3139041; FR 2199084.

SOAF- ★ D15 02178C/02 ★FR 2420-363
Purificn. of waste water with lime and carbon di:oxide - followed by sepn. of sludge by filtration

SOAF 22.03.78-FR-008320 (28.09.77-FR-029147)

(23.11.79) B01d-21/* C02c-01/18 C02c-05

In an installation for the purificn. of waste water, the latter is first introduced into a reaction vessel to be agitated with lime in a lightly pressurised atmos. of CO_2 . The treated waste water is transferred into a decanting vessel for sepn. of the liq. phase from the sludge composed of calcium carbonate and impurities. Settled sludge is pumped away for drying.

The treated waste water transferred from the reaction vessel is strained through a filter receiver suspended inside the decanting vessel. The filter receiver is pref. a disposable filter bag of textile material. The clarified effluent runs off continually from the decanting vessel. The filter receiver is renewed, or emptied and replaced, periodically as necessary.

The filter screen eliminates the need for a pump. 22.3.78 as 008320 Add to 28-9-77-029147(7pp448)

EAUG- ★ D15 02194C/02 ★FR 2420-4
Moving comb type sewage detritus extractor - has ramped para and overlapping head and tow pans respectively fore and aft comb path

EAU GAZ ASSAINISSEM 21.03.78-FR-009168

Q42 (23.11.79) E02b-08/02

The moving type detritus extractor may be used in sewage installation, the combs ascending and passing between ramped staggered parallel toe and head pans. A grill for toe pan is utilised, comprising parallel bars traversed by the teeth of the combs, and locating upstream of the comb trajectory. The head pan is of contiguous plate, being located downstream of the comb trajectory, and extending basally to overlap the toe pan.

Detritus is, thus extracted from the effluent by the combs traversing the toe pan, then being pushed up and over the head pan. The combs may have vertical teeth projecting from a horizontal bar, the latter spanning rollers guided by lateral channels, and being coupled to one another in a motor driven endless chain. 21.3.78 as 009168 (12p)

MONS D15 38324A/21 =GB 1558-7
Hollow fibre membranes of ethylene copolymers - for efficient concentrating dil. aq. phenol solns. by permeation

MONSANTO CO 09.02.77-US-767096

A88 E14 J01 (A17) (09.01.80) *US4082-658 B01d-13 D01 05/24

A hollow fibre membrane is prepd comprising a copolymer of ethylene with 5-20 wt% of a copolymerisable vinyl monomer, having an outside dia. of 50-1000 μ and a wall thickness of 0.1-0.4 times the outside dia.

Pref the copolymerisable vinyl monomer is a vinyl ester, (meth)acrylic acid or ester, or a copolymerisable monoolefin. The ethylene copolymer is with vinyl acetate, acrylic acid, ethyl acrylate, or propylene.

The membrane is esp used for the sepn of phenol from an aq soln. No rapid loss in intrinsic permeability occurs during use or after prolonged storage. 8.2.78 as 005012 (16pp931).

CRDC D15 81520A/45 #GB 1558-8
Microporous hollow polyethylene fibres - with high oxygen permeability, useful as dialysis membranes etc.

CORDIS DOW CORP (CORD-) 22.04.77-NL-004427 (22.04.77-G 016919)

A88 F01 J01 +P34 (A17) (09.01.80) *NL7704-427 D01d-05/ +B01j-13

A microporous hollow fibre is prepd having contiguous porosity, a gas permeation rate of $\geq 2 \times 10^{-5} \text{ cc. (STP) cm}^{-2} \text{ sec}^{-1} \text{ cm}^{-1}$ of mercury transmembrane pressure differential. The fibre comprises polyethylene and/or a copolymer of ethylene with ≥ 1 copolymerisable monomer, the polymerised ethylene content of the fibre being sufficient high to give the fibre the character of polyethylene.

Pref. the fibre has a gas permeation rate of $\geq 2 \times 10^{-5} \text{ cc. (STP) cm}^{-2} \text{ sec}^{-1} \text{ cm}^{-1}$ of mercury transmembrane pressure differential, and a max pore radius of 50Å. The fibre pref comprises ≥ 90 wt% of polyethylene.

The hollow fibres prepd are esp used as separatory membranes in artificial lungs or oxygenators. 22.4.77 016919(16pp931).

PORT- D15 76235A/42 =GB 1559-0
Dissolving gas in liquid - by passing it into column of falling liquid

PORTALS WATER TREAT (PERU) 17.11.76-GB-047947

J02 Q42 (09.01.80) *ZA7706-790 B01d-19 +B01f-03/04

Gas can be dissolved or removed from a liq by passing the liq down a column in which a gas space is defined, in a region of non-atmospheric hydrostatic pressure, and adding to or removing released gas from the space. The space is bounded at the top by a distributor and at the bottom by a continuous liq phase.

After the gas has been dissolved, the liq passes to a riser downstream of the space. The liq is pref water and flows at a speed $< 0.3 \text{ m/s}$.

The method of dissolution can be used in waste water treatment. 11.11.77 (5pp1376).

UC/★ D15 02234C/02 ★GB 2024-028
 appts. for agitating sludge in lagoon bottom - with vertically
 movable compressed air dispensing bar for thinning sludge
 SHUCK W D 03.07.78-US-921257
 (09.01.80) B01f-03/12 B01f-13/02
 appts for agitating sludge includes a support platform ada-
 pted to float on a body of water. An agitating mechanism
 comprises a fluid dispenser movably attached to the plat-
 form and adjustable between a raised position where the
 dispenser is adjacent the platform, and a lower submerged
 position. A fluid supply source is coupled to the agitating
 mechanism. The dispenser includes fluid outlets for re-
 lease of fluid received from the source. Preferably the
 source is an air compressor.
 Appts is used for conditioning sludge so that it can be
 pumped from a lagoon. 27.6.79 as 022330(14pp295).

CL/★ D15 C/02 ★IL--47-422
 Installation for desalinating brine - includes high voltage generator
 connected to flat electrode plates
 BERLEJEV G 04.06.75-IL-047422
 (30.11.79) C02b-01/82

ITQ★ D15 02341C/02 ★J5 4112-379
 Waste water treatment appts. - with strainer for feeding liq. and
 draining adsorbent, strainer for draining liq. and feeding liq. for
 moving bed upwards, etc.
 MITSUBISHI ELECTRIC CORP 23.02.78-JA-019996
 J01 (03.09.79) B01d-15/02
 appts. for treating a liq. such as waste water and liquors
 in a column charged with an adsorbent such as active C,
 polite and silica sand, forming a moving adsorbent bed,
 comprises (a) a first strainer for feeding the liq. to be
 treated and draining the old adsorbent; (b) a second strainer
 for draining the liq. to be treated and feeding an operating
 liq. for pushing the adsorbent bed upwards; (c) a cover lo-
 cated above the second strainer; (d) an adsorbent suppl-
 menting tank located above the main body of the device;
 (e) a straight pipe extending from the tank down to the
 cover to feed fresh adsorbent from the tank to the second
 strainer and the vicinity of the cover. 23.2.78 as 019996
 (pp26)

JT★ D15 02354C/02 ★J5 4149-256
 Dewatering and solidifying compsn. for sewage sludge - contains
 mixt. of cement, ferric chloride and calcium hydroxide, and mixt. of
 cement, aluminium hydroxide and calcium sulphate
 FUJISASH IND KK 15.05.78-JA-056612
 L02 (22.11.79) C02c-03 C04b-13
 compsn. comprises inorganic coagulating component (I)
 and solidifying component (II). (I) comprises 100 pts. wt.
 cement, 5-30 pts. wt. FeCl_3 and 10-60 pts. wt. $\text{Ca}(\text{OH})_2$,
 and (II) comprises 100 pts. wt. cement and 10-40 pts. wt.
 a mixt. comprising $\text{Al}(\text{OH})_3$ and CaSO_4 in a wt. ratio of
 1 to 1/4.

The cement is e.g. Portland cement, alumina cement
 mixed cement etc., and the CaSO_4 is, e.g. anhydrite,
 hemi-hydrate or gypsum etc. The amt. of the compsn. to
 be used is 70-250 (100-250) wt. % based on solid content of
 the sewage sludge to be treated. The sewage sludge is
 effectively dewatered by subjecting it to vacuum dewatering
 treatment after adding the compsn. 15.5.78 as 056612
 (pp34)

HI★ D15 02355C/02 ★J5 4149-257
 Treating waste water sludge by compression dewatering - involves
 adding a nonionic polymer coagulant and basic aluminium chloride
 and filtering
 ISHIGAKI KIKO KK 13.05.78-JA-057423
 (22.11.79) B01d-21/* C02c-03

treatment of sludge contg. colloidal organic components,
 resulting from treatment of sewage or industrial waste
 water, by compression dewatering appts., the improve-
 ment comprises adding a nonionic polymer coagulant and
 basic Al chloride, followed by thoroughly mixing together
 and filtration, so that flocculated matter is improved in
 strength and filter cloth is not blocked with it in compress-
 ion filtration, and further the amt. of the treating agent is
 saved largely cf. conventional art where Fe chloride or
 $\text{Al}(\text{OH})_3$ etc. is used as the coagulant, thereby the amt. of
 filter cake is decreased.

The amt. of basic Al chloride to be added is 1-1.5 w/v
 % against the sewage sludge, and the amt. of the nonionic
 polymer coagulant is about 0.3-0.4% w.r.t. solid content
 of the sewage sludge. The filter cake is easily peeled from
 the filter cloth and its water content is 70-80%. 13.5.78
 as 057423 (2pp34)

KUBI★ D15 02356C/02 ★J5 4149-258
 Dewatering of sludge from effluent treatment - preheating by
 adding acid, oxidising agent and inorganic coagulant
 KUBOTA KK 15.05.78-JA-059198
 (22.11.79) B01d-21/* C02c-03

In dewatering of sludge resulting from treatment of effluent,
 e.g. sewage, night soil and org. industrial waste waters,
 etc., the improvement comprises adding acid, e.g. H_2SO_4
 etc. followed by stirring and subsequently adding oxidising
 agent, e.g. H_2O_2 etc. and inorg. coagulant, e.g. Ca salt
 and FeSO_4 etc., prior to the dewatering. This improves
 dewaterability of the sludge so that filter cake having low
 water content is obtd.

In an example, 24.8 DS% of 97%- H_2SO_4 was added to
 sewage sludge (solid concn.: 4.3%; suspended solids:
 41,500 mg/l, pH: 7.25; 1 g loss: 49.8%; M-alkalinity:
 3.710 mg/l as CaCO_3), followed by stirring at 120 r.p.m.
 for 2 mins. 10 DS% of FeSO_4 , 9DS% of H_2O_2 and 15 DS%
 of CaO are simultaneously added thereto, followed by
 stirring for 10 mins. at 120 r.p.m. and then 3 mins. at
 50 r.p.m. The sludge thus treated was then filtered by
 means of filter press at filtration rate of 9.0 kg.ds/m².
 HY, and pH of filtrate was found 5.0. 15.5.78 as 059198
 (3pp34)

SANK★ D15 02357C/02 ★J5 4149-260
 Seeding agent for activated sludge treatment of waste water -
 giving accelerated growth, improved supply of nutrients etc.,
 comprises excrement of earthworm
 SANKYO AGENCY KK 13.05.78-JA-056902
 (22.11.79) C02c-01/02

Seeding agent suitable for use in operation and mainten-
 ance of biological waste water treating appts., e.g. activ-
 ated sludge treating appts., trickling filters, contact ox-
 idn. treating appts. and rotating disc treating appts., etc.
 capable of accelerating growth of activated sludge, dedi-
 mentation of sludge, supply of nutrients as well as adjust-
 ing bulking, comprises excrement soil of earthworm.

A polluted water contg. organic matter $\text{NO}_2\text{-N}$, sulphide,
 ammonia, phosphoric acid, oil components, floated matt-
 er etc. is effectively purified by passing it through lamin-
 ated layer of earthworm excrement soil. The activated
 sludge used in treatment of food-processing waste water
 is largely improved in its properties by adding the earth-
 worm excrement soil, and settlability of sludge is im-
 proved and further it exhibits strong seeding effect.
 13.5.78 as 056902 (5pp34)

TAKE★ D15 02358C/02 ★J5 4149-261
 Phosphate ion removal from aq. soln. e.g. sewage - by adding acid
 or alkali and contacting with titanium hydrate
 TAKEDA CHEMICAL IND KK 15.05.78-JA-057913
 (22.11.79) B01d-15 C01b-25/16 C02b-01/14 C02c-05/02

PO_4^{3-} is effectively removed from aq. soln. e.g. municip-
 al sewage and industrial effluents etc. without any format-
 ion of sludge by previously adjusting its pH to 1.5-5.5 (2-
 4) with (in)organic acid or with alkali and contacting it with
 TiO_2 hydrate of formula: $\text{TiO}_2 \cdot n\text{H}_2\text{O}$ (where n is 0.5-2.0,
 e.g. $\text{TiO}_2 \cdot \text{H}_2\text{O}$ ($\text{Ti}(\text{OH})_2$), $\text{TiO}_2 \cdot 2\text{H}_2\text{O}$ ($\text{Ti}(\text{OH})_4$), $\text{TiO}_2 \cdot n\text{H}_2\text{O}$
 (n = 1.5-2.0) etc., e.g. prepd. by adding in small port-
 ions warm aq. KOH soln. to aq. Ti sulphate soln. to form
 white ppte. which is then filtered, washed with water and
 dried.

The regeneration of TiO_2 hydrate is effectively carried
 out by contacting it with aq. alkali soln. of NaOH, KOH,
 Na_2CO_3 or $(\text{NH}_4)_2\text{CO}_3$ etc. having pH > 8 (esp. > 10).
 15.5.78 as 057913 (5pp34)

TAJA★ D15 02359C/02 ★J5 4149-264
 Waste water treating appts. - where hydrochloric acid is
 electrolysed using aluminium electrodes to give activated
 aluminium and hydrogen for addn. to waste water
 TAKAOKA ELECT MFG KK 16.05.78-JA-057125
 J03 (22.11.79) C02b-01/82 C02c-05/02

A waste water treating appts. using electrolysis is claimed in which waste water is not directly electrolysed in electrolysing vessel. Electrolysis of HCl soln. is effected in an electrolysing vessel provided with Al anode and Al (or insoluble) cathode to form activated Al and hydrogen bubbles, and the HCl soln. contg. the activated Al and a large amt. of hydrogen bubbles is then added to waste water to be treated to rise by coagulation floatation polluting matters to the surface of the water.

By this process, adhesion of deposits or sticky mud to the electrode is effectively suppressed; it is not necessary to increase the volume of electric installations and to carry out cleaning of the electrode and further the volume of electric source is decreased due to the fact that HCl exhibits higher electro-conductivity than that of water. 16.5.78 as 057125 (3pp34)

TAKE- ★ D15 02549C/02 ★ J5 4150-369
Solidification of waste contg. heavy metal cpds. etc. - by addn. of hydraulic cement, metal sulphate, alkali metal (bi)carbonate or silicate and sewage sludge ash

TAKENAKA DOBOKU KK (TKEN) 17.05.78-JA-059643
J02 (26.11.79) B01j-01 C02c-03 C04b-07/35 C04b-29

Solidification of waste matter (I), comprises addn. of hydraulic cement (II), (A), (B) and (C) into (I). (A) is Al sulphate, alum, ferrous sulphate and/or ferric sulphate. (B) is carbonate, bicarbonate and/or silicate or alkali metal. (C) is ash of sewage-sludge.

The elution of harmful cpds. such as heavy metals, pesticides, etc. from (I) can be prevented by solidification. When (I) contains large amts. of the cpds. which interferes with the solidification of (II), or when sufficient amt. of Ca oxide to be converted to Ca hydroxide by hydration is not contained in (C), hydroxide or oxide of alkali earth metal is added to (I) with (II) (A), (B) and (C). The wt. ratio of (A) to (B) and (C). The wt. ratio of (A) to (B) is stoichiometric. The sum of the quantities of (A) and (B) is 5-30% on the quantity of (II). 17.5.78 as 059643 (11pp)

KAWJ ★ D15 02639C/02 ★ J5 4150-843
Rendering hide treatment sludge harmless - by indirectly heating to dry, calcining under non oxidising atmos., and solidifying ash using asphalt

KAWASAKI HEAVY IND KK 16.05.78-JA-057774
(27.11.79) B01j-01 C02c-03

A hides sludge resulting from treatment of hides in tannery, i.e. water-washing, depilating, ash-removing, pickling and tanning treatments of hides, contg. wasted hides, Cr component, $\text{Ca}(\text{OH})_2$, sludge by flocculation, activated sludge and crude protein etc., is made harmless while suppressing formation of Cr^{6+} by the following steps. Process comprises drying the hides sludge by indirect heating system, calcining the dried hides sludge at 200-500°C under non-oxidising atmos. by indirect heating system, and subsequently solidifying the calcined ash thus obtd. with asphalt.

Conversion of Cr^{6+} into Cr^{3+} is effectively suppressed and organic matter, esp. feather causing lowering in strength of solidified product is carbonised; the solidified prod. is suitable for use in land fill without any dissolution of Cr^{6+} ; it becomes possible to use as the heat source steam or heating oil medium due to low temp. calcination. 16.5.78 as 057774 (3pp34)

KOBM ★ D15 02640C/02 ★ J5 4150-844
Dewatering of sewage sludge by centrifuging - after addn. of cationic organic polymer coagulant and alkali metal salt

KOBE STEEL KK 16.05.78-JA-058575
A97 P41 (27.11.79) B01d-21/* B04b-01 C02c-03

A sludge discharged from municipal sewage works is dewatered by centrifuging after adding a cationic organic polymer coagulant, e.g. water-soluble aniline resin hydrochloride, polythiourea acetate, polyethyleneaminotriazol, polyvinylbenzyltrimethylammonium chloride, polyethylene amine and vinyl pyridine copolymer salt etc., and an alkali metal salt, e.g. NaCl , Na_2SO_4 , Na_2CO_3 , KCl and LiCl etc., the amt. of which is < 100 (pref. 25-100) wt.% of the coagulant.

Recovery of solid component is very high and the water content of dewatered cake is very low. The necessary

amt. of the metal salt added is very small; the amt. of coagulant is also economical. The alkali metal salt removes hydrated water taken into sludge by formation of flocs by the action of dewatering ion, e.g. Na^+ , K^+ and Li^+ etc. 16.5.78 as 058575 (5pp34)

HITA ★ D15 02641C/02 ★ J5 4150-845
Removing organic cpds., ammoniacal nitrogen and solids from effluent - using granular activated charcoal packed between pair of supporting electrodes

HITACHI KK 16.05.78-JA-057211
(27.11.79) C02b-01/82 C02c-05/12

Organic matters, ammoniacal nitrogen and suspended solids are effectively removed from effluent by passing it through a treating vessel in which granular activated charcoal having a granular size of > 5 mm is packed between supporting electrodes comprising > 1 pair of anode and cathode, simultaneously applying DC to cause polarisation of the granular activated charcoal and generate fine air bubbles by the action of which suspended solids in the effluent are floated to the surface of the water and overflowed to the outside of the system, ammonium ion being fixed on the polarised granular activated charcoal and the organic matters being also adsorbed on them.

Appts. for treating the effluent comprises upper suspended solids-floating region at which are provided rectifying plate, overflowing weir and effluent inlet and lower electrolysis region at which are provided the supporting electrodes and the granular activated charcoal packed in layered form. 16.5.78 as 057211 (5pp34)

HITA ★ D15 02642C/02 ★ J5 4150-846
Ammoniacal nitrogen-contg. effluent treatment - by passing through electrolysis vessel contg. granular active charcoal between electrodes and passing DC

HITACHI KK 16.05.78-JA-057212
J03 (27.11.79) C02c-05/12

NH_4^+ -N is effectively removed by adsorption from effluent and decomposed to N_2 by electrolysis by passing the NH_4^+ -N-contg. effluent through electrolysing vessel in which granular activated charcoal having a granular size of > 5 mm is filled between supporting electrode constituting pairs of anode and cathode and simultaneously applying D.C.

The used activated charcoal is reproduced in its activity by contacting it with electrolysing liquor. Each of the granular activated charcoal filled between the supporting electrodes is polarised, and NH_4^+ in the effluent is sorbed on the activated charcoal by catalytic and electrostatic neutralising effect. In this case, NH_4^+ is decomposed until to N_2 under high electric voltage to be applied. 16.5.78 as 057212 (8pp34)

WATA/ ★ D15 02643C/02 ★ J5 4150-847
Motorised vehicle for purifying waste water - comprises a primary oxidiser, solid-liq. separator and sec. oxidiser using UV rays

WATANABE H 16.05.78-JA-058366
(27.11.79) C02c-05/04

The vehicle comprises initial oxidn. vessel in which acids, e.g. H_2SO_4 , HCl etc., oxidn. catalyst, e.g. FeSO_4 , etc. and H_2O_2 are added to polluted waste water to decompose the pollutants; a solid-liq. separator capable of sepg. solids from initial purified water; and a sec. oxidn. vessel in which > 1 oxidising gas, e.g. oxygen, O_2 -contg. gas and ozone(-contg.) gas is blown into the sepd. liquor from the separator and UV rays are irradiated to it to decompose, by oxidn, pollutants contained in the sepd. liquor.

A neutralising vessel may be provided for reuse or discharge of sec. purified water. Water can be rapidly purified in any situation. 16.5.78 as 058366 (5pp34)

MATU ★ D15 02666C/02 ★ J5 4151-048
Cassette tape for use with electrode for ion determination comprises waterproof band e.g. of synthetic resin on absorptive tape base

MATSUSHITA ELEC IND KK 18.05.78-JA-059060
A89 J04 R16 (27.11.79) G01n-01/10 G01n-27/26 G01n-31/06

The tape comprises waterproof band part (consisting of e.g. synthetic resin film) at right angles to tape base material and at a given interval, on a tape base consisting of a material capable of adsorbing liq. (e.g. filter cloth, filter

fibrous synthetic polymer, foamed plastics etc.). Various functions for detecting object ions contained in sewage, river water, industrial waste water, etc. can be easily imparted to the cassette tape. The cassette tape can be stored for long period. Harmful ions can be precisely determined with ion electrode by using the cassette tape. 18.5.78 as 059060 (4pp50)

A ★ D15 02749C/02 ★ J5 4151-565
Purification of waste water - reducing energy for filtering water with pressure against a higher osmotic pressure of filtering fillers
NITIKA KK 16.02.78-JA-017472
(28.11.79) C02c-05

Device for finely purifying a liq. such as waste water at low speed is claimed. The object is to reduce the energy for filtering the water with high pressure against a higher osmotic pressure of filtering fillers and maintain a high degree of purification for a long time.
A box for collecting purified water from a tank contg. water under treatment is connected with the tank through a large number of siphon pipes so as to flow the water from the tank to the box. Fibrous capillary elements are inserted into the start end of each siphon pipe with that ends of the elements at the start end side of the box remain outside the pipe, extending down to a level below the start end of the pipe and are relaxed like a root of a tree. 16.2.78 as 017472 (9pp26)

DZ ★ D15 02750C/02 ★ J5 4151-568
Sodium ion-contg. water prodn. - in appts. comprising an anode compartment contg. e.g. calcium lactate, sepd. from cathode compartment by porous diaphragm
INOUE JAPAX RES INC 19.05.78-JA-060517
(28.11.79) C02b-01/82 C25b-11
The appts. is made by positioning through a porous diaphragm a cathode and an anode in water to be treated, adding a calcium component, such as, calcium lactate, on the anode side, applying electric current to the electrodes to electrolyse the water, and producing Ca^{++} contg. water.

The improvement comprises positioning an electric source for application of pulse electric current between the anode and the cathode. The diaphragm is ceramic, porous porcelain, sponge or foamed resin of 200 Å - 1 µm. 19.5.78 as 060517 (2pp51)

ITU ★ D15 02751C/02 ★ J5 4151-569
Treating oil-contg. waste water - by adding basic magnesium carbonate and stirring
MATSUSHITA ELEC IND KK 19.05.78-JA-060115
(28.11.79) B01d-17/04

Process comprises adding basic MgCO_3 to the waste water contg. emulsified oil and then stirring to adsorb oil with the carbonate. Specifically the basic MgCO_3 has formula $\text{MgCO}_3 \cdot \text{Mg}(\text{OH})_2 \cdot 3\text{H}_2\text{O}$ and is synthesised by adding MgCO_3 to an aq. soln. of a Mg salt to obtain a ppte. filter-able the ppte., washing with water and drying.

In an example, basic MgCO_3 was added to 30 ml of waste water contg. emulsified oil, stirred and filtered with paper filter to obtain water contg. no oil. The resulting basic MgCO_3 was heated at $\sim 500^\circ\text{C}$. Oil adsorbed with the carbonate was thermodecomposed and removed to obtain regenerated basic MgCO_3 . 19.5.78 as 060115 (3pp)

IRA ★ D15 02752C/02 ★ J5 4151-571
Separator appts. using semipermeable membrane around tube using porous sheet or net as laminate with membrane, to give twice with reduced pressure loss
TORAY IND INC 22.05.78-JA-060066
(28.11.79) B01d-13

Device for sepg. a liq. aq. solns. of salts is claimed using a semi-permeable membrane spirally wound around a porous hollow pipe, which is used in a casing and has openings at both ends to drain one sepd. component of the liq. The object is to reduce the pressure loss of the device and avoid contamination of the surface of the membrane.

A laminate tape consisting of a porous sheet or forming passage of the raw liq., semi-permeable membrane, and another porous sheet or net for forming a passage of the sepd. component of liq. is spirally wound around the hollow pipe multiply to form several layers. One end of one mem-

brane layer is adhered to that of adjacent membrane layer to form an envelope, whose open end is communicated with pores of the pipe. 22.5.78 as 060066 (6pp26)

AGEN ★ D15 02753C/02 ★ J5 4151-572
Semipermeable membrane for dialysis, ultrafiltration, etc. - by dissolving chitin in trichloroacetate halohydrocarbon solvent mixt., forming soln. into film, immersing in solvent and alkali-treating
AGENCY OF IND SCI TECH 19.05.78-JA-060381
A88 J01 (28.11.79) B01d-13

The semipermeable membrane is obtd. by dissolving chitin in a mixed solvent consisting of 20-70 wt. % trichloroacetate and 80-30 wt. % halohydrocarbon to obtain a soln. forming the soln. to a film, immersing it in a water soluble organic solvent and treating it with alkali. The water soluble organic solvent is isopropyl alcohol, acetone, dioxane or ethylacetate.

In an example, 0.2 g purified chitin was dissolved in a mixed solvent contg. 3.5 g trichloroacetate and 6.5 g 1,2-dichloroethane at 15°C for 2 hrs. to obtain a soln. of high viscosity. The soln. was aged at 4°C for 16 hrs. and poured on a glass plate to obtain a film. The film was dried, immersed in acetone for 2 hrs., immersed in an aq. soln. of 0.2 wt. % ammonia and washed with water to obtain a semi-permeable membrane.

Membrane is used as a dialysis diaphragm, a molecular filter, an ultrafiltration membrane or a reverse permeation membrane. 19.5.78 as 060381 (6pp51)

SANY ★ D15 02768C/02 ★ J5 4151-591
Treating sulphuric acid waste contg. aluminium ions - by sepg. out aq. aluminium sulphate soln. then reacting it with aluminium hydroxide sludge
SANKYO ALUMINIUM KK 19.05.78-JA-060354
E36 (28.11.79) C01b-17/90 C02c-05

The process comprises (1) sepg. sulphuric acid waste contg. aluminium ions into sulphuric acid soln. contg. only a small amt. of aluminium ions and aq. aluminium sulphate soln., and (2) producing aluminium sulphate contg. a small amt. of free sulphuric acid by reacting aq. aluminium sulphate soln. with aluminium hydroxide sludge, at the same time, reusing sulphuric acid soln. contg. only a small amt. of aluminium ions.

Compared to conventional method which neutralise dialysed soln., this process makes it possible to reduce the formation of aluminium hydroxide sludge which is difficult to treat, and to reuse waste water. The appts. may be small scale. 19.5.78 as 060354 (7pp96)

MITB D15 32352V/17 = J7 9041-559
Desalination of brine by crystallisation - through direct contact with refrigerant and subsequent refrigerant recovery
MITSUI SHIPBUILDING ENGG (MITC) 22.05.71-JA-035066
(08.12.79) *US3803-860 B01d-09 C02b-01/12

Brine is deaerated and cooled to near 0°C in a heat exchanger. The brine is then fed to a horizontal crystallisation chamber where it is contacted directly with refrigerant to form ice crystals. The ice is removed from the chamber and washed in a vertical tower to remove trapped brine.

The ice crystals are then transferred to a melting chamber where they are melted by contact with compressed refrigerant. Finally the purified water is deaerated to recover the refrigerant which is condensed and returned to the crystallisation chamber. A portion of the feed brine is used for heat exchanger purposes and discharged via a drain. 22.5.71 as 035066 C02b-1/12; B01d-9/00 (8.12.79) MITSUI SHIPBUILDING ENG. (6pp) (J4 8004382)

KOAS- D15 07473A/04 = J7 9041-603
Granular, opt. activated coal, prepn. from pitch particles - by heating in oxidising atmos. and with calcined carbon powder and used for water and gas purificn. and as fuel
KOA SEKIYU KK 04.06.76-JA-065285
A97 H08 J01 (10.12.79) *J52148-502 C01b-31/08 C10b-53/08 + C10b-57/04

Particulated pitch obtd. by granulating pitch having $>100^\circ\text{C}$ softening point is heat-treated in a rotary kiln and in an oxidising gaseous atmos. together with calcined carbon powder to obtain infusible granular pitch. Granulated coal is obtd. by carbonising the infusible granular pitch

Granulated activated coal may be obtd. by activating the obtd. granular coal.

The prod. is suitable for prodn. of particulated fuel, and/or treating waste water or waste gas. It has low flow resistance. Prepn. of granular coal from pitch of lower softening point obtd. by the heat-treatment of straight run residue of petroleum oil is possible. Melt-sticking or cohesion of pitch having relatively high softening point during the insolubilising stage is prevented by the anti-static effect thereof.

Prof. pitch is heat-treated tarlike substance obtd. from coal, petroleum or shale oil, etc. Residual oil of straight run petroleum oil obtd. by heat-treating, e. g. at 350-550 °C for several seconds - 24 hrs. is most pref. Pref. range of softening point of the pitch is 100-300°C (by the ring and ball method). Pref. carbon powder is calcined coke, pulverous activated coal, pulverous smelting coke, etc. Pref. amt. thereof is 0.2-10 esp. 0.5-5 wt. % basing on the amt. of granular pitch. 4.6.76 as 065285 C10b-53/08; 57/04; C01b-31/08 (10.12.79) KOA SEKIYU KK (4pp) (J5 2148502)

NIRA ★ D15 02974C/02 ★J7 9041-824
Decolourisation of dyeing waste water - by adding aq. acidic soln. of reaction prod. of polyamide and polyethyleneimine as absorbent then precipitating flocs

UNITIKA KK 03.04.72-JA-033274

F06 (11.12.79) B01d-15 C02c-05/02

Coloured dyeing waste water is effectively decolourised by adding aq. acidic (mineral acid) soln. of a reaction product between polyamide and polyethyleneimine to absorb colouring matters, adjusting the pH of the water to generate flocs of the reaction product adsorbing the colouring matters, and subsequently separating the flocs from the water. 3.4.72 as 033274 C02c-5/02; B01d-15/00 (11.12.79) UNITIKA KK (4pp34)

MATU ★ D15 02998C/02 ★J7 9042-180
Portable water purifier - in which sterilising agent, e.g. silver salt, is hardly released into filtered water

MATSUSHITA ELEC IND KK 17.05.74-JA-055872

(12.12.79) C02b-01/14 C02b-03/10

The purifier comprises an initial filter cloth surrounded by an activated charcoal layer, covering the outlet opening provided at the top of the main body. There is a secondary filtering net holding an adsorber, e. g. activated charcoal, in the inner part, provided in the inside of the outlet, and a sterilising agent, e. g. a difficultly-soluble silver salt, is provided on the inside of the filter cloth. 17.5.74 as 055872 (12.12.79) MATSUSHITA ELEC. IND. KK (3pp34) (J5 0147152)

SHIG/ ★ D15 02999C/02 ★J7 9042-181
Wheat starch-contg. waste water treatment - by digestion pptn. to obtain starch, filtering the supernatant liquor and sepg. to give two layers, and treating each layer

SHIGEHIO M 20.02.74-JA-020252

(12.12.79) C02c-05/10 C12b-01/18 C131-01

A wheat starch-contg. waste water is purified and useful components are effectively recovered by digestion pptn. to obtain out-grade starch from a portion of ppte, passing supernatant liquor through trickling filter followed by sepg. into upper and lower liquors, passing the upper liquor further through trickling filter for use as culture liquor for fine algae, fermenting (acetic acid) the lower liquor and pptd. starch obtd. by dewatering a portion of the ppte. to give acetic acid which is used as carbon source in culture of fine algae, and extinguishing foams generated in the culture by adding the pptd. starch obtd. by dewatering a remaining portion of the ppte. 20.2.74 as 020252 C02c-5/10; C12b-1/18; C131-1/00 (12.12.79) SHIGEHIO, M; NAGATA, T. (3pp34) (J5 0114048)

ROMA- ★ D15 C/02 ★RU --67-898
Chromium tri:oxide prepn. from exhausted residual waters - by pptn. with ammonium hydroxide in plant contg. centrifuge, drier and calcinating furnace

INTR ROMANA PIELE 14.06.74-RU-079176

E31 (30.01.79) C01g-37/02

UYOD= ★ D15 03077C/02 ★SU -658-0
Removing ions of non-ferrous metals from waste water - by blowing with air in presence of sorption agent of long chain alkyl di:eth amino-phenyl iodide

ODESS UNIV 07.12.76-SU-426897

(29.04.79) C02c-05/02

Non-ferrous metal ions are removed from wastes by sorption and flotation, and the cost of the process can be reduced if the sorption agent used is a long chain 1-alkyl-2-(N-diethylaminophenyl) quinoline iodide. This reagent is obtd. as a waste product from coke-processing, and does not have to be synthesised, as did the previous reagents aliphatic amines or quaternary ammonium salts.

Waste contg. 50 mg./l. Mo as molybdate ions was treated with a 1% soln. of 1-heptyl-2-(N-diethylamino-phenyl)quinoline iodide in a ratio of 15 ml. reagent to 20 ml. waste, while air was blown through for 10 min. and the foam was sepd. The vol. of the foam fraction was < 1 ml. and the cleaned waste contained only 5 mg./l. Mo. Skrylev, L.D., Purich, A.N., Obdeenko, S.N. Bul. 15/25.4.79. 7.12.76. as 426897 (2pp815)

VOBR= ★ D15 03240C/02 ★SU -659-17
Cleaner for spent grain washing etc. water - with compression of sepd. solids in bi:conical filter element contg. output worm and supplementary filter assembly

VORON BREAD PRODUCT 14.11.77-SU-547545

J01 (30.04.79) B01d-29/10

The unit used for sepn. of suspended solid material from growth washing spent water in mills etc. for subsequent utilisation of sepd. solids comprises a casing with an axial inlet pipe and a distributor, a filter element, and an intermediate section.

For simplicity, and to increase cleaning and deposit drying efficiency, the element is made as a combination of two truncated cones of 1:2 conicity ratio sandwiching a horizontal partition, while a discharge worm houses a cylindrical perforated filter.

Shapovalov, A.P. Bul. 16/30.4.79. 14.11.77. as 54754 (2pp132)

DAVY/ ★ D15 03334C/02 ★SU -659-52
Extraction of sodium sulphate from industrial aq. waste - using two-stage evapn. in presence of glycol to remove cellulose ester(s)

DAVYDENKO N M 27.12.76-SU-434622

A11 E34 (A35) (30.04.79) C01d-05/16

Na₂SO₄ is extd. from waste water of cellulose esters prodn. by two-stage evapn. of starting soln. in the presence of glycol, with initial evapn. conducted at 65-125°C to a ratio glycol: water = 1:3-3.5 with subsequent sepn. of solid Na₂SO₄ and secondary evapn. conducted at 95-125°C to ratio glycol: water = 1:0.4-0.6 with subsequent regeneration of glycol from mother liquor.

The total yield of Na₂SO₄ achieved is 99.8% with the solid prod. obtd. from both evapns. with av. crystal size of 0.45-0.65 mm.

Davydenko, N.M., Yakovenko, I.V., Drozhina, D.N. et al. Bul. 16/30.4.79. 27.12.76. as 434622 (3pp1347)

MOPO= ★ D15 03335C/02 ★SU -659-52
Multistage evaporator installation for thermal power stations contains independently fed evaporator connected to secondary steam pipeline of evaporation unit, and additional feed-water preheater

MOSC POWER INST 25.07.77-SU-511460

J01 Q51 (30.04.79) C02b-01/02 F01k-07/40

Increased efficiency of the multistage evaporator installation for thermal power stations is ensured by provision of the possibility to obtain from it a supplementary distillate without increasing consumption of the heating steam, as well as the possibility of feeding the installation with several streams of the feed-water of diverse salt composition. For this purpose, the installation is equipped with independently fed evaporator connected to secondary steam pipeline of at least single stage of evaporation, as well as with additional feed-water preheater connected to the feed-water channel and to the evaporator.

The feed-water channel transfers the water consecutively through a set of feed-water preheaters before the water enters the first stage of evaporation which also receives heating steam. Here, part of the feed-water

aporates and the rest passes to the next stage of evapn. with secondary steam. The latter is also fed to feed-water preheaters and to independently fed evaporator which is supplied by additional pipeline with feed-water of different salt compsn. than the feed-water fed to the set other evaporators. The water fed to the additional pipeline can consist of effluents and can pass through additional preheater which is then supplied with secondary steam which also passes through independently fed evaporator and through additional preheater. The distillate formed by condensation of the heating steam in the stages of evaporation, and in the independently fed evaporator, is used as make-up water in the thermal power station. Garman, L.S., Sedlov, A.S., Vasina, L.G. et al. Bul. 16/30.4.79. 25.7.77. as 511460 (2pp135)

U★ D15 03336C/02 ★SU-659-530
Water desalination and recirculation systems - using surfactants, thermal and ultrasonic treatments to prevent scale formation
DONETSK FERR METAL 30.08.77-SU-521554

MA97 G04 (30.04.79) C02b-05
Formation of deposits of scale in water recirculation system or sea water thermal desalination units etc. can be prevented or reduced by addn. of surface active agents to the water followed by thermal treatment.

The hard salts remaining in soln. stabilised by the surface active cpds., can be removed as a crystalline ppt. if the water is also subjected to ultrasonic radiation of frequency 18-35 k.Hg. for a few sec.

This breaks down the adsorbed layer of surface active cpds. on the surface of the salts, and allows formn. of centres of crystallisation, resulting in pptn. of calcium phosphate as a crystalline deposit.

Water contg. 8.3 g./l. total salts and 4.15 g./l. calcium sulphate was treated with 5 mg./l. sodium carboxymethylcellulose (or 15 mg./l. n-pentanol) and heated to 50°C, then subjected to ultrasonic radiation at 20 kHz.

for 30 sec. The salts in soln. pptd. as a readily removable crystalline deposit, and the calcium sulphate content was reduced to 2.6 g./l. (or 2.68 g/l.). Water subjected to heat treatment only, gave a heavy scale deposit on evapn., while the above water did not.

Sedoruk, T.Ya., Malko, S.V., Pilipenko, V.L. et al. Bul. 16/30.4.79. 30.8.77. as 521554 (2pp815)

IN=★ D15 03337C/02 ★SU-659-531
Chemical purificn. of waste water - includes multistage treatment with activated sludge with specified aeration to remove suspended organic materials

LENGLD ENG-CONS INST 27.12.76-SU-437625
(30.04.79) C02c-01/02

Colloidal organic material can be removed from waste by aeration in presence of activated sludge, and the efficiency of the process can be increased if sludge from the first stage is regenerated prior to being passed on for use in the second stage, from where it is returned to the first stage. A similar procedure is followed in subsequent stages, if more than 2 are used, the sludge being passed in the direction of increased concn. of contaminants. The method is more efficient than that using recycle of sludge from the second to the first stage in a closed cycle, and is suitable for waste with a high BOD of >300-400 mg. O/l., such as is obtd. in processing milk, meat and fish. The size of aeration plant required can be reduced by 15%, and the air consumption is reduced by 22%. Golubovskaya, E.K., Ivanov, G.V. and Smolkov, V.V. Bul. 16/30.4.79. 27.12.76. as 437625 (3pp815)

UME=★ D15 03338C/02 ★SU-659-532
Aerator for surface layers of effluents - contains vibrator with rigidly connected conical chamber having open wide base immersed in liquid and vertical narrow discharge nozzle
AS UKR MECHANICS 10.11.77-SU-563231
(30.04.79) C02c-01/10

Improved efficiency of aerating the surface layers of liquids, e.g. saturating the effluents with oxygen from the air for their biological purification, is ensured by the following features of the design. The aerator contains a conical chamber immersed in the liquid up to its narrow base connected to vertical pipe serving as discharge

nozzle. The conical chamber of the aerator is rigidly fixed to the vibrator which causes its reciprocal vertical motion with frequency 36 Hz. This produces pumping action and the stream of liquid flowing upward from the discharge nozzle and returning to the liquid together with bubbles of captured air.

The air-bubbles are typically of 0.5-1.0 mm. in diameter and with long retention time in the liquid (1-2 min) become well dispersed init.

Ganiev, R.F., Malyshev, P.A., and Chistyakov, Yu.G. Bul. 16/30.4.79. 10.11.77. as 563231 (3pp135)

ESSO D15 36439A/20 =US RE30-179
Liquid membrane separation process - using common ion effect to remove soluble materials, esp. fluoride

EXXON RES & ENG CO 11.03.76-US-668128 (13.04.70-US-028094)

J01 (25.12.79) *US4081-369 B01d-13 C02b-01/46

A soluble material is removed from soln. by contacting the soln. with an emulsion, the external phase of which is immiscible with the soln. and permeable to the soluble material.

The internal phase contains a reagent which reacts with the permeable soluble material to form an insoluble ppt. which is trapped. The concn. of the reagent in the internal phase of the emulsion is maintained at a level at which the concn. of the soluble material is suppressed by the common ion effect to a level less than the level desired to effect the removal of the soluble material from soln.

The process is esp. used as a liq. membrane for lowering fluoride ion concn. in an aq. soln. to <6ppm.

13.10.78 as 951078 Reissue of 4081369 Div.ex 3779907

Cip 3617546, 3637488 (+12.5.70, 25.8.71, 9.10.73 -US-036686, 174990, 404716(14pp931)

TINT- D15 76236A/42 =US 4180-009
Indicating device for swimming pool impurities - has measuring containers with coloured indicator windows

TINTOMETER GMBH 26.05.77-DT-723723

J04 Q46 R16 (25.12.79) *ZA7706-809 +G01n-31/22

A device for simultaneously measuring pH value and Cl₂ ion concn. of swimming pool water by admixt. with colour forming reagents, comprises measuring containers and ≥1 reference container combined to form a container row with a common side wall. An indicating screen, with fixed, differently tinted indicating windows, distributed over the height of the containers, is arranged in front of the common wall. These windows have a standard colour-ation relating to that formed by the colour-forming reagents.

Several different ion concns. can be easily investigated in one operation. 17.11.77 as 852603(4pp976)

INFI-★ D15 03496C/02 ★US 4180-459
Agricultural product e.g. fertiliser prodn. from organic sewage sludge - by conditioning with ferric chloride and sugar factory waste
IND FILTER & PUMP M 16.12.77-US-861292
C04 (25.12.79) B01d-05 C02c-01/02 C05f-03

Process for dewatering organic sewage sludge to obtain an acidic dewatered sludge having a pH of >5.7, comprises adding FeCl₃ to the sludge to lower its pH to <3.5; adding CaCO₃ to increase the pH to 3.5-5.7; and then dewatering by mechanical dewatering process. Pref. the pH of the sludge is reduced to pref. >3 before dewatering or addn. of lime for economically satisfactory flow rates during filtration.

Dewatered sludge having good organic cultural uses e.g. fertiliser is obtd., as a source of lime the waste by-product from sugar refining process is used. 16.12.77 as 861292(4pp957)

UNTC D15 42680B/23 =US 4180-547
Salt water, e.g. sea water desalination - to recover drinking water, salt, potassium chloride, bromine, sodium sulphate, calcium and magnesium cpds.
ECODYNE CORP 25.11.77-US-854811

E37 (25.12.79) *DT2850-785 C01d-03/06

Chemicals in saline water are recovered in a continuous process by converting the sulphates in the saline feed Na₂SO₄, then then sepg. and recovering magnesium and calcium in their oxide forms.

A NaCl-fortified soln. is then prepd. by mixing the feed with recycled NaCl, then crystallising, recrystallising, then sepg. the crystals-pref. in 2 evaporative crystallisation processes. Bromine is stripped from the NaCl-depleted soln., and Na₂SO₄ and NaCl crystallised, then sepd. from each toher, then from soln. The sepd. NaCl is recycled to the first NaCl crystallisation step., and residual sulphate sepd. from soln. The sepd. NaCl is recycled to the first NaCl crystallisation step, KCl is crystallised then sepd., and the resulting soln. recycled to the last NaCl crystallisation step.

Drinking water is produced in substantial amts. by the process. NaCl produced may be electrolytically converted to NaOH, which is conc. and flaked. 25.11.77 as 854811 (8pp934)

FREU D15 42402A/24 = US 4180-611
Semipermeable matted fibre diaphragm - has face of matted web provided with layer of thermoplastics particulate material calendered into face
FREUDENBERG, CARL FA 04.12.76-DT-655024
A88 F04 J01 +P73 (25.12.79) *DT2655-024 +B32b-05/16
B32b-27/02

Nonwoven fabric having a smooth surface esp. for use as a support for a semipermeable membrane, comprises a support not having ≥ 1 surface into which there has been calendered an open structural porous covering layer of fine flat fibres having a thickness of $< 30 \times 10^{-6} \text{m}$.

The covering layer has a specific wt. of 1-200g/m² and has been formed by electrostatically spinning the fibres directly onto the support mat. The support mat extends over the entire width of the fabric.

Pref. fibre thickness is $1-20 \times 10^{-6} \text{m}$ and the covering layer has a specific wt. of 10-40g/m². 1.2.77 as 856564 (3pp982)

See Also

D22 US 4180654

D25 GB 2024193

D16: FERMENTATION INDUSTRY

SANO D16 50924W/31 = DS 2500-785
Extn. of immunogens hemagglutine and neuraminase - by treating influenza virus with cationic surfactants also vaccines contg. the immunogens

SANDOZ-PATENT-GMBH 14.01.74-CH-000447
B04 (03.01.80) *BE-824-372 A61k-39/18 C07g-07
Process for isolation of haemagglutininase and neuraminidase components from influenza virus concentrates comprises dispersion of the virus (opt. deactivated) in an aq. medium containing detergent, and sepn. utilising their particle size or density.

In partic. influenza virus type A, A1, A2 or B, are dispersed in aq. solns. of cetyltrimethylammonium bromide in ratio 10:2 to 1:10. The prods. are treated with a preservative and used as influenza vaccines. 10.1.75 as 500785 (9pp047)

MCDD D16 75869Y/43 = DS 2717-977
Detection of klebsiella and enterobacter in urine - using a medium contg. an indicator and escherichia coli inhibitors
MCDONNELL DOUGLAS CORP 03.05.76-US-682659
B04 R16 +P31 (03.01.80) *BE-853-719 C12k-01/06
Culture medium for the detection of Klebsiella and Enterobacter species contains a N source free from sugar; a mixt. of cellobiose and inositol as C source; vitamins; an indicator which responds to these bacterial species; and also 3- (α-acetonylbenzyl)-4-hydroxycoumarin, (0.196-0.204%), and α-ketoglutaric acid 2,4-dinitrophenyl hydrazone, (0.049 - 0.051;) as inhibitors to prevent the development of Escherichia coli; at pH 8.
The prods. are valuable diagnostic aids. 21.4.77 as 717977 (3pp047)

MCDD D16 81470Y/46 = DS 2717-981
Culture medium for selective detection of enterococci - esp. Streptococcus faecalis, in urine samples, contains growth inhibitors for other bacteria
MCDONNELL DOUGLAS CORP 03.05.76-US-682661
B04 +R16 (03.01.80) *DT2717-981 C12k-01/06
Culture medium for the detection of group D Enterococci (e.g. Streptococcus faecalis), in polymicrobial samples contains N and C sources; neomycin sulphate (to inhibit Staphylococcus aureas); K₂TeO₃ (to inhibit Gram negative microorganisms); and an indicator comprising Fe (III) ammonium citrate, (0.48-0.52 g/dm³), and aesculin hydrolysate, (0.9-1.1 g/dm³), which gives a ppt. with group D Enterococci growth products.
These media are valuable diagnostic aids. 21.4.77 as 717981 (3pp047)

KOHL/★ D16 01763C/02 ★DS 2840-173
Agents for restoring cell function - contg. beta-glucuronidase, pref. as a topical e.g. ointment formulation
KOHLE V 15.09.78-DT-840173
B04 (03.01.80) A61k-37/54

New agents for restoring cell functions in infectious or degenerative tissue defects, retarded wound healing, age-induced symptoms, and depressive mental states of the human or animal body, contain a usual pharmaceutical or cosmetic carrier material, opt. with usual additives, together with 0.1-50 units beta-glucuronidase per gram. of carrier material.

Beta-glucuronidase has a restorative effect on cell function without diving rise to injurious or unpleasant side effects. 15.9.78 as 840173 (6pp280)

MERE★ D16 01798C/02 ★DT 2826-651
Multiple test strip device - with common filling cylinder for test strips held in group of vertical chambers
MERCK PATENT GMBH 19.06.78-DT-826651
J04 R16 (03.01.80) C12k-01/04 G01n-31/22 G01n-33/16
A device in which many test strips can be used simultaneously for the detection of microorganisms in biological research or of volatile substances in fluids consists of a group of vertical elongated chambers in which the test strips are held in waisted sections. Each chamber is joined on top and bottom by a tube to a manifold line. The fluid to be checked is filled in through a cylinder in the centre of the group, with an open top and joined at the bottom to the lower manifold tube.

This simplifies the manipulation by one common filling operation for all reactions and saves much time. The system is enclosed so that no contamination is possible. A once-only use of the low-cost plastic device makes the operation very hygienic. 19.6.78 as 826651 (17pp39).

TOXN★ D16 01925C/02 ★DT 2924-47
Lactate oxidase enzyme specific to L-lactic acid - useful for lactic acid analysis by conversion to pyruvic acid and hydrogen peroxide
TOYO JOZO KK 17.06.78-JA-073619
B04 E17 R16 (03.01.80) C07g-07/02 C12d-13/10 C12k-03 G01r 31/14

A new lactate oxidase enzyme (I) and its prodn. are claimed. (I) is specific to L-lactic acid and catalyses the reaction: L-lactic acid + O₂ → pyruvic acid + H₂O₂. Also claimed are (a) a process for lactic acid analysis, comprising contacting a sample with lactate oxidase and measuring the amt. of H₂O₂ or pyruvic acid formed or the amt. of O₂ consumed, and (b) a test kit for lactic acid analysis, comprising a system including at least lactate oxidase.

(I) has an optimum pH of 6-7, an optimum temp. of 35°C, an isoelectric point of 4.6 ± 0.3 and a mol. wt. of

100 ± 10000. It is produced by culturing a suitable *Pediococcus*, *Streptococcus* or *Aerococcus* strain in a nutrient medium and isolating (I) from the medium. Preferred strains are *Pediococcus* sp. B-0667 (FERM-P 4438), *Streptococcus* sp. B-0668 (FERM-P 4439) and *Aerococcus* strains IFO-12219 or IFO 12317. 18.6.79 as 924470 (10pp367).

★ D16 01987C/02 ★EP ---5-867
α-amylase assay with limit dextran and an exo:carbohydrase - using coupled enzyme system that forms a chromophore
MILLIPORE FILTER CORP 06.06.78-US-912986
B04 R16 (12.12.79) G01n-31/14 G01n-33/16
E(DT, FR, GB, IT).
The assay comprises reacting limit dextrin (I) in the test sample in the presence of one of the exocarbohydrases phosphorylase, β-amylase or glucoamylase. The resulting (I) fragments react with the exocarbohydrase to form the initial component of a coupled enzyme reaction system that is specific and results in formation of a chromophore. The rate of formation of chromophore is determined, the α-amylase being rate limiting.
The assay is used in clinical diagnosis of pancreatic and other diseases. The α-amylase concn. is determined simply and rapidly with a high degree of sensitivity, and specimen blank is not required.
1979 as 101791 (34pp1248).
ISR: DT2729636; DT2705859; US3879263; FR2402872.

A- D16 89577B/50 =EP ---6-181
Softening tough parts of mushrooms - by incubating in acidic salt soln. opt. with addition of enzymes
FINANZPAT AG (SCHM/) 05.06.78-DT-824553
D13 (09.01.80) *DT2824-553 A231-01/28 + A23b-07/10
E(BE, CH, FR, GB, IT, LU, NL, OE, SW).

Addn. of soft, edible fungal fruiting bodies (or their extracts) from tough fungal material, rich in softening enzymes, comprises treating the material with an acid soln. of pH 3-5.5 and salt concn. 0.02-0.5M at 20-55°C for 0.5-10 days. The treatment may be under aerobic or anaerobic conditions.

Pref. the acid soln. is a pH 4 acetic, citric or lactic acid buffer, or an acid whey made by fermentative milk acidification. The fungal material may be fresh or stored for up to 2 years at -2° to -40°C.

A similar process can be used with fungal material of low softening enzyme content if combined with treatment with glucanase and chitinase (supplied e.g. as an extract of enzyme-rich fungi).

1979. as 101776 (17pp1251).
ISR: DT 2197531; FR 2050070; DS -271938;
R -786121; FR 1596887; GB 1009430; 4 Journal references.

DEF D16 00076C/01 =EP ---6-192
Microbiological test materials e.g. for detecting microorganisms - comprise nutrient substrate covered by selectively permeable polymer film

BOEHRINGER MANNHEIM GMBH 12.06.78-DT-825636
A96 B04 J04 (09.01.80) *DT2825-636 + C12m-01
S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW)..

Microbiological test materials comprise a nutrient-impregnated absorbent substrate covered by a film which is permeable to nutrients but impermeable to bacteria. The film is a water-insoluble polymer film produced from an aq. polymer dispersion and modified with one or more cross-formers (i.e. cpds. which dissolve or swell on contact with water).

The test materials can be used as a substitute for conventional agar culture media, e.g. for detecting microorganisms in body fluids, foodstuffs or water. They give the same results as agar media but have better storage characteristics and are easier to dispose of by incineration.

1979 as 101806 (33pp367).
ISR: DT2320946; US2672431; US2672432; FR2374353.

INRG ★ D16 02190C/02 ★FR 2420-572
Reagent for diagnosis of *Staphylococcus aureus* - prepd. by sensitisation of red blood cells with protein a reactive immunoglobulin(s), then treatment with glutaraldehyde and lyophilisation

INST NAT RECH AGRON 24.03.78-FR-008748

B04 P31 R16 (23.11.79) A61b-10 C12k-01/10 G01n-33/16

Prepn. of a reagent for the diagnosis of *Staph. aureus* comprises (a) sensitising the red blood corpuscles of an animal with a serum contg. reactive immunoglobulins with respect to protein A and having an anti-red corpuscle activity for the animal; (b) addn. of glutaraldehyde to the sensitised prepn. and (c) lyophilisation of the prepn.

Stable reagent having high sensitivity for the determination of *Staph. aureus* by haemagglutination. The diagnosis is very rapid about 30 secs. per test. Known reagents are unstable difficult to prepare or give slow response times.

The sensitisation in stage (a) is generally effected at 37-40°C for 1-2 hrs. and stage (b) is effected at 37-40°C for 10-15 hrs. after glutaraldehyde addn. Pref. the temp. is 40°C, 0.0025-0.01 vol/vol. % of glutaraldehyde is used; the red blood corpuscles are sheep corpuscles and the serum used for the sensitisation is rabbit anti-sheep red blood corpuscle serum. 24.3.78 as 008748 (10pp395)

JONS/ D16 08004Y/05 =GB 1558-603
Filtration of suspensions or colloidal solns. - e.g. liqs. contg. bacteria, animal cells etc.

JONSSON URS 07.07.75-SW-007741

J01 (09.01.80) *DT2630-643 B01d-31

In a method of filtering a suspension supplied at spaced intervals to the prim side of a membrane, the sec side of the membrane is rinsed by a liq other than the filtrate during the periods when the supply of suspension to the membrane is cut-off. The rinse supply is cut-off during the supply of the suspension. A conc. suspension and the filtrate are removed from their respective sides of the filter by two passages, which are closed during rinsing.

Pressure is pref used to supply the suspension.

Dilution of the filtrate is prevented. 5.7.76 as 027920 (16pp1376).

ICIL ★ D16 02269C/02 ★GB 2024-205
Microbiological oxidn. of organic cpds. - with methane-utilising *Methylosinus trichosporium* bacteria

IMPERIAL CHEM INDS LTD 11.05.79-GB-016345 (16.05.78-GB-019712)

E19 (09.01.80) C07b-29

Organic cps (I) are oxidised with the methane-utilising bacteria *Methylosinus trichosporium* (or an extract of this species). (I) are suitably 5-16C alkanes, 3-16C aliphatic alcohols, 3-8C alkenes, or a cyclic organic cpd.

M. trichosporium oxidises a very wide range of (I) at high (80-90%) conversion efficiencies. Thus PhH is oxidised to PhOH, propylene is oxidised to propylene oxide, and p-xylene is oxidised to 4-methylbenzoic acid, etc.

11.5.79 as 016345 (4pp478).

KERJ ★ D16 02312C/02 ★GB 2024-432
Determn. of dielectric breakdown and size - of particles having enveloping membrane by passage through measuring aperture in electrode cell

KERNFORSCHUNGS JULICH 28.06.78-DT-828232

B04 R11 R16 (09.01.80) G01b-07/04 G01n-27/07

A process for determining the dielectric breakdown of particles having an enveloping membrane involves suspending the particles in an electrolyte. The particles are introduced to a measuring aperture through which the electrolyte flows and through which extend lines of electric force generated by a voltage applied to electrodes positioned on opposite sides of the aperture. The particles are exposed as they pass through the aperture to a linearly increasing electric field.

It is arranged that dielectric breakdown of the individual particles occurs as it passes through the aperture. The breakdown is determined by determining the field strength at which the rise of current through the aperture deviates from linearity. The particle size before and after breakdown is determined by measuring the extent to which the current through the aperture deviates from an expected current.

Used for determining the dielectric breakdown of particles which have an enveloping membrane such as biological cells, liposomes, protoplasts, chloroplasts or vacuoles. It may be used in the investigation of the effect of pharmaceuticals or poisons in concentrations which cannot be tolerated by biological cells, or for the examination of the influence of diseases on the condition of living cells. 27.6.79 as 022305(12pp295).

MATU ★ D16 02321C/02 ★ J5 4105-597
Determining concn. of substrate contg. oxido-reductase - and enzyme electrode contg. oxido-reductase, used in synthesis of lactic acid and ethanol

MATSUSHITA ELEC IND KK 30.09.77-JA-118253
E17 J04 R16 (18.08.79) G01n-27/46 G01n-31/14

The concn. of (a) substrate is determined by measuring the electric current of anodic reaction of (b) a redox cpd. on (c) a current-collector in the system which contains (d) oxidoreductase, and (e) coenzyme, (b) conjugates with (e) and has poorer redox potential than (e) has, (c) and (a). An enzyme electrode consisting of (d), (e), (b) and (c) is also claimed. Pref. (b) is a viologen, acridine, quinoline or pyridine deriv.

The method makes it possible to determine the concn. of oxidative substrate of oxidoreductase. The enzyme electrode is used for synthesis of lactic acid from pyruvic acid, synthesis of ethanol from formaldehyde, etc. 30.9.77 as 118253 (5pp90)

KYOW ★ D16 02327C/02 ★ J5 4107-593
Nucleoside-5'-tri:phosphate prodn. - by treating reaction liq. contg. e.g. guanine, phosphoric acid-donor surfactant and sugar with culture liq. of *Saccharomyces* microorganism

KYOWA HAKKO KOGYO KK 07.02.78-JA-011983
B03 (B02) (23.08.79) C12d-13

Prodn. of nucleoside-5'-triphosphate comprising guanosine-5'-triphosphate (GTP), cytidine-5'-triphosphate (CTP), uridine-5'-triphosphate (UTP) and trymidine-5'-triphosphate (TTP) comprises treating reaction liquor contg. (a) guanine, cytosine, uracil or thymine, (b) phosphoric acid-donor and (c) sugars and (d) surfactant with cultured liquor or fungi body of microorganism of *Saccharomyces*, *Candida* or *Torulopsis* genus having power yielding GTP, CTP, UTP and TTP correspond. to bases of (a) from (a), (b), (c) in the presence of surfactant or processed substance of the cultured liquor or fungi body.

GTP, CTP, UTP and TTP useful as biochemical reagents or pharmaceuticals are obtd. at low cost on industrial side. Pref. fungi strain is *Saccharomyces cerevisiae* ATCC 20018, *Candida zeylanoides* ATCC 20356 or *Torulopsis cyclophilla* ATCC 22163, etc. 7.2.78 as 011983 (5pp69)

YOSH/ ★ D16 02361C/02 ★ J5 4149-292
Measuring activity of plasmin in blood - by adding blood plasma to fibrin suspension, opt. adding plasminogen conversion accelerator and measuring rate of decrease of absorbence

YOSHIHAMA H 13.05.78-JA-057033
B04 R16 (22.11.79) G01n-31/22 G01n-33/16

Activity of plasmin, i.e. fibrin-dissolving enzyme in blood is measured rapidly and accurately by (a) adding blood plasma to fine suspended liquor of fibrin, (b) opt. further adding plasminogen conversion-accelerator, e.g. urokinase streptokinase, etc., and (c) measuring the rate of decrease of absorbence, (d) of the fibrin suspended liquor.

The plasmin activity is proportional to R and the plasmin activity can be measured with high accuracy. The fibrin suspended liquor is prepd. by adding EDTA and trombin to 5%-fibrinogen soln. (0.3 M NaCl soln.) to prepare fibrin. The insolubilised fibrin is dissolved in urea soln., and dialysed with deionised water to settle-out fibrin as fine particles. The fibrin granular size is further decreased to $< 10 \mu$ by means of an ultrasonic generator and the suspension is stabilised by adding NaCl, glucose, gum arabic, imidazole-HCl buffer (pH = 7.3). 13.5.78 as 057033 (3pp34)

TANA ★ D16 02694C/02 ★ J5 4151-1
Compsns. contg. washed microorganisms - prepd. by freezing washed microorganism suspension in aq. DMSO, used for microbiological analysis of physiologically active substance

TANABE SEIYAKU KK 16.05.78-JA-058559
B04 (28.11.79) C12k-01/08

Compsns. contg. washed microorganisms are prepd. by freezing a suspension of washed microorganisms in aq. DMSO.

The compsns. are used in quantitative analysis of physiologically active substances, e.g. aminoacids, vitamin or in screening of disorders of metabolism, e.g. phenylketonuria, tryptophanuria, hyperlysinemia, maple syrup urine disease. The organism contained in the compsns. is inoculated on a basal culture medium from which the physiologically active substance has been eliminated and to which a sample to be analysed has been added; thus, the organism grows in proportion to the amt. of the active substance contained in the sample. The addition of DMSO in the freezing is effective in avoiding the damage organisms by frost. 16.5.78 as 058559 (9pp52)

TOXF ★ D16 02695C/02 ★ J5 4151-18
Photosynthetic bacteria prepn. - by culturing a bacterium of *Rhodopseudomonas* genus in presence of distillers solubles

TOHO BESLON KK (KIRI) 15.05.78-JA-057123
(28.11.79) A23k-01 C12k-03

In cultivation of photosynthetic bacterium belonging to the genus *Rhodopseudomonas*, grain syrup is added to the culture medium. The photosynthetic bacterium can be obtd. at high concn. The grain syrup means wasted material of distillation of whisky which is also called distillers' solubles. The amt. of the grain syrup to be added to the culture medium is 0.1-10%.

The culture medium contains conventional carbon sources, nitrogen sources, inorganic salts and others. The cultivation is conducted at pH 6-8 at 15-37°C, pref. 28-32°C under aerobic conditions with air volume of 0.05-0.4 vvm for 24-48 hrs. By this method, yield of the photosynthetic bacterium can be increased by 50-200%. 15.5.78 as 057123 (5pp22)

AGEN ★ D16 02696C/02 ★ J5 4151-19
Alpha-1,6-glucosidase prepn. - by cultivating microorganism of genus *Bacillus* in the presence of iron ions

AGENCY OF IND SCI TECH 17.05.78-JA-058487
(D17) (28.11.79) C12d-13/10

α -1,6-Glucosidase is prepd. by cultivation of microorganisms which belongs to the genus *Bacillus* and can produce α -1,6-glucosidase, Fe ion being allowed to exist in the culture medium.

α -1,6-Glucosidase can be obtd. at high yield. The microorganism usable includes *Bacillus cereus* var. *mycoides* FERM-P No. 2391. Fe ion is added to the culture medium in a form of hydrochloride, sulphate, citrate, fumarate, lactate and other inorganic or organic acid salt. An amt. of the Fe ion to be added is 1×10^{-5} to 1×10^{-3} M.

The culture medium contains starch, dextrin, maltose, glucose, etc. as carbon source, peptone, casein, meat extract, yeast extract, etc. as nitrogen source, inorganic nitrogen cpd., phosphate, magnesium salt, etc. The culture medium is adjusted to pH 6-8. 17.5.78 as 058487 (4pp22)

AGEN ★ D16 02697C/02 ★ J5 4151-19
Alpha-1,6-glucosidase prepn. - by cultivation of microorganism of genus *Bacillus* in the presence of nickel, cobalt or zinc ions

AGENCY OF IND SCI TECH 17.05.78-JA-058488
(D17) (28.11.79) C12d-13/10

α -1,6-Glucosidase is prepd. by cultivation of microorganism which belongs to the genus *Bacillus* and can produce α -1,6-glucosidase. Ni, Co or Zn ion being allowed to exist in the culture medium.

α -1,6-Glucosidase can be obtd. at high yield. The microorganism used includes *Bacillus cereus* var. *mycoides* FERM-P No. 2391. The metal ion is added in the form of hydrochloride, sulphate, phosphate, other inorganic acid salt or organic acid salt. Amt. of ion to be added is 1×10^{-5} to 1×10^{-3} M.

The culture medium contains starch, dextrin, maltose

ucose, etc. as carbon source; and peptone, casein, meat extract, yeast extract, etc. as nitrogen source, inorganic nitrogen cpd., phosphate, magnesium salt, etc. The culture medium is adjusted to pH 6-8. 17.5.78 as 058488 (4pp22)

EN ★ D16 02698C/02 ★ J5 4151-192
 fermentative prodn. of alpha-1,6-glucosidase - by culturing microorganism belonging to Bacillus genus, with rice bran, opt. in presence of ammonium phosphate
 AGENCY OF IND SCI TECH 18.05.78-JA-059666
 (D17) (28.11.79) C12d-13/10 C12k-03
 prepn. of a-1,6-glucosidase by cultivation of microorganism which belongs to the genus Bacillus, rice bran or treated material opt. with ammonium phosphate are added to the culture medium. Suitable microorganisms include Bacillus cereus var. mycoides FERM-P No. 2391. The rice bran treated material includes extract of rice bran with water, etc. Amt. of rice bran or its treated material to be added is 0.1-5 %, and that of ammonium phosphate is 0.05-0.2 M. The culture medium contains starch, dextrin, maltose, glucose, etc. as the carbon source, peptone, casein, meat extract, yeast extract, etc. as nitrogen source, inorganic N cpd., phosphate, magnesium salt, etc. The culture medium is adjusted to pH 6-8. 17.5.78 as 059666 (4pp22)

PK ★ D16 02699C/02 ★ J5 4151-195
 phenylphenol prodn. from Pseudomonas SG-1043 strain - by culturing in medium contg. biphenyl as major carbon source
 NIDEMITSU KOSAN KK 17.05.78-JA-057586
 (E14) (28.11.79) C12d-13
 prepn. of phenylphenol comprises culturing Pseudomonas SG-1043 strain (FERM-P No. 4471) in a medium contg. biphenyl and recovering phenylphenol from the culture. SG-1043 strain is new strain and the produces a large amt. of phenylphenol.
 In an example, SG 1043 strain is inoculated to a medium (pH 7.0) contg. 2% of biphenyl, 0.2% of ammonium nitrate, 1% of disodium phosphate, 0.55% of monopotassium phosphate, 0.02% of magnesium sulphate, 0.001% of calcium chloride, 0.0001% of ferrous sulphate, 0.01% of yeast extract and 0.01% of corn steep liquor and cultivation is carried out at 30°C for 3 days. After cultivation, 420 ml of culture liq. is centrifuged, the resulting liq. adjusted to pH 7, and extracted with ethyl acetate. The ethyl acetate layer is dehydrated with sodium sulphate and concd. to dryness. The obtd. residue is subjected to silica gel column chromatography. o-Phenylphenol and m-phenylphenol are eluted in this order. Each fraction is concd. and the residue is recrystallised from n-hexane. There are obtd. 410 mg of o-phenylphenol and 130 mg of m-phenylphenol. 17.5.78 as 057586 (4pp108)

II ★ D16 02700C/02 ★ J5 4151-196
 nocardicine-A prodn. - by culturing strain of Streptomyces
 FUJISAWA PHARM KK 19.05.78-JA-060484
 (B04) (28.11.79) C12d-09/14
 nocardicine A is produced by culturing a nocardicin A producing strain of Streptomyces on a culture medium and recovering nocardicine A from the culture broth is new.
 nocardicin A is produced by a new basophile strain of Streptomyces, named Streptomyces alcalophilus No. A-635 (FERM-P 4484; ATCC 31393), growing at pH 9.5-10.0, isolated from the soil of Tokyo. In an example, a culture medium (100 ml each) of 1% soluble starch, 1% soybean meal, 0.5% soybean oil, 0.08% Na₂CO₃ and 0.00025% CoCl₂ is placed in four 300 ml Erlenmeyer flasks, and sterilised at 120°C for 20 mins. A platinum loop of Str. alcalophilus No. A-635 (slant culture broth) was inoculated thereon, and cultured at 30°C for 3 days. 19.5.78 as 060484 (5pp52)

RA ★ D16 02760C/02 ★ J5 4151-583
 specific adsorbent for physiologically active substances - comprising fibre agglomerate contg. single yarns of fineness max. 1 denier
 UNITIKA KK 19.05.78-JA-060485
 (A97 B04 J01) (28.11.79) B01d-15
 specific adsorbent, comprises fibre agglomerates, in which agglomerates consist of single yarns whose single

yarn fineness is < 1 denier or whose single yarn fineness is 0.001-0.8 denier.

Since this adsorbent has a large adsorption capacity per unit weight, appts. may be formed in a small size. This is used for sepg. or purifying physiological active substances such as lymphocyte, T-cell, B cell, coenzyme, hormone and antigen, or enzyme such as urokinase, amylase, trypsin and cellulose.

In an example, Nylon-6 staple (single yarn fineness: 0.2 denier; fibre length: 76 mm) 1 g was washed in turn with tetrachlorethylene, ethanol and boiling water and packed in a 3-cc-column, to which human televein blood contg. less erythrocyte component was added dropwise, and thus purified lymphocyte was obtd. The collection rate of the lymphocyte was 99% and the number of the lymphocyte was 10×10^5 per 1 ml. 19.5.78 as 060485 (3pp96)

NIRA ★ D16 02791C/02 ★ J5 4151-673
 Carrier for fixing physiologically active substances - comprising fibre assemblage contg. individual fibres of max. 1 denier

UNITIKA KK 16.05.78-JA-058564
 (A96 B04 F01) (29.11.79) B01d-15 C09k-03 D06n-07

Carrier for fixing physiologically active substances is composed of fibre-assembly product wherein the fibre-assembling prod. is composed of a fibre of ≤ 1 (0.001-0.8) d. of single fibre size.

The fibre-assembling prod. is composed of polyamide, polyester, polyacrylonitrile, polyvinyl alcohol and regenerated cellulose. The carrier is used for fixing physiological substance such as enzyme, assistant enzyme, hormone, antigen and antibody.

In an example; 500 mg of a staple fibre composed of PET are treated as follows; (1) the staple fibre is immersed in a methanol soln. contg. 2% wt. polyethylene imine and 2% wt. dicyclohexyl carbodi-imide and washed with methanol and dried, (2) and immersed in acetone contg. 3% wt. anhydrous maleic acid-methyl vinyl ether copolymer and washed with acetone and dried, and (3) immersed in a soln. dissolving 5 mg β -amylase and 1.5 mg glutathione in 5 ml phosphoric acid buffer soln. at 40°C for 24 hrs. and washed with physiological saline. 16.5.78 as 058564 (3pp84)

ISHH ★ D16 02809C/02 ★ J5 4151-901
 Antibiotics FA-2713-I and II - have potent antimicrobial action against Gram positive bacteria, yeast and mould, esp. sheath blight in rice

ISHIHARA SANGYO KAISHA 23.05.78-JA-060580
 (C03) (29.11.79) A01n-09 A61k-35/74 C07g-11 C12d-09/14

Antibiotic FA-2713-I is a neutral white powder of elementary analysis, 60.1% C, 8.1% H and 4.3% N, m.pt. 130-133°C (decompsn.), IR (KBr) 3600-3200, 2950, 1700-1600, 1390, 1250, 1100-1080 cm⁻¹ and paper chromatography (developed by water-satd. n-BuCH). Antibiotic FA-2713-II is a neutral white powdered elementary analysis 61.8% C, 7.9% H, and 4.5% N, m.p.t 117-120°C decompsn. IR (KBr) 3800-3200, 2900, 1820, 1370, 1230, 1060 cm⁻¹ and Rf = 0.7 by paper chromatography (water-satd. n-BuOH).

When used as dusts or wettable powders against sheath blight, they may be applied in a concn. of 5-1000 pref. 10-300 ppm. The antibiotics are produced by Streptomyces hygroscopicus FA-2713 (FERM-P 4497) isolated from Malaysian soil and its variants. 23.5.78 as 060580 (10pp)

BOEF D16 14866V/08 = J7 9041-359
 Enzymic detn of uric acid - using a uricase-catalase-alcohol dehydrogenase system

BOEHRINGER MANNHEIM GMBH 25.05.73-DT-326756 (02.08.72-DT-237940)

(B04 R16) (07.12.79) *NL7310-625 G01n-31/14 G01n-33/16

Uric acid is determined by converting to allantoin and H₂O with uricase, reacting the H₂O₂ with EtOH and catalase to obtain acetaldehyde, and reducing this with NaDH and alcohol dehydrogenase. The reaction is followed spectrophotometrically at 340 or 366nm by means of the conversion of NaDH to NAD. Provided the EtOH concn. is 0.3-0.7% v/v and the pH 6.3-7.1, EtOH does not interfere in the final step. 2.8.73 as 087182 (clg. 2.8.72; 25.5.73-DT-223794; 232675) G01n-33/16; 31/14 (7.12.79)
 BOEHRINGER MANNHEIM GMBH (6pp) (J4 9060290)

SANY D16 34353X/19 = J7 9041-520
Terminating dehydrogenase enzymatic reactions - by adding cyclohexylamino-propanesulphonic acid aqueous alkaline solution
SANKYO KK 23.10.74-JA-122243
B04 + R16 (08.12.79) *DT2547-557 G01n-31/14 + G01n-33/16

In the spectrophotometric determ. of the activity of a serum enzyme involving the enzymatic reaction of a dehydrogenase or dehydrogenase system, the enzymatic reaction is terminated using an aq. alkaline soln. of cyclo-hexylaminopropanesulphonic acid (I) having a concn. of 0.1-2 M and a pH of 10.5-12.5.

Method is useful in the spectrophotometric determ. of a serum enzymes such as GOT and GPT, ALD, and CPK, in the diagnosis of heart liver and muscular disorders. The alkaline solns. of (I) terminate dehydrogenase activity without affecting the UV absorption of NAD or NADP at 340nm and without affecting the turbidity of normal human serum or serum from hyperlipaemic patients.

Termination of the enzymatic reaction with (I) enables one person to carry out several analyses simultaneously, in this way, it is possible for one person to carry out 100-200 analyses per day. 23.10.74 as 122243 G01n-33/16, 31/14 (8.12.79) SANKYO KK (7pp) (J5 1048482)

PERR-★ D16 03012C/02 ★NL 7904-646
Sterilisable plastic bags - with microporous film panel sealed between perforated wall section, used e.g. as mushroom grow bag
HEINZ PERRIER SA 16.06.78-FR-018146
A92 Q32 Q34 (A17 A23) (18.12.79) B65d-31 B65d-33/04 B65d-65/38 B65d-85/52

Sterilisable plastic bags have a panel of microporous sheet material with a pore size of $< 0.5 \mu\text{m}$ which is a bacterial filter. The panel is situated between, and welded around the edges to, two perforated areas in the plastic sheet material. The bags can be made eg. of transparent or translucent polypropylene, nylon or polyethylene. The microporous panel is eg. of microporous polyethylene or polypropylene sheet, or microporous paper contg. polymer fibres to facilitate welding to the plastics film material.

The bags are esp. useful as a container for a growth medium inoculated with a mushroom mycelium. The bags allow the passage of CO_2 and O_2 , so that the mushrooms can grow during storage of the bags. 13.6.79 as 004646 (8pp513)

MLCS=★ D16 03093C/02 ★SU -658-112
Structural, metal casting etc. ceramic material mfr. - includes treatment of clay with aq. suspension of specified live bacterial cells to reduce firing temp. etc.

MOLD CON MAT RES 29.11.76-SU-424565 (29.11.76-SU-424564)
L02 (25.04.79) C04b-33/04

Treatment of raw clay with *Bacillus mucilaginosus*, subsp. nova: siliceus A-27, increases the degree of dispersion of the clay particles, reduces the firing temp. of the material and improves its properties by solubilising the Ca, K, Fe, Ti and Si impurities.

The strain A-27 has been developed by prof. V.G. Aleksandrov, and is obtained from the Leningrad Agricultural Microbiology Res. Inst. It was developed for use as a bacterial fertiliser.

The culture contg. $(0.1-0.3) \cdot 10^6$ cells/ml. was added to clay in amounts of 10^{-5} - 10^{-2} m^3 per ton of clay, the mixture satd. with water and left to stand for 1-50 days at 20-30°C and pH 6.5-7.6. Subsequent washing gave the product. Tests show the treatment increases the specific surface area of the clay e.g. from 28.2 to 53.8 m^2/g . The treatment reduces the firing temp. of the clay by 50-80°C, improves its refractory properties, increases the compressive and bending strength of the fired articles by 45-80% and 10-25% respectively.

Aleksandrov, V.G., Goryainov, K.E., Ternovskaya, M. I et al. Bul. 15/25.4.79. 29.11.76. as 424565 (9pp124)

IVAN=★ D16 03145C/02 ★SU -658-167
Enterobacteria type determination - using thermal differentiation analysis after specified culturing test strain

IVANOVO MEDICINE IN 21.10.77-SU-535931
(26.04.79) C12k-01

Differentiation between enterobacteria is carried out by cultivating the bacteria in a nutrient medium, and then determining their proliferation.

The method is rendered more accurate by washing the culture (in an agar medium), drying, disintegrating and performing differential thermal analysis (DTA) to determine the genus and form of the enterobacteria.

The enterobacteria are cultivated in a nutrient agar medium for 1 day. Then the culture is washed with a twice distilled water; dried at 60°C, and ground for 5 min. The subsequent DTA takes 60 min. The characteristic peaks are ($\pm 1-2^\circ\text{C}$) salmonella 242 and 300°C; Shigella 242, 275 and 316°C; Escherichia 300 and 316°C; Proteus vulgaris 305, 325 and 340°C; Proteus mirabilis 305 and 325°C, Proteus morganii 305°C.

Smirnov, S.G., Mokey, S.I. Bul. 15/25.4.79. 21.10.77 as 535931 (2pp70)

BIOT=★ D16 03146C/02 ★SU -658-1
Cultivation of hemicellulase-producing strain of fungus *Aspergillus* using aq. nutrient medium contg. extract of wheat bran in sebatic acid soln., extract of malt germs and sodium nitrate

BIOTECH RES INST 17.10.77-SU-534774
(26.04.79) C12d-13/10 C12k-01/06

Nutrient medium for deep cultivation of the hemicellulose producing fungus *Aspergillus awamori* 16 contains extract of wheat bran and malt germs and NaNO_3 . This medium is prepd. by carrying out a first extraction of wheat bran with an acid soln. at elevated temp; and carrying out a second extraction with the first extract in an autoclave. This method is improved by carrying out the extraction of the wheat bran with a sebatic acid soln. (pref. concn. 0.04-0.2%), whereby the activity of the hemicellulose is increased by 50%. The duration of the two extraction stages is 1.5-2.0h. and 1-1.5h. respectively.

The compsn. contains (in wt. % w.r.t. the total compsn.) 6% extract of wheat bran in 0.05-2% sebatic acid soln. 88.73, 10% extract of malt germs 10.0, NaNO_3 0.27. No ppt. is formed during the sterilisation.
Budanov, V.D., Kalunyants, K.A., and Dorokhov, V.V. Bul. 15/25.4.79. 17.10.77. as 534774 (2pp70)

KIME=★ D16 03147C/02 ★SU -658-1
Extending storage viability of microorganisms in dried cultures includes growing microorganisms on polyacrylamide gel plate impregnate with nutrient medium and drying at specified temp.

KIEV MEDICINE INST 03.08.77-SU-515472
(26.04.79) C12k-01/08

The storage viability of microorganisms in dried culture is extended by growing the microorganisms on polyacrylamide gel plates imbued with a nutrient medium; then cutting out of the plate cylindrical bodies (dia. 1.0-1.2 cm) and drying them at 37°C.

The preparation is stored at 4°C.

The biochemical properties of the microorganisms are preserved. They are able of propagating upon reamination.

The method is much simpler than the customary lyophilic drying of the microorganism cultures. In an example, staphylococcus aureus is stored by this method.
Bilko, I.P., Gashinskii, V.V. 3.8.77. as 515472 (2pp70)

MOVE=★ D16 03148C/02 ★SU -658-1
Inactivation of virus of infective bronchitis of chicken - by repeated culturing in chick embryo and use of aq. soln. of ethyl-mercury-thiosalicylic acid

MOSC VET ACAD SKRYA 22.03.77-SU-465500
B04 C03 (26.04.79) C12k-07

Virus of the infective bronchitis of chicken can be inactivated by treatment with ethylmercurythiosalicylic acid (m.pt. 111°C) after passivation by culturing in chick embryo. There is no need to apply any additional chemical treatment. The $\text{LD}_{50} = 75 \text{ mg/kg}$. (w.r.t. rats).

A soln. of ethylmercurythiosalicylic acid is prepd. by dissolving 100 mg. of this cpd. in 10 ml. of the nutrient medium 199 at 370°C for 3h. Then the soln. is used for inactivation of the bronchitis virus extracted from 9-day old chicken embryos, at 37°C for 3 days.

Kurilenko, A.N., Kosova, N.K. Bul. 15/25.4.79. 22.3.77. as 465500 (2pp70)

D/ ★ D16 03237C/02 ★SU -659-167
 determining foaming tendency of liquids - by bubbling air at
 different velocities and comparing with foaming of reference
 liquid, used in microbiology etc.
 SIDOROV V M 11.11.75-SU-192422
 216 (30.04.79) B01d-19/02 C12b-01/18 G01n-33
 foaming tendency of liquids can be determined by bubbling
 through a liquid contained in a measuring cylinder
 until the foam level reaches a constant value. This
 method is improved by gradually increasing the velocity
 of the air stream from 0.01 m/sec. to a critical velocity
 at which the foam layer disappears.
 The index of the foaming tendency is the ratio of the
 volume of the liquid introduced into the cylinder to the
 volume of a reference liquid corresponding to the same
 critical velocity as that of the liquid under test. By this
 method the foaming tendency of any liquid can be deter-
 mined with good accuracy.
 This method is esp. suitable for use in the microbio-
 logical industry for the determin. of the foaming tendency
 in culture media.
 Sidorov, V.M., Umanskii, M.P. Bul. 16/30.4.79.
 11.75. as 192422 (4pp70)

W/ ★ D16 03245C/02 ★SU -659-176
 dispersion systems generation - using continuous non-
 mechanical agitation through regulated gas injection into industrial
 reactor
 KRIVOI B A 10.10.77-SU-530223
 102 (30.04.79) B01f-03
 process, used in petrochemical, ore processing,
 microbiological etc., industries, comprises formation in
 dispersion medium of a dynamically-stable cavitation
 cavity, and spraying into it of the material being dispers-
 ed.
 To increase performance by reducing the specific
 energy expenditure, the cavity is produced by feed of gas
 under a pressure above the hydrostatic pressure of the
 dispersion medium. The gas press. in the cavity is regu-
 lated.
 Krivoi, B.A., Smyslov, P.A., Perkovich, S.G. et al.
 11.16/30.4.79. 10.10.77. as 530223 (2pp132)

OD= ★ D16 03356C/02 ★SU -659-606
 beer prodn. grain malting process automatic control - includes
 adjusting aerating air flow rate and temp. to control heat
 generation
 FOOD IND WKS DES IN 15.10.76-SU-412687
 (30.04.79) C12c-01/08
 reduced losses as well as improving the malt and accel-
 erating the malt growth in box-type processing are achiev-
 ed by controlling the temp. of the aeration air.
 The rate of air flow and its temp. are adjusted
 according to the indication of heat development during
 malting, and when heating is moderate the flow is adjust-
 ed at a stable temp.
 Sukher, Ya.G., Seredenko, V.B. Bul. 16/30.4.79.
 10.76. as 412687 (4pp89)

LIT/ ★ D16 03357C/02 ★SU -659-608
 microbial biomass e.g. yeast from culture medium sepn. unit - has
 horizontal perforated tubes and vessel with curved plates of
 hydrophobic material below gas dispersion unit
 ZAITSEV V A 04.04.77-SU-469650
 (30.04.79) C12c-11/24
 sepn. of microbial culture, e.g. yeast is improved
 and losses by entrainment with the clarified liquid are re-
 duced due to the presence of the curved plates in the tank,
 made of a hydrophobic material and fitted in the down-
 stream of the unit dispersing gas in the culture liquid.
 Horizontal tubes with perforations for feeding the
 microorganisms suspension are fitted between the turns
 of the auger flight, so that the foam is additionally de-
 watered.
 Zaitsev, V.A., Kipriyanov, Yu.I., Krats, V.M. et al.
 Bul. 16/30.4.79. 4.4.77. as 469650 (4pp89)

KIFO= ★ D16 03358C/02 ★SU -659-616
 Fermenter filler beer wort aerator - has vertical unit between cooler
 and fermenter with connection to filter through non-return valve
 KIEV FOOD IND TECHN 21.12.76-SU-432763
 (30.04.79) B01f-03/04 C12h-01/22

The fermentation of wort is accelerated and its contamin-
 ation with air bacteria is prevented with enhanced re-
 liability of the installation if during the aeration of the
 wort, the liquid is satd. with gas by a vertical unit be-
 tween the cooled and the fermenter tank, and a connection
 is provided at the top to the gas filter via a non-return
 valve.

The gas is forced through a porous element, the
 pressure controlled by a manometer and valve, while the
 filter valve ensures discharge of condensates. The annu-
 lar section of the space of gas entry contributes to rapid
 dissolution, the oxygen dispersion controlled by a trans-
 ducer.
 Yarochkin, B.E., Oderil, L.P. Bul. 16/30.4.79.
 21.12.76. as 432763 (4pp89)

HETB D16 59066A/33 #US 4179-918
 Beer carbon dioxide content measurement - using temperature-
 sensitive unit with electrical characteristics fluctuating to Henry
 constant (NL 8.8.78)
 HEINEKEN TEC BEHEER NV 04.02.77-NL-001200 (13.02.78-US-
 877090)

J04 R16 (25.12.79) *DT2804-350 G01n-33/14
 The CO₂ content of beer is measured by partially filling a
 vessel with beer and forming a CO₂ atmos. over it; meas-
 uring its temp. to give an electric signal which varies with
 temp. in a manner proportional to changes in a constant
 (f) with temp. (where $f = (b/T) - a$; f = Henry's constant; a =
 10.89232; and b = 2654.06); measuring the CO₂ pressure to
 produce a signal proportional to it; and combining the sig-
 nals to give an output which is a direct measure of the CO₂
 concn.

The system uses an operational amplifier, having a
 feedback loop, which comprises a thermistor in the beer.
 13.2.78 as 877090 (6pp976)

BOEF D16 07402V/05 = US 4180-060
 Staining biological substances - using thin tubes having inner solid
 coating contg dyes or colour producing reagents
 BOEHRINGER MANNHEIM GMBH 18.08.72-DT-240672
 B04 + P31 R16 (25.12.79) *DS2240-672 + A61b-05/14

A device for staining individual cells suspended in a bio-
 logical fluid consists of a thin tubelet and a solid coating
 of staining reagent for uniformly staining the suspended
 cells.

The coating is applied to the inner wall of the tubelet
 and is soluble in the fluid. The uniform staining of the sus-
 pended cells for microscopic examination is effected
 upon the removal of the reagent from the inner wall when
 dissolved in the fluid. Pref. the inner dia. of the tubelet
 is 0.3-1mm. The coating further contains a buffering sub-
 stance, an anticoagulant and/or a stabilising substance.

The device is esp. used for the microscopic assessment
 of blood, urine, bacterial cultures and body secretions.
 8.8.77 as 822964(+ 2.8.73 -US- 385000)(3pp931)

BECT D16 80578X/43 = US 4180-383
 Stable carriers, esp for immunoadsorbents - comprising a support
 coated with a protective layer
 BECTON DICKINSON CO (HUGJ) 07.04.75-US-565848 (31.05.77-
 US-801867)

B04 R16 + R19 (25.12.79) *NL7603-439 G01n-33/16
 Chamber holders for immobilised immunoadsorbents are
 used in a radioimmunoassay for accurate determination of
 the amount of an antigen. The holder is repeatedly reused
 for subsequent assays by show of a mixt. of radioactive
 labelled and unlabelled antigen through the holder, followed
 by a stoichiometric release of the portion of the mixt.
 which is bound to the immunoadsorbent, and release of the
 holder.

The holder comprises a supporting structure, a cham-
 ber in the support, an immobilised immunoadsorbent
 which includes a substrate stable against dehydration and
 collapse in the chamber and a support for the immunoad-
 sorbent in the chamber. The substrate has associated anti

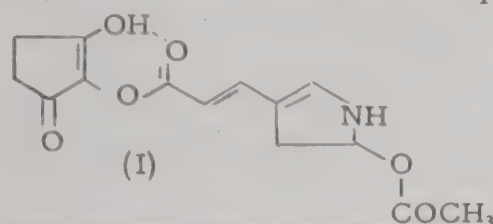
-bodies for binding a specific antigen. 31.5.77 as 801867 Div.ex 4095685(8pp974)

KYOW D16 75441A/42 =US 4180-436
Antibiotic S551-II - prepd. by culturing *Streptomyces* microorganism in nutrient medium

KYOWA HAKKO KOGYO 18.02.77-JA-016068

B04 (25.12.79) *J53105-473 C12d-09

A new antibacterial cpd. S551-II (Reductiomycin) of formula (I) is produced by culturing the microorganism *Streptomyces griseoerubiginosus* FERM-P No. 3836, NRRL 11,268 in a nutrient medium pref. at 23-38°C.



The cpd. is useful for cleaning and disinfecting purposes. 17.2.78 as 878776(6pp990).

INSP D16 39098U/28 =US 4180-563
Isolation of immunostimulating agents - from animal spleen cells etc

INST PASTEUR 24.12.71-FR-046520

B07 (25.12.79) *NL7217-588 A61k-39/02

Immunostimulant agent is derived from bacterial cells of *salmonella typhimurium* or *Listeric monocytogenes* and promotes non-specific resistance to pathogens. The immunostimulant is (a) soluble in CHCl_3 , (b) insol. in water; (c) free of bacterial cell fractions which are not a soluble in a solvent mixt. of halogenated hydrocarbon and an alcohol; (d) a stimulant for the non specific resistance of a human or animal host organism to a pathogen which has no anti-*-enic* relationship to the immunostimulant, (e) capable of causing an increase of macrophages and lymphocytes of a hot organism; (f) effective against *Salmonella typhimurium* in blood if so infected mice; (g) effective against 10 times the LD_{50} of *Listeria monocytogenes* and 20 times the LD_{50} of *Salmonella typhimurium* (i) virtually free of toxicity and (j) not capable of increasing the sensitivity of mice to bacterial endotoxins. 23.2.78 as 880511 Div.ex 4076801(+ 20.12.71, 2.5.75-US-317022, 573925)(16pp964)

ELIL D16 89800B/50 =US 4180-564
Antibiotic A-38533 complex contg. four separate factors - useful as low toxicity antibacterial esp. effective against *Pseudomonas* spp.

ELI LILLY & CO 25.05.78-US-909582

B04 (25.12.79) *EP---5-956 A61k-35

Antibiotic A-38533 factor A_1 , a white non-crystalline powder is new. The antibiotic has the following characteristics (a) compsn. 53.3-54.9%, 5.5-5.7% H, 12.4-12.7%N, 24.3-25.6% O and 3.3-3.8% S; (b) mol.wt. 840; (c) mol. formula $\text{C}_{37}\text{H}_{44}\text{N}_8\text{O}_{13}\text{S}$. (d) IR absorption maxima at 3363, 1665, 1593, 1552, 1518, 1465, 1396, 1363, 1268, 1185, 1112, 1073, 964, 887, 822, 792, 708, 635, 582, 555 and 490 cm^{-1} ; (e) five tetratable gps. in 66% aq. DMF with pKa values 5.93-6.02, 7.71-7.88, 10.80-10.90, 12.0-12.6 and 13.0.

Other characteristics are : (f) UV absorption maxima at 256 nm (t 21,500) and 222 nm (E28,500) in acidic or neutral methanol; and 290 nm (E7,500), 260 nm (E22,400), and 242 nm (E35,599); (g) is soluble in water, methanol DMSO, DMF, aq. alcohol and aq. THF; (h) gives positive colour reaction to Molish, Ehrlich and Pauly tests; (c) contains (1) uracil and (2) OH and/or NH_2 gps. which can undergo acylation; (j) has an Rf value of 0.55 or their layer chromatography. 25.5.78 as 909582(14pp964)

MILL-★ D16 03556C/02 ★US 4180-589
Prodn. of lager beer of milder flavour - by fermentation at elevated temp. under carbon dioxide overpressure

MILLER BREWING CO 28.12.77-US-865358 (14.10.75-US-622001)

(25.12.79) C12c-11/04

Lager beer having a mild, bland less aromatic character is prepd. by fermenting the wort for 60-200 hrs. at 60-200 hrs. at 60-85°F, under a CO_2 overpressure of 5-40 psig so that the dissolved CO_2 concn. is 2.1-4.0c.c. per c.c. of fermenting wort.

The prod. may appeal to those who do not like the taste of conventional beers, and can be used as a base for flavoured beers. It has a milder flavour than both conventional beer and the prod. of the process of the parent patent No. 4068005 (A process for producing beer in reduced fermentation time using elevated temps. and CO_2 overpressure) 28.12.77 as 865358 C.i.p. 4068005(+14.12.76 -US- 750509) (7pp955)

SHOW- D16 75353A/42 =US 4180-626
Fermentative prepn. of citric acid from crude olefin - by aerobically culturing with the yeast, *Candida tropicalis*, in culture medium contg. olefin mixt.

SHOWA OIL CO 25.02.77-JA-019286 (25.02.77-JA-019285)

E17 H04 (25.12.79) *J53104-794 C12d-01/04

Citric acid is produced by fermentation by culturing olefin-assimilable *Candida tropicalis* microorganisms under aerobic conditions at 25-40°C at pH3-10 in an aq. nutrient medium contg. olefins. The olefins used are combinations of normal 8-40C olefins. The olefins are used as the main carbon source, and the medium further contains < 1000g/l of biotin or biotin and thiamine-hydrochloric acid as a vitamin.

Crude olefins produced from the thermal cracking of crude paraffin wax or from the polymerisation of ethylene are used as the carbon source, providing a cheap starting material for citric acid mfr. 29.12.77 as 865397(3pp931)

USDA ★ D16 03571C/02 ★US 4180-627
Bovine Transfer Factor prepn. from ground lymph nodes - by incubating the lymphocytes, centrifuging, and fractional pptn. of the supernatant with ethanol

US SEC OF AGRICULTURE 17.08.78-US-934289

B04 C03 (25.12.79) A61k-39 C07g-07

Bovine Transfer Factor is produced by grinding mesenteric, thoracic, submandibular, cervical, axillary, femoral and popliteal lymphatic nodes of cattle, incubating the resulting ground material in Hanks salt soln. for 4 hours, at 37°C, centrifuging, sepg. the supernatant which is dialysed against water for 16 hours at 4°C.

It is then freeze dried to give crude Transfer factor. This is fractionated by the dropwise addition of 95% alcohol at 4°C to its aq. soln. until a fibrous interphase develops, allowing to stand for an hour, stirring and sepg. the pptd. Transfer Factor I which is then lyophilised. The supernatant is again fractionated by the addition of alcohol in the same manner to give Transfer Factor II.

Used in immunisation of mammals by the transfer of cell-mediated immunity to *Eimeria bovis* antigen, purified protein deriv., keyhole limpet haemocyanin and other derivs. from pathogenic microorganisms or malignant tissue. The prod. produced is more efficient than prior art Transfer Factor. 17.8.78 as 934289(5pp916)

See Also

D13 DT 2922783

D17: SUGAR; STARCH

OLIV/★ D17 C/02 ★BR 7803-806
Cane mill hydraulic actuating system

OLIVEIRA H 14.06.78-BR-003806

P71 Q56 (18.12.79) B30b-09/20 C13d-01/02 F04b-39/08

TENC D17 72164T/45 =DS 2230-074
Aq surface coating compsns contg hydroxyalkyl ether - of galactomannan gum - have superior flow and levelling props

TENNECO CHEMICALS 23.06.71-US-156050

A11 G02 (A82) (03.01.80) *US3700-612 C09d-03 48 + C09d-05

A paint is an aq. dispersion contg. (a) 10-70 wt. % of a water soluble adhesive which is an oil resin and/or a vinyl addition polymer and (b) 0.01-2.0 wt. % (based on total wt.

of dispersion) thickener of galactomannan-hydroxyalkyl ether with a degree of substitution 0.1-3.0 and 2-6C in the hydroxyalkyl.

Pref. 0.1-1.0 wt. % thickener is used of guar hydroxyalkyl ether of 0.5-2.0 degree of substitution; the adhesive is polyvinylacetate copolymer, or acrylate copolymer, or 80 : 20 (wt) vinyl acetate/ethyl acrylate copolymer. The paint contains 30-60 wt. % pigment of filler. The new thickener imparts good flow properties to the paint. 20.6.72 as 230074 (5pp068)

SUDC D17 12795Y/08 = DS 2545-110
Xylose recovery from xylan-contg. natural products - by two stage base and acid treatment in a single vessel

SUD-CHEMIE AG 08.10.75-DT-545110

E13 (D13) (03.01.80) *BE-847-080 C13k-13

Hemicelluloses from natural prods. contg. xylan are decomposed in two stages, to produce xylose (II). The starting material (III) is treated in the first stage at normal or elevated pressure, and at elevated temp., with an alkali hydroxide soln. (IV) of alkali content sufficient to cleave off and neutralise acetic acid bonded in (III); (IV) is filtered off from the reaction vessel (V) and the residue obtd. is extracted. The solid extn. residue so obtd. is subjected to an acid treatment in the second stage at elevated press. and elevated temp., the acid soln. is filtered off from (V) and the residue so obtd. is again extracted. The soln. or extract from the second stage is worked up to produce (II) or xylite, and opt. the soln. or extract from the first stage is worked up to produce organic acids and lignin.

The novelty is that both stages are effected in a single reaction vessel. The process avoids disadvantages associated with filter presses. 8.10.75 as 545110 (6pp481)

SUCR- D17 63443X/34 = DS 2709-683
Syrup filter requiring short regeneration time - consisting of rotatable vessel on hollow horizontal axle carrying filter units

SUCRERIE COUPLET 25.03.76-BE-839979 (25.03.76-BE-054897)

(03.01.80) *BE-839-979 B01d-33/26

The rods, which are inserted through the central openings of each pair of filter cloth disks, in a filter for sugar refining, to support and hold the two cloths apart, are wrapped with a spiral spring extending the full length of the rod. The rod with its spring is curved into a circle and its ends are inserted into blind holes in the hollow shaft.

This makes it possible to prepare the filter cloths completely beforehand. The armouring can be inserted afterwards and does not interfere with the filtration process. 5.3.77 as 709683 (5pp1045)

KNAU/★ D17 01830C/02 ★DT 2827-388
Acid-hydrolysing cellulose contg. material to sugar - by first reducing to fibres then heating

KNAUTH H 22.06.78-DT-827388

(03.01.80) C13k-01/02

Process for continuous hydrolysis of cellulose-contg. material with dil. acid at high temp. comprises sepg. the material into fibres at the beginning of hydrolysis, then subjecting the suspension to additional heat treatment.

The catalyst may be introduced by pre-impregnation or during sepn. into fibres, and may be used together with a solvent for lignin. After hydrolysis, the solvent may be expelled from the hydrolysate and reused.

Used for recovering sugars from cellulosic raw materials or wastes. Any material regardless of its morphological structure can be used and max. sugar yield is obtd. Complete and uniform distribution of catalyst is achieved; the liquor ratio is kept to a min., and the sugar prod. is rapidly withdrawn from the reaction zone, so repolymerisation and caramelisation are reduced. 22.6.78 as 827388 (8pp1251).

BOEF D17 00106C/01 = EP---6-162
Xylitol recovery from residual syrups - by chromatographic sepn. and hydrolysis and hydrogenation of polysaccharide fraction

SUDDEUT ZUCKER AG 14.06.78-DT-826120

E17 (09.01.80) *DT2826-120 C07c-29/74 C07c-31/18

D/S: E(BE, CH, DT, FR, GB, IT, OE, SW).

Recovery of xylitol (I) from residual syrups (remaining after the last crystn. stage in the prodn. of (I) from

xylan-contg. materials) comprises first chromatographically sepg. the syrup into a first fraction rich in polysaccharides and polysaccharide alcohols and one or more subsequent fractions rich in pentitols and hexitols.

The first fraction is then subjected to acid hydrolysis, after which the acid is removed, the hydrolysate is hydrogenated, and (I) is crystd. from the hydrogenated soln.

The (I)-rich subsequent fraction is evapd. to remove all or part of the water, and (I) is crystd. from the concentrate by cooling or pptn. Any other subsequent fractions, contg. (I), other sugar alcohols and polysaccharides, are subjected to further chromatographic sepn.

31.5.79. as 101686 (18pp367).

(G) ISR: DT 2418800; DT 2710374; CH-541526; US4096036.

ICIL ★ D17 02046C/02 ★EP---6-313
Stereoselective prodn. of sugar alcohol - by hydrogenating keto sugar over finely divided copper catalyst

IMPERIAL CHEM INDS LTD 25.05.78-GB-022431

E17 (09.01.80) C07c-31/18

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Prodn. of a sugar alcohol (I) comprises selective hydrogenation of a keto sugar (II) soln. in a pressurized system contg. H₂ at $\geq 80^{\circ}\text{C}$ using as catalyst finely-divided metallic Cu on a (pref. insol.) particulate support. The majority of metal particles have max. dimension < 60 (pref. < 35) nm.

Pref. the soln. has pH > 7 and the system may contain (a) oxyacids or oxyanions of B and/or (b) an O-free inorganic anion, esp. Cl, Br or I.

Reaction is stereoselective with predominant prodn. of only one possible stereoisomer. Reaction can be carried out at high temp. without degradation.

The process is esp. used for converting fructose to mannitol or invert sugar to mannitol and sorbitol, with $> 50\%$ conversion of fructose to mannitol in both cases. 25.5.79 as 300949 (29pp1251).

(E) ISR: DS-544666; DT1667106; DS2538253;

FR2256780; GB1025813; US2224011; US2818851;

GB1022480.

SAKH=★ D17 03061C/02 ★SU-657-415
Level control for syrup tank in sugar prodn. - has sampler pneumatically switched to positive and negative chambers of differential manometer, with output to control contg. counters

SAKHPROMENERONALADK 21.06.77-SU-498873

R26 (18.04.79) C13f-01/14 G05d-09/12

Known level control for tanked syrup in sugar prodn. contains a hydrostatic sampler, differential monomer and pumps. For greater accuracy of level determination, the sampler is switched to positive and negative chambers of a differential manometer with output to a control contg. electric counters. As the syrup rises to e.g. one-tenth, the hydrostatic pressure is proportional to the level. This is converted into electric pulses for a count to control pumping.

Voloshin, Z.S., Kuperberg, I.L. Bul. 14/15.4.79.

21.6.77. as 498873 (3pp840)

NOFO=★ D17 03198C/02 ★SU-658-446
Determining concn. of sugar solns. in sugar industry - based on electroconductivity changes during dilution of conc. soln.

MOSC FOOD IND TECHN 11.10.74-SU-066254

R16 (25.04.79) G01n-15/06 G01n-27/06

Concentration of sugar solns. can be determined by measuring their electroconductivity.

The method is rendered more accurate by diluting the sugar soln. until extreme value of the electroconductivity is attained, and then calculating the starting concn. from the ratio of the electroconductivity values before and after the dilution, using a calibrated curve.

This method is used for measuring the concn. of sugar juices in sugar factories. In an example, the syrup leaving the evaporator (concn. 70%) has an electroconductivity of $0.00332 \Omega^{-1}$. The extreme electroconductivity is $0.0401 \Omega^{-1}$ at concn. 29%. The accuracy of the method is 1-2% w.r.t. the solids. This permits a more accurate calculation of the optimal process parameters.

Tuzhilkin, V.I., Lapkin, A.I. Bul. 15/25.4.79. 11.10.74 as 066254 (2pp70)

IPPO/ ★ D17 03359C/02 ★SU -659-622
Vegetable material acid hydrolyser - has a cylindro-conical tank with coaxial digesting and washing fluid pipes, useful in cellulose etc. mfr.

IPPOLITOV YU S 28.03.77-SU-481856

(30.04.79) C13k-01/02

The efficiency of acid hydrolyser is enhanced by optimising the density of the vegetable raw material in the zone of discharge and ensuring a uniform feed rate and distribution of the digesting and washing fluids. The tank comprises cylindrical and conical sections with a height ratio

of 1:3, and coaxial pipes along its geometrical axis carry the fluids for digestion and washing.

The discharge is controlled by tubes having ejector-type intakes in the discharge zone of the material while the shut-off valves are fitted outside. Each intake comprises a coaxial cylindrical shell with a conical bottom narrowing down below a conical part which expands downwards above it, and bounds the annular slot.

Ippolitov, Yu.S., Danilenko, L.M., Boiko, V.I. et al. Bul. 16/30.4.77. 28.3.77. as 481856 (4pp89)

See Also

D16 J5 4151190

D16 J5 4151191

D16 J5 4151192

D18: SKINS; HIDES; LEATHER; TOBACCO

HABL/ ★ D18 01773C/02 ★DT 2825-863
Animal skin marking device - with angularly adjustable pairs of limbs and elements

HABLITZEL W 13.06.78-DT-825863

(03.01.80) C14b-15/10

A device for marking up animal skins prior to cutting them into strips for fur coats consists of a frame to which two hinged limbs of L-shaped cross-section are joined through a slider in such a way that the angle between them can be adjusted. Each limb has two elongated slots in which an L-shaped element can be angularly adjusted. The protruding flanges of the limbs and elements form the marking faces.

This saves the time consuming manual marking up, requiring a skilled operator, and reduces the cost for the finished prod. 13.6.78 as 825863 (36pp39).

GREN/ ★ D18 02169C/02 ★FR 2420-310
Cigarettes of reduced or zero tobacco content - based on mint and prepd. from mint leaves previously extracted with boiling water

GRENET E P 23.03.78-FR-008513

P15 (23.11.79) A24c-05/60 A24d-01/18

The cigarettes contg. mint leaves are prepd. by first boiling the mint leaves in water for 10 min. to several hrs. to extract most of the aromatic substances they contain. The opt. mixed with tobacco leaves are then treated in the usual manner for tobacco to produce cigarettes. The cigarettes obtd. when smoked have the normal flavour of menthol tobacco but with no or reduced toxicity due to the reduced or zero nicotine content.

When tobacco is added the prodn. method is pref. according to that used for the particular variety of tobacco. The pref. amt. of tobacco is 0-20%. The amt. of water used in the treatment is pref. reduced by using a perforated plate or grill to hold the leaves below the water. The aq. extract is pref. evaptd. to recover a water-soluble mint infusion. 23.3.78 as 008513 (6pp597)

CHCC ★ D18 02701C/02 ★J5 415i-199
Tobacco filter prepn. - by aligning fibre-forming polymer and lower m.pt. polymer in parallel, coating with cellulose acetate, heating and shaping

CHISSO CORP 18.05.78-JA-059421

A88 P15 (A11) (28.11.79) A24b-15/02

A first component consisting of ≥ 1 fibre forming polymer, and a second component consisting of $\geq 10^\circ\text{C}$ lower than that of the first component are placed parallel to give self-adhesive fibre, and then the surface of the fibre is coated with cellulose acetate. The obtd. composite fibre with or without acetate fibre are formed into bundles of fibres, and the resultant is heat treated at such temp. that is lower than the m.pt. of the first component but higher than the m.pt. of the second component, whereby self-adhesion occurs to stabilise the fibre bundles. The obtd. stabilised fibre bundles are formed into a suitable shape, which can be used as tobacco filter.

Tobacco filter having cellulose acetate like properties and touch is prepd. in a simple procedure. The taste and flavour of tobacco are not damaged. 18.5.78 as 054421 (5pp22)

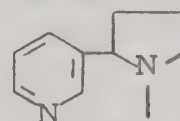
NISB ★ D18 02852C/02 ★J5 4151-980
Nor:nicotine derivs. - useful as tobacco flavour enhancing agent

JAPAN TOBACCO & SALT PUB 16.05.78-JA-057180

E13 P15 (29.11.79) A24b-03/12 C07d-207 C07d-213 C07d-401/04

Nornicotine derivs. of formula (1) (where R is $-\text{COCH}_2\text{CH}_2\text{CH}_3$ or $-\text{COCH}_2\text{CH}_2\text{CH}_2\text{N}(\text{CH}_3)_2$ or $-\text{COOC}_2\text{H}_5$) are novel.

A tobacco-flavour-improving agent comprising (1) is also claimed.



R (1)

In an example, nornicotine (0.79 g) is dissolved in 10 ml of dichloromethane. Butyryl chloride (0.533 g) is dissolved in 5 ml dichloromethane. The latter soln. is added dropwise to the former soln. at room temp. under stirring. After 5 hrs.

the mixt. is poured into 15 ml water and the whole mixt. is left standing. The aq. layer is removed and sodium hydroxide added to render it alkaline, followed by extn. with dichloromethane. The extract soln. is dehydrated with e.g. sodium sulphate, then concd. and the resulting oily substance is purified by silica-gel chromatography employing ethyl acetate as a developer. The yield of N'-butanoylnicotine is 0.91 g i.e. 78.4% relative to nornicotine. 16.5.78 as 057180 (4pp75)

LENL ★ D18 03120C/02 ★SU -658-139
synthetic polymeric tanning agent for leather - prepd. from crude phenolic mixt. distilled from wood-pyrolysis resins, by reaction with formaldehyde and ammonium chloride

LENINGRAD FORESTRY ACAD 20.10.75-SU-182161

A97 (A11) (25.04.79) C08g-08/24 C14c-03/18

A synthetic polymeric prod. (I) is mfd. from a crude phenolic mixt. (II) obtd. by continuous distillation of wood-pyrolysis resin. (II) contains 80% of prods. boiling between 180 and 300°C and has SG 1.03, water content 5.4%, viscosity 2.7°E (Engler at 20°C, and acid no. 25-28.

It contains 60-65% phenols (III), 21-22% neutral substances (IV) and 10-12% $-\text{COOH}$ cpds. (V). (III) contain 40-45% catechol and catechol homologues. (II) is condensed with NH_4Cl and CH_2O in aq. soln. for 3 hrs. in the temp. range 60-100°C. The lower layer of the prod., contg. (IV) and (V), is discarded. The upper aq. layer is concd. to give (I) (ca. 68% of the wt. of II) which is fully water-soluble and contains 70% active tanning agents. It has pH 3.8-4, water content 7-8%, ash 0.6-0.7%, N content 2.4% and mean mol. wt. 675.

The prod. (I) is used as 4.1-4.2 g/l at 89°C as a tanning agent for leathers. It has forming index (TsNIKP method) 139% and tanning coefft. 93%. It gives leather with bulk density 0.65 with vol. yield 382%.

Ratner, M.E., Smetanina, S.S., Sorokin, I.S. et al. Bul 15/25.4.79. 20.10.75. as 182161 (5pp1360)

ULEA = ★ D18 03361C/02 ★SU -659-624
Animal skins liquid treatment unit - has drum with additional bottom shelves connected to longitudinal shelves to prevent tangling of skins

UKR LEATHER FOOTWEA 02.04.76-SU-350685 (02.04.76-SU-341779)

(30.04.79) C14c-15

The animal skins liquid treatment unitormity and reliabil-

ity of physico-mechanical processing unit are improved if the drum is provided with pairs of additional shelves close to the bottom and linked to the shelves fitted along its length.

The main shelves pickup the loaded skins and shift them together with the working soln. in the sense of drum rotation, while the bottom shelves force the fluid towards the skins away from the centre of the drum. The diversity of action prevents skins tangling and the latter remain in the flattened-out state contributing to enhanced treatment.

Mets, M.M., Braginskii, M.A., Ponomarev, S.G. Bul. 16/30.4.79. 2.4.76. as 341779 (3pp89)

CELA D18 68589B/38 = US 4180-536
Cellulose acetate foam cigarette filter rod - prod. by extrusion with blowing agent under controlled temp. conditions
CELANESE CORP 13.03.78-US-886201
A88 P15 (A11 A32) (25.12.79) *GB2015-921 B29d-27

Plasticised, open cell, foamed cellulose acetate filler rod is made by melt extruding through an elliptical or circular orifice of a screw extruder a mixt. of cellulose acetate, nontoxic taste, compatible thermally stable plasticiser of b.pt. $\geq 180^{\circ}\text{C}$, blowing agent which is a (partial) solvent for cellulose acetate, and a nucleating agent. The melt is free of entrained air and the extrusion pressure profile is such as to prevent the blowing agent from backing up in the extruder.

The extrudate may be passed through a sizing device. The blowing agent is e.g. a ketone, ester or monohydric alcohol of b.pt. $\leq 120^{\circ}\text{C}$. The filter rod is esp. useful as a cigarette filter. 13.3.78 as 886201(11pp945)

See Also

D15 EP 0006101

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

WARN ★ D21 01737C/02 ★ CA 1068-215
Antiperspirant and deodorant stick compsns. - contg. talc, aluminium cpd., metal stearate, kaolin, calcium carbonate, rice starch and glycine
WARNER-LAMBERT CO 30.05.75-CA-228146
(18.12.79) A61k-07/38

An antiperspirant and deodorant compsn. in stick form comprises 5-25% (wt) talc, 20-77.8% Al chloride, sulphate or chlorhydroxide, 5-20% Mg, Zn or Ca stearate, 1-10% kaolin, 1-5% CaCO_3 , 10-40% rice starch, 0-1.0% mineral oil, 0-3.0% water, 0.1-5.0% glycine, 0.001-1.0% perfume and 0.01-1.0% a deodorant agent and is prepd. by blending and moulding the ingredients at 600-3,000 psi.

The use of 2,4,4'-trichloro-2'-hydroxy-diphenyl ether as the deodorant agent is claimed. Three blends: (1) the Al cpd. and mineral oil; (2) the starch and water; and (3) the remaining ingredients are suitably prepd. initially before mixing and compressing. Fragrances such as perfumes can be included in the compsn. in an amt. of 0.0001-1%.

The stick, when applied under gentle press., releases the ingredients evenly and provides a good protective coating on the body surface area. It also has high strength. 30.5.75 as 228146 (9pp558)

COLG D21 21107T/13 = DS 2146-224
Optically clear dentifrice - contg aluminosilicate particles in a gelled medium of the same refractive index
COLGATE PALMOLIVE CO 27.11.70-GB-056577 (21.09.70-GB-044858)
(03.01.80) *BE-772-863 A61k-07/16

Clear tooth-care agent (I) contains, in a gel-form carrier (II), a H_2O -soluble, particulate cleaning agent (III) comprising a synthetic, amorphous, complex alkali- or alkaline earth aluminosilicate having a particle size $\geq 40 \mu\text{m}$, pref. 1-20 μm , having a refractive index of 1.44 - 1.47 consistant with (II), and contg. ≥ 10 wt. % alkali- or alkaline earth oxide and ≥ 20 wt. % of moisture.

Pref. (I) contains 5-50 wt. % (III), and pref. (II) comprises 20-94.5 wt. % of a liq. comprising H_2O and/or a moisture-retaining agent and 0.5-5 wt. % of a gelling agent (IV), each based on total wt. of (I). Pref. (IV) is a synthetic, inorganic, complex silicate clay of formula:



(I) is optically translucent or transparent and has good cleaning action. 16.9.71 as 146224 (6pp481)

WIEL- ★ D21 01766C/02 ★ DT 2804-577
Premix forming dental filler when amalgamated with mercury - where premix contains reinforcing bodies coated with silver to prevent corrosion during storage of premix
FA WIELANDT 03.02.78-DT-804577 (00.00.76-DT-658785)
M26 (03.01.80) A61k-05/02

DT 2658785 described a premix contg. filings and mixed with mercury to obtain a dental filler which hardens at the temp. of the human body. The premix also contained skeleton- or reinforcing bodies (2) made of an Ag-Sn-Cu alloy and coated with a layer (3) of copper formed by chemical- or electroplating.

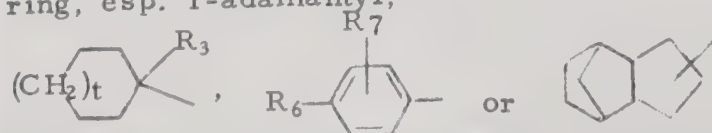
The novelty in the present invention is that the Cu coating (3) is covered by a protective layer (4) of metal, which pref. forms an amalgam and has superior oxidn. - and corrosion-resistance to Cu (3) when the premix is stored prior to use. Metal (4) is pref. a noble metal, esp. silver, which is also present in the premix, and layer (4) is pref. $< 1 \mu$ thick so it allows the Cu to participate in reactions when Hg is added to make the dental filler.

With the original invention, the Cu coating (3) on skeletons (2) oxidised and interfered with the desired amalgamation. The Ag (4) prevents oxidn. of the Cu (3). 3.2.78 as 804577 Add to 2658785 (7pp1144).

OREA ★ D21 01949C/02 ★ DT 2925-358
Cosmetic compsn. contg. tetra:polymer - prepd. from vinyl acetate, vinyl pyrrolidone, crotonic acid and e.g. allyl stearate, as hair lacquer or waving lotion (NL 28.12.79)
L'OREAL SA 08.02.79-FR-003260 (23.06.78-FR-018832)
A96 (03.01.80) A61k-07

Cosmetic compsn. contains, in a carrier, ≥ 1 copolymer (A) derived from (i) 1-30 wt. % N-vinylpyrrolidone, (ii) 13-87 wt. % vinyl acetate; (iii) 2-15 wt. % crotonic acid and (iv) 1-80 wt. % ≥ 1 fourth monomer.

Component (iv) is esp. of formulae $\text{CH}_2=\text{CH}-\text{OCOR}_1$ (I); $\text{CH}_2=\text{CR}_3-\text{CH}_2-\text{OCOR}_2$ (II); $\text{CH}_2=\text{CHOR}_4$ (III); $\text{CH}_2=\text{CH}-(\text{CH}_2)_n\text{CH}_3$ (IV); or $\text{Cyc}-(\text{CH}_2)_p-\text{COO}(\text{CH}_2)_m-\text{CR}_3=\text{CH}_2$ (V). In the formulae R_1 is 2-21C alkyl; R_2 is 1-21C alkyl; R_3 is H or CH_3 ; R_4 is 4-18C alkyl; $n = 3-15$; m and $p = 0$ or 1, when $p = 0$ cyc-mono- or poly-cyclic (un)satd. ring, esp. 1-adamantyl,



when $p = 1$, cyc is R_6 , R_7 -substd. phenyl. $t = 0$ or 1; $\text{R}_6 = \text{H}$, CH_3 , C_2H_5 , tert. butyl, ethoxy, butoxy or dodecyloxy. R_7 is H, 1-4C alkyl or alkoxy.

Used esp. in hair lacquers and aq. waving lotions. (A) has less tendency to flake off than resins of FR. 7016821

(terpolymers of high N-vinylpyrrolidone content).

22.6.79 as 925358 (29pp1251).

KAMM/ D21 91296B/51 =EP---6-200
Mfg. pieces of floating soap - by bonding porous open cell plastic wafer to one side

KAMMER M 10.06.78-DT-825529

A97 (09.01.80) *DT2825-529 C11d-17/04

D/S: E(BE, CH, DT, FR, GB, IT, LW).

A piece of soap or other washing medium is joined at one end to a wafer, made of a plastic foam with a closed cell structure. On the side towards the soap, the wafer carries grooves, recesses and/or webs to improve the adhesion. On the free side, the wafer has a fine granular texture or fine grooves so it cannot slip on slightly inclined surfaces.

The complete piece of soap has thus a specific gravity of <1 and will float on the water in a bath tub. The grain-ed underside can be used to massage the skin. A piece of soap can be used up, without wastage, to the last remnant. 9.6.79 as 101857 (8pp39).

(G) ISR: CH-602915; DT2651276; DT2751094.

HENK D21 00156C/01 =EP---6-232
Deodorant compsns. contg. acid aluminium salt - in combination with deodorant ester and antioxidant

HENKEL KG AUF AKTIEN 19.06.78-DT-826757

E33 (E19) (09.01.80) *DT2826-757 A61k-07/32

D/S: E(BE, CH, FR, GB, IT, NL, SW).

The use of the following components in cosmetic deodorant preps. is new: (a) 1-20 (pref. 5-15) wt.% of an astringent acid Al salt; (b) 0.5-20 (pref. 2-10) wt.% of an ester of citric and/or acetylcitric acid or a mono- or dibasic 2-4C hydroxycarboxylic acid with a 1-6C aliphatic or alicyclic alcohol; and (c) 0.01-5 (pref. 0.1-3) wt.% of an antioxidant.

Addn. of components (b) and (c) greatly improves the deodorant action of component (a).

15.6.79. as 101965 (18pp367).

(G) ISR: DT 2456639; GB 1461991; FR 2192798;
FR 2192799; BE-631239; DT 2358121.

HENK D21 00158C/01 =EP---6-233
Deodorant compsns. contg. hydroxy-carboxylic acid ester cpds. - in combination with antioxidants

HENKEL KG AUF AKTIEN 19.06.78-DT-826759

E17 (E15) (09.01.80) *DT2826-759 A61k-07/32

D/S: E(CH, GB, NL, SW).

Cosmetic preps. contain 0.5-20 (pref. 1-10) wt.% of an ester (I) as deodorant in combination with 0.01-5 (pref. 0.1-3) wt.% of an antioxidant (II). (I) are esters (pref. neutral esters) of mono- or dibasic 2-4C aliphatic hydroxycarboxylic acids with 1-6C aliphatic or alicyclic alcohols.

Addn. of (II) greatly improves the deodorant action of (I). Combinations of (I) and (II) can also be used in aq. cosmetic preps.

15.6.79. as 101966 (19pp367).

(G) ISR: DT 2456639; DT 2418362; FR 2192798;

US 3098795; DT 2358121; FR 2160898; FR 2099582.

HENK D21 00157C/01 =EP---6-234
Deodorant compsns. - contg. citrate and/or acetyl citrate ester(s) in combination with antioxidants

HENKEL KG AUF AKTIEN 19.06.78-DT-826758

E19 (09.01.80) *DT2826-758 A61k-07/32

D/S: E(CH, GB, NL, SW).

Cosmetic preps. contain 0.5-20 (pref. 1-10) wt.% of esters (I) as deodorants in combination with 0.01-5 (pref. 0.1-3) wt.% of an antioxidant (II). (I) are esters (pref. triesters) of citric and/or acetylcitric acid with 1-6C aliphatic or alicyclic alcohols.

Addn. of (II) greatly improves the deodorant action of (I). Combinations of (I) and (II) can also be used in aq. cosmetic preps.

15.6.79. as 101967 (22pp367).

(G) ISR: DT 2456639; FR 2362210; DT 2418338;

FR 2192799; DT 2358121; FR 2160898; FR 2099582.

OSTE-★ D21 02100C/02 ★EP---6-41.
Bone cement contg. fibre-reinforced poly:methyl methacrylate pref. contains carbon fibre stocking mixed with synthetic or natural apatite

OSTEO AG 29.06.78-EP-810005

A96 P32 (A14) (09.01.80) A61f-01

D/S: E(CH, DT, FR, GB).

Bone cement of self-polymerising plastics, e.g. contg. polymethyl methacrylate and derivs., is fibre-reinforced, pref. with C fibres.

The bone cement is used to fix endo-prostheses, esp. joint prostheses, in bones.

Fibre-reinforcement increases bone cement strength and tolerance.

29.6.78 as 810005 (12pp200).

(G) ISR: US4064567; DS2334643; DT2628284;

DT2617749; DT2502884; US4064566; FR2243915;

FR2360295; FR2350825.

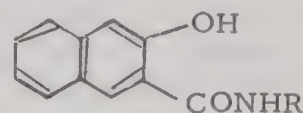
HENK D21 48185A/27 =GB 1558-655
Dyeing keratin materials, esp. hair, with developed dyes - using N-aryl-2-hydroxy-naphthalene-3-carboxamide as coupling component

HENKEL KG AUF AKTIEN (CIBA) 27.12.76-CH-016349

E21 (09.01.80) *DT2757-866 D06p-03/12

Human hair is dyed using developing dyes by the successive application of the diazo salts and coupling components to be coupled together in either sequence.

(I)



The coupling components are 2-hydroxy-naphthalene-3-carboxylic acid arylamides of formula (I), where R is Ph or an γ - or β -naphthyl, opt. substd by 1-4C alkyl or alkoxy

halogen, nitro or further (opt. substd.) Ph gps. The diazo salts used are stabilised diazonium cpds of mono-amines or aminobenzene derivs.

Compsns give deeply coloured dyeings having fastness to washing, to cold setting, to rubbing, to light and to perspiration, give the possibility of turning dyed hair blonde, absorb the components w.r.t. damaged hair, and give good behaviour w.r.t. permanent waving. 22.12.77 as 053574(10pp931).

LIOC ★ D21 02595C/02 ★J5 4150-459
Stabilised polyamide soln. - contains metal salt esp. of Gp/I Gp/II Gp/IIIA or Gp/VIII metal

LION DENTIFRICE KK 19.05.78-JA-059776

A23 E12 (A60 D22 E37) (26.11.79) A61k-09 C08j-03/08 C08k-03/24 C08k-05/09 C08l-77

A stabilised polyamide soln. contains a metal salt as a stabiliser. The content of the metal salt pref. 0.01-40 wt.%. The soln. is a coating soln. contg. a soluble nylon. The metal salt is an organic or inorganic salt of one or more metals of Gps. I, II, IIIa and VIII.

The soln. is used in a facial pack, peel-off type eye liners, medical care prods. (sealing bandage) etc. by coating the soln. on the skin to form a coat, and peeling it off after use. The compsn. gives a coat having improved adhesion, release properties, feel on use, etc.

The polyamide is specifically 6,6-nylon, 1,6-nylon, 8-nylon etc. The solvent is e.g. methanol ethanol, propylene glycol, acetone, water-methanol, water-ethanol, etc. The metal salt is was. CaCl_2 , ZnCl_2 , NaCl , Ca pantothenate , calcium lactate, ZnSO_4 etc. 19.5.78 as 059776 (8pp119)

IDEN-★ D21 02637C/02 ★J5 4150-790
Grinding material prodn. for use in dentistry - by embedding hard particles with soft coating in binder such as polyester or PTFE

IDENTOFLEX AG 16.05.78-JA-057231

A96 E37 L02 P61 (27.11.79) B24d-03/28

Grinding material is produced by embedding grinding particles such as silicon carbide particles or aluminium oxide particles in a plastic binder having anti-abrasive nature and high tearing strength such as polyester or polytetrafluoroethylene. Before the embedding step the grinding particles are coated with a soft film more mild than the film of the plastic binder. The grinding material has a good elasticity and it is used for dental therapeutical purposes. 16.5.78 as 057231 (2pp15)

LIOC ★ D21 02670C/02 ★J5 4151-113
Wound-healing compsn. applied topically - obtd. by fractionating alcohol extract of aloe arborescens mill var. natalensis
LION DENTIFRICE KK 13.05.78-JA-056995
B04 (28.11.79) A61k-35/78

Novel compsn. having wound-curing action is fractionated from an ethanol extract of Aloe arborescens mill var. natalensis (or related plants). The Rf value of the fraction in thin layer chromatography is 0.10-0.38 developing solvent ethyl acetate: methanol: water = 20:3:2 (vol. ratio), plate is silica gel). The fraction is odourless has thin brown colour and does not contain any aloin, Aloe emodin or polysaccharide.

The fraction is applied externally to wounds, cracks in the skin, chaps and burns. It can be used to treat piles and in cosmetics such as after-shave cream, medicinal cream, lotion or hair cosmetics. LD₅₀ by oral admin. to a rat is > 5000 mg/kg, and no irritation to the skin is found. The fraction has high solubility in water or water-ethanol is high and it can be readily formulated into an ointment or lotion. 13.5.78 as 056995 (5pp69)

POKK ★ D21 02685C/02 ★J5 4151-137
Metallic soap-coated fine globular silica gel compsn. - for cosmetic use, prepd. by coating metallic soap on surface of globular silica gel

POLA KASEI KOGYO KK 10.05.78-JA-055219
E12 (E36) (28.11.79) A61k-07

Compsn. is prepd. by coating metallic soap on the surface of fine globular silica gel of dia. 1-30 (5-15) μ. Specifically silica gel beads are coated with metallic soap using in a wt. proportion of 99-85:1-15 esp. 97-93:3-7. Metallic soap is pref. Al stearate, Mg stearate, Zn stearate, Zn palmitate, Zn laurate, Zn oleate, etc.

Silica gel beads are closely covered with a thin film of metallic soap. Compsn. does not separate into its components in an aq. or non-aq. medium. It is excellent in dispersibility, productivity, filling property, sliding property, adhesive property, softness, rolling effect, etc. and can be used in cosmetics or paints. 10.5.78 as 055219 (9pp5)

SHIS ★ D21 02686C/02 ★J5 4151-139
Cosmetic make-up compsn. - contg. copolymer emulsion obtd. by copolymerising acrylic ester(s) and methacrylic ester(s)
SHISEIDO KK 16.05.78-JA-058028
A96 (A14) (28.11.79) A61k-07/02

Make-up compsn. is characterised by contg. 20-50 w/w% of the copolymer emulsion obtd. by copolymerising (a) ≥ 1 acrylic acid ester monomer having 4-18C ester part and (b) > 1 methacrylic acid ester monomer.

Pref. (a) are(iso)butyl acrylate, 2-ethylhexylacrylate, etc. A mixt. of butyl acrylate and 2-ethylhexylacrylate is esp. used. Pref. (b) are MMA ethyl methacrylate and butyl methacrylate. Acrylate and methacrylate are pref. used in the wt. ratio 3:7-8:2 and the copolymer is has MFT (min. film-forming temp.) 30-(-20)°C esp. 10-(-10)°C (sic.). The emulsion is pref. made to have an effective resin concn. of ~ 50 w/w%.

Emulsion is non-toxic and stable to microbes and its film is continuous, soft, has good adhesion to skin, and has good water resistance. The make-up obtd. is highly durable. 16.5.78 as 058028 (8pp5)

SHIS ★ D21 02687C/02 ★J5 4151-140
Hair cosmetics - comprising oily substances, water, lower alcohol(s) and aerosol agent
SHISEIDO KK 17.05.78-JA-058667
(28.11.79) A61k-07/06

Hair cosmetics are prepd. by filling (a) the cosmetic soln. which is composed of 5-20 wt.% water, 2-20 wt.% of ≥ 1 kind of oily substances selected from hydrocarbons, higher alcohols, higher fatty acids, fatty acid esters, silicone oil and animal and vegetable oils and 60-93 wt.% of lower alcohol and (b) aerosol injecting agent in the aerosol vessel equipped with injecting device, to form the gas-liq. phase.

Hair cosmetics hair brothing can be rapidly practiced effectively. That is, with it (1) hair can be set in natural form, (2) hair can be combed smoothly and (3) hair can be made glossy. 17.5.78 as 058667 (5pp5)

CHTI- ★ D21 C/02 ★RU --65-386
Bacteriostatic soap prepn. - by adding quat. ethoxylated tri:phenyl phosphonium salt deriv.
CENT CHIM TIMISOARA 20.03.75-RU-081724
A97 E11 (30.10.78) C11d-09/50

TERA- ★ D21 C/02 ★RU --65-977
Astringent tonic vegetable extract prepn. - by boiling wild pear fruit, filtering pulp, washing with water and conc. extracting
TERAPIA INTR MEDIC 02.02.76-RU-084674
(30.11.78) A61k-35/78

ANTI- ★ D21 C/02 ★RU --66-648
Aromatised, soothing ointment - contains menthol, camphor, Oleum Eucalypti, Oleum Caryophyllorum, Oleum Lavandulae and Oleum Cinnamoni
INTR ANTIBIOTICE 09.04.76-RU-085553
(30.11.78) A61k-35/78

ANTI- ★ D21 C/02 ★RU --68-935
Soothing aromatised ointment - contains menthol, camphor, Oleum menthae piperitae, Oleum amorphae fruticosae, Oleum obies albae and white or yellow wax
INTR ANTIBIOTICE 19.10.76-RU-088107
(30.11.78) A61k-09/06 A61k-35/78

WHIT/ ★ D21 03411C/02 ★US 4179-812
Bonding dental bracket to tooth - using alpha-cyanoacrylate adhesive absorbed in filler in open-scrim envelope
WHITE V C 06.09.77-US-830425
A96 P32 P73 (A14) (25.12.79) A61c-07 B32b-31

An orthodontic device is bonded temporarily or permanently to a tooth by interposing an open-scrim envelope contg. finely divided filler material between the device and the tooth, infusing an alphacyanoacrylate resin through the filler, which lengthens the curing time of the resin, and pressing the device against the tooth and retaining it in place until the resin has cured.

The method is esp. useful for fixing braces. It avoids the need for placing a band around the tooth. The bonding agent is non-toxic, the bond is strong and does not weaken or creep, and the device can easily be removed when this is desired. The method is designed to leave little scope for careless or faulty application. 6.9.77 as 830425(4pp)

CIBA D21 78369A/44 = US 4180-084
Cosmetic products based on polymers contg. quat. ammonium gps. - used for hair treatment, esp. in shampoos, and also as skin cosmetics

CIBA GEIGY CORP 02.05.77-CH-005463
A96 + P24 (25.12.79) *BE-866-515 + A45d-07

Hair care compsn. in the form of an aq. and/or alcoholic solns., creams, gels, emulsions, or of aerosol which opt. contains a propellant, contains 0.01-10 wt.% of 1 polymeric quat. ammonium salt which contains cationic units of formula $[-N(R_1)(R_2)-A_1-N(R_3)^+(R_4)-CH_2-A_2-CH_2-]$ (I).

In (I), R₁₋₄ are each opt. substd. 20C (cyclo)alkyl or alkenyl, or (alk)yl, or R₁ and R₂ and/or R₃ and R₄ together with the bonded N₁ form an opt. substd. heterocyclic ring contg. 3-6 ring members; A₁ is e.g. -(CH₂)_m (where m is integer 1-20), opt. interrupted by ≥1 -S-, -C(=O)- or -CH=CH- gp. of substd., or is polyoxyalkylene.

Compsns. result in an improved stability of the hair-style for which they are used. 25.4.78 as 899940(22pp936)

COLG ★ D21 03501C/02 ★US 4180-467
Denture soaking cleaning compsn. - contg. acid anhydride to provide sustained effervescence
COLGATE PALMOLIVE CO 20.01.76-US-650600 (29.05.69-US-829133)
E19 (E37) (25.12.79) A61k-07/20 C11d-07/18

Denture soak compsns. contain 20-43 wt.% water-soluble inorganic peroxygen salt, 35-50 wt.% sodium or potassium bicarbonate, 15-25 wt.% tartaric, citric, malic, maleic, fumaric or succinic acid, and 5-10 wt.% boric, succinic, adipic, fumaric, tartaric, citric, maleic or malic anhydride, which slowly hydrolyses and reacts with the bicarbonate.

The compsns. when added to water gives a roughly neutral soln., which effervesces for a long period. The anhydride also acts as an internal dessicant, preventing caking

of the compsn. during storage. 20.1.76 as 650600
(+ 7.10.71, 11.2.74 -US- 187524, 441588)(4pp955)

UNIL ★ D21 03503C/02 ★ US 4180-470
Acyl isethionate detergent bars - contg. alkoxy-hydroxy-propane-sulphonate and sodium chloride to reduce wear
LEVER BROTHERS CO 25.01.78-US-872298 (20.03.77-US-782698)
E34 (E12 E16) (25.12.79) C11d-01/28 C11d-10/04

Method for reducing the wear rate of an acyl isethionate (I) detergent bar which contains an unesterified H₂O-soluble alkali metal isethionate (II) as bar processing aid, consists of incorporating into the bar (by wt.) 2-6% of a propane-sulphonate Me(CH₂)_nCH₂OCH₂CH(OH)CH₂SO₃M (III), (Where n = 6-18; M = Na, K, Ca, Mg, or NH₄), and < 1.2% NaCl.

Method effectively reduces the known high wear rate of (I) bars without adversely affecting the lathering props. and processing characteristics of the bar. 25.1.78 as 872298 (9pp478)

VINS/ ★ D21 03543C/02 ★ US 4180-561
Hair styling compsn. - based on petrolatum and lanolin with extracts of weeping willow, mustard greens and corn
VINSON WL 21.01.77-US-761044
(25.12.79) A61k-07/09

A hair pressing compsn. consists of a base of petrolatum and lanolin, to which is added an extract prepd. by boiling weeping willow twigs in water, and a second extract prepd. by grinding and squeezing mustard greens and corn kernels.

The compsn. pref. contains 32 pts. petrolatum, 24-32pts. pts. lanolin, and 4-8pts. of each extract, all pts. by volume. The willow extract is prepd. by boiling 1 pts. willow twigs etc. in 20pts. water until a soln. the colour of tea is obtd. The other extract is prepd. from about 2pts. wt. mustard greens mixed with 1 pt. wt. corn kernels, which may be mixed and squeezed or squeezed separately and the juices combined.

The compsn. leaves the hair looking lustrous and full of body, without imparting a greasy look or feel. 21.1.77

as 761044(4pp955)

ALZA D21 48032X/26 = US 4180-646
Biodegradable ortho-ester polymers - for enclosing active agents to be liberated therefrom e.g. steroid implants

ALZA CORP 28.01.75-US-544808 (03.03.78-US-883123)

A96 B07 C03 + P34 (A23) (25.12.79) *BE-837-935 C08g-65/28

Polymer of formula (I) are novel and can be used for making devices and coatings for releasing a beneficial agent,

as they erode at a controlled rate.

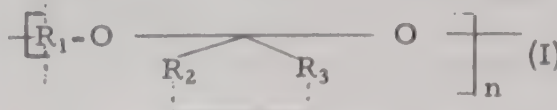
They can be used as carriers for drugs.

R₁ is di-, tri- or

tetravalent 2-10C alkylene; 2-10C alkylene; 2-6C alkyleneoxy 3-7C cycloalkylene opt. substd. with 1-7C alkyl, 1-7C alkoxy, 1-10C alkylene or 2-7C alkenyl; 4-7C cycloalkylene opt. substd. with 1-7C alkyl, 1-7C alkoxy, 1-10C alkylene or 2-7C alkenyl; arylene opt. substd. with 1-7C alkyl, 1-7C alkoxy, 1-10C alkylene or 2-7C alkenyl.

R₂ and R₃ are 1-7C alkyl; 2-7C alkenyl; 1-7C alkoxy; 2-7C alkenyloxy; 2-6C alkylene; 3-6C alkenylene; 2-6C alkyleneoxy; 3-6C alkenyleneoxy of 8-12C intramolecularly covalently bonded to each other; 8-12C aralkyleneoxy, 8-12C aralkylenedioxy; oxa; OR₁₀; 5-8C heterocycle opt. 1-7C alkyl, when R₂ and R₃ are taken together; or R₂, R₃ together form 2-7C alkenyl, 1-7C alkoxy, or fused 8-12C polycyclic ring opt. substd. with 1-7C alkyl, 1-7C alkoxy or 2-7C alkenyl.

At least one of R₂ and R₃ is alkoxy, alkenyloxy and OR₁₀, and when R₂ and R₃ are independently alkoxy and alkenyloxy and the other of R₂ and R₃ is alkyl, alkenyl, alkoxy, alkenyloxy, alkylene, alkenylene, alkyleneoxy or oxa, and when R₂ and R₃ are taken together, a heterocyclic or fused polycyclic ring, n is > 10. 3.3.78 as 883123 Div ex 4093709 (31pp393)



D22: BANDAGES; DRESSINGS

SCOL ★ D22 01735C/02 ★ CA 1068-107
Deodorising footwear insole - having top fabric, bottom compressible plastics layer and intermediate deodorant particle contg. incompressible plastics layer (BR 22.5.79)

SCHOLL CANADA INC 02.11.77-US-847918

A83 F08 P22 P73 (18.12.79) A43b-07 A43b-13/40 A43b-17 B32b-05/22

A footwear insole comprises a laminate composed of a bottom open cell resilient compressible plastics sheet with a smooth bottom skin; an intermediate pliable relatively incompressible plastics sheet in which odour-absorbing chemical particles are uniformly dispersed and locked; and a top fabric sheet with a slippery abrasion-resistant top surface.

The layers are bonded together and holes extend through them, exposing the particles in the intermediate layer. The holes are sufficiently large so as not to be closed during compression of the bottom layer by the foot load. The particles are pref. activated charcoal (~200 mesh) and the intermediate layer is pref. of styrene-butadiene latex.

When the bottom layer is compressed, air is pumped from the cells through the holes into intimate contact with the chemical particles, so that odours and moisture are absorbed. The footwear and wearer are protected against staining resulting from migration of the particles.

18.11.77 as 291187 (18pp558)

KNAP/ ★ D22 01789C/02 ★ DT 2826-558
Bone cement contg. copper salt as local disinfectant - has a complex builder, pref. alkali tartrate, added to prevent formation of insoluble basic copper salts

KNAPPWOST A 16.06.78-DT-826558 (00.00.76-DT-612208)

E12 (03.01.80) A61k

Bone cement for bone replacement surgery contains a H₂O-soluble Cu salt, esp. copper acetate as a local surfactant as in the Parent Patent. A complex builder (I) is now added to the Cu salt which is active at pH values < 7.

(I) is pref. a tartrate and esp. an alkali tartrate. The addn. of the complex builder prevents the formation of sparingly soluble basic Cu salts, e.g. basic copper carbonate with consequent redn. in activity. 16.6.78 as 826558 Add to 2612208 (3pp903).

FARH ★ D22 01804C/02 ★ DT 2826-760
3-(1,2,4-Triazolyl)-cinnamic and crotonic acid derivs. - used as pesticides and fungicides for plant protection and plant growth regulators esp. for cereals

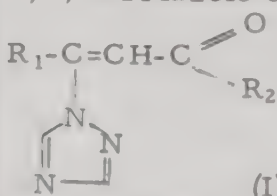
HOECHST AG 19.06.78-DT-826760

C02 E13 F09 (03.01.80) A01n-05 A01n-09/22 C07d-249/10

1,2,4-Triazole derivs. of formula (I) are new.

In (I), R₁ is Me or Ph, opt. substd. by halogen, 1-4C alkyl (pref. Me or Et) or by 1-4C alkoxy (pref. MeO or EtO); R₂ is R₃O- or R₄R₅N-; R₃ is alkyl with pref. 1-8C atoms and opt. substd. by halogen, pref. Cl or Br, by 1-4C alkoxy or alkoxy-carbonyl, pref. contg. 1-5C atoms; or R₃ is alkenyl with pref. 2-3C atoms, cycloalkyl with pref. up to 6C atoms and opt. substd. by 1-4C alkyl; or R₃ is Ph opt. substd. by halogen and/or CF₃; R₄ is H or 1-4C alkyl, opt. substd. with alkoxy-carbonyl pref. contg. up to 5C atoms; R₅ is 1-4C alkyl or Ph, opt. substd. by halogen, CF₃, 1-4C alkyl, 1-4C alkoxy, PhO or halophenoxy

(I) are pesticides for the protection of plants and can also be used as plant growth regulators. (I) are fungicides and are effective against disease-causing fungi which have already penetrated the plant tissue. 19.6.78 as 826760 (24pp1401).



BATT ★ D22 01835C/02 ★DT 2827-529
 Implantable synthetic bone prosthesis - consists of tissue compatible core with outer layer of calcium phosphate ceramic
 BATTELLE-INSTITUT EV 23.06.78-DT-827529
 L02 P32 + P31 P53 P73 (03.01.80) A61b-17/18 A61c-08 A61f-01
 B32b-15/04 C04b-35 C04b-37/02

Implantable synthetic bone material consists of particles of bio-active sintered Ca phosphate ceramic with CaO: P₂O₅ between 3:1 and 4:1 supported in a matrix of material. The material consists of a massive core of tissue compatible metal with a layer of Ca phosphate particles 500µm to several mm. long forming the contact surface with body tissues. The material may be made by casting or hot pressing processes. Sintered bodies can be made from mixts. of metal powder and Ca phosphate.

The prosthesis forms a strong bond with the bone which is not subject to stress loosening. The implants have high chemical stability. 23.6.78 as 827529 (19pp1351).

HEXC ★ D22 01991C/02 ★EP ---6-094
 Mfg. orthopaedic structures by impregnating fabric with polymer soln. - of prepolymer polyurethane having terminal isocyanate gps. e.g. for tapes, bandages and supports
 HEXCEL CORP 19.06.78-EP-100201
 A96 P34 (A25) (09.01.80) A611-15/07 C08g-18/42
 D/S: E(BE, CH₁ DT, FR, GB, LU, NL, SW).

(A) orthopaedic structures are prepd. by impregnating a pliant fabric carrier with a polymer soln (I) and removing the solvent from the impregnated carrier. (I) is a soln. of a prepolymer polyurethane having 2 NCO end gps. formed by reacting a bifunctional cpd. (reactive with an NCO gp) with a molar excess of a diisocyanate. The soln. also contains a bifunctional chain extender and opt. a chain extender catalyst. The impregnated carrier is warmed to remove solvent and form the final polymer.

(B) Thermoplastic linear polyurethane contg. recurring units of a prepolymeric diisocyanate linked by chain extender gps is also claimed.

Orthopaedic tapes, bandages and supports may be formed that are moisture-proof and lightweight.

19.6.78 as 100201 (24pp966).

(E) ISR: FR1418863, US3631854.

MAUC/ ★ D22 02003C/02 ★EP ---6-158
 Allergic test plaster strip - with narrow adhesive selvages on allergically inert punched strip
 /MAUCHER O M 09.06.78-DT-U17327
 P34 R16 (09.01.80) A611-15/06 G01n-33/48
 D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

A test plaster strip for the application of several different allergens to the skin of a patient consists of a punched tape which is inert in its allergic skin action. It carries on both side selvages a thin adhesive layer. Absorbent pads, impregnated with the allergens, are bonded by backing strips to the rear of the punched holes.

This reduces any irritation of the patient's skin by the adhesive of the strip to a minimum and keeps it away from the allergy test zones. It also facilitates handling because it does not stick so readily to the fingers of the person applying the test strip.

31.5.79 as 101674 (17pp39)

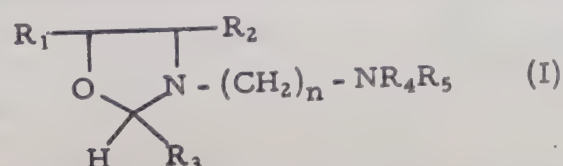
(G)ISR: DS1598463; US3515126; DTU519341; DTU755526; DTU1685261; US3212495.

HENK D22 89576B/50 =EP ---6-169
 3-Omega-aminoalkyl-oxazolidine derivs. - useful as antimicrobials in cleaning, disinfecting and preservative compsns.

HENKEL KG AUF AKTIEN 05.06.78-DT-824540
 C02 E13 G03 (09.01.80) *DT2824-540 C07d-263/04 +A01n-43/76

D/S: E(BE, CH, DT, FR, GB, IT, NL).

Oxazolidine derivs. of formula (I) are new.



(R₁ and R₂ = 1-17C alkyl, the total no. of C being 8-18;

R₃ = H, 1-5C alkyl, phenyl (opt. substd. by halo, OH or CH₃O) or styryl;

n = 2-6;

R₄ and R₅ are each H or 1-3C alkyl).

(I) are antimicrobials useful at 0.1-25 (pref. 0.5-20) wt. % of the total microbicidal compsn. or at 0.1-2 wt. % as preservatives. They are included in cleaning and disinfecting compsns. for textiles, floors, hospital equipment, and in preservatives for preventing spoilage of dyes, glues, cutting oils, etc.

1.6.79 as 101727 (28pp1251).

(G) ISR: DT2338516; DT2530243; DT2512980; FR2332985; GB1415566; US4092144.

BUCY ★ D22 02031C/02 ★EP ---6-263
 Rayon web stabilised by thermoplastic web - the thermoplastic web penetrating the rayon web by up to 40 per cent of its thickness
 BUCKEYE CELLULOSE CORP 16.06.78-US-916220
 A94 F04 (A11) (09.01.80) D04h-01/60
 D/S: E(BE, DT, FR, GB, IT, LU, NL).

A stabilised rayon web comprises a non-woven rayon web having Z fibre orientation and a thermoplastic web, the latter penetrating the ray web by 10-40, pref. 10-25% of its thickness. The rayon web has a pre-stabilisation basis weight of 20-25 g/m² and the thermoplastics web has a pre-stabilisation basis weight of 5-25 g/m².

The rayon web may be of spunbonded continuous filament or may be of staple length fibres prepared by conventional dry or wet laying techniques. The web may be needed to produce the required orientation. The thermoplastic web can be in the form of a reticulated film or a melt blown or superbonded web and pref. materials are polyethylene, polypropylene, ethyl vinylacetate, nylon, polyurethane or an ethyl methyl acrylate polyester. Stabilisation is preferably effected by hot laminating rollers. The stabilised web may be used on its own or laminated to further webs.

Improved abrasion resistance, wet and dry stability, bulk and resilience, and tensile strength are obtd. The web may be used in washcloths, towels, bandages, surgical dressings, towels and sponges, or as a gauze substitute.

7.6.79 as 200283 (47pp525).

(E) ISR: US3523861; FR2064067; FR1505092; US3697347; US3481806; US3878014.

BUCY ★ D22 02032C/02 ★EP ---6-264
 Laminated nonwoven fibrous web - comprises hydrophobic microfine fibre layers and one cover ply
 BUCKEYE CELLULOSE CORP 16.06.78-US-915913
 A94 F04 P31 (A18 A23) (09.01.80) A61b-19/08 D04h-13
 D/S: E(BE, DT, FR, GB, IT, LU, NL).

A composite non-woven fabric (1), comprises at least two plies (2,3) of hydrophobic microfine fibres of diameter ≤ 10 µ and a cover ply (4), the plies being bonded together around their periphery. The microfine fibre plies have a basis wt. ≥ 10 g/m² and a density of 0.15 g/cc.

The microfine fibre plies may be of melt blown nylon, polyester or polypropylene fibres and the cover ply may be an apertured plastics film or a spunbonded or wet or dry laid web of discontinuous fibres of rayon, polyester, polypropylene or nylon, the fibres having a diameter ≤ 40 µ, a length ≤ 10 mm and the web having a basis weight ≤ 34 g/m². There may be up to five microfine fibre plies. A fibrous strength imparting ply may be incorporated.

The fabric has an air permeability ≥ 150 mm³/s m², a liquid column strike through resistance ≥ 250 mm, a bacteria strike through resistance ≥ 20 kN/m² and a density ≤ 0.1 g/cc. All these characteristics render the fabric of special use in surgical items such as surgical gowns, and surgical drapes.

7.6.79 as 200285 (45pp525).

(E) ISR: FR2352664; FR2281448.

MUND ★ D22 02060C/02 ★EP ---6-340
Germicidal iodophor powder prodn. - by reacting undissolved organic cpd., esp. polyvinyl pyrrolidine, with solns. of iodine and iodide

MUNDIPHARMA AG 12.06.78-US-914683

A96 (09.01.80) A01n-59/12 A61k-33/18

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Prod. of an iodophor powder (A) comprises suspending an organic iodophor-forming cpd. (I) in a soln. of iodine, dissolved in a solvent in which (I) is not soluble, then adding an iodide dissolved in a solvent system miscible with the iodine solvent. Pref. the iodide soln. is added until the iodine soln. becomes colourless.

(I) is esp. polyvinylpyrrolidone; the iodine solvent is esp. a satd. or halogenated alkane and the iodide solvent esp. a mixt. of water and aliphatic alcohol or ketone. Pref. iodides are HI, NH₄I, LiI, NaI or KI.

(A) are germicides.

Since a solid (I) is used subsequent spray-drying etc. is avoided. Iodine vapours are not evolved during the process and the iodine solvent can be recycled after washing.

12.6.79 as 301112 (9pp1251).

(E) ISR: FR2293441; FR2351663; FR2293458.

FUJI- ★ D22 02094C/02 ★EP ---6-406
Foamed plastic cover for neurosurgical operation - comprising sheet of open celled hydrophilic polymer

FUJI SYSTEMS CORP 05.07.78-EP-100309

A96 P32 P34 (09.01.80) A61f-13 A61l-15

D/S: E(DT, FR, GB, SW).

A cover for placing on the brain or spinal cord during a neurosurgical operation comprises a sheet of open-celled hydrophilic polymeric material. The material must be water insoluble, pliable, chemical resistant. The sheet has thickness 0.5-3 mm, a porosity 85-95% and a water holding capacity of 8-19 times the dry wt. of the sheet.

Pref. materials for the sheet are polyvinylformal or viscose.

The cover remains wet for an extended length of time, does not leave material on the underlying tissue or pull the tissue upon removal and is non reactive to the ambient chemicals.

5.7.79 as 100309 (10pp525).

(E) ISR: FR2337028; GB-786100; GB1390240; FR2125527; FR2258188; FR1568149

BATT D22 01835C/02 =EP ---6-544
Implantable synthetic bone prosthesis - consists of tissue compatible core with outer layer of calcium phosphate ceramic

BATTELLE-INST EV 23.06.78-DT-827529

L02 P32 + P31 P53 P73 (09.01.80) *DT2827-529 A61f-01 B22f-07 + A61b-17/18 A61c-08 B32b-15/04

D/S: E(BE, CH, FR, GB, IT, LU, NL, OE, SW).

Implantable synthetic bone material consists of particles of bio-active sintered Ca phosphate ceramic with CaO: P₂O₅ between 3 : 1 and 4 : 1 supported in a matrix of material. The material consists of a massive core of tissue compatible metal with a layer of Ca phosphate particles 500µm to several mm. long forming the contact surface with body tissues. The material may be made by casting or hot pressing processes. Sintered bodies can be made from mixts. of metal powder and Ca phosphate.

The prosthesis forms a strong bond with the bone which is not subject to stress loosening. The implants have high chemical stability.

11.6.79, as 101845 (24pp1351).

(G) ISR: DT 2127843; DT 2621384; DT 2733394;

DT 2725665; DT 2008010; DT 2620907; DT 2546824;

2 Journal References.

BADI ★ D22 02145C/02 ★EP ---6-548
Aq. iodophor solns. for disinfectant use - contain maleic acid copolymer with alkyl vinyl ether or olefin and mixt. of iodine and iodide

BASF AG 24.06.78-DT-827827

(09.01.80) A01n-59/12 C08l-35/08

D/S: E(BE, DT, FR, GB, IT).

Iodophors are prepd. by mixing, w.r.t. iodophor wt., (a) 14-80 % 1 : 1 copolymer having K-value 8-60 and consisting of maleic acid with a 1-4 C-alkyl vinyl ether or a 2-3 C olefin and (b) 86-20 % mixt. of I₂ and iodide ions in equiv. ratios (0.2-1.1):1, in sufficient water to cause complete dissolution.

The iodophors are used in the prodn. of tenside-free, foamless disinfectants, e.g. for breweries, dairies, agriculture and hospitals.

15.6.79. as 101959. (12pp200).

(G) ISR: - GB-824215; GB1101304.

BEGH- ★ D22 02176C/02 ★FR 2420-339
Protective pad for menstrual and pathological flow - has contour conforming better to feminine anatomy with vulvar tampon

BEGHIN-SAY 20.03.78-FR-007934

P32 (23.11.79) A61f-13/16

A protective pad for feminine hygiene is absorbent and only of slight thickness. It is roughly oblong and has front and rear parts which are rounded. Close to its longitudinal axis it has a protuberance of absorbent material. This is inserted completely between the outer lips of the vulva without penetrating inside the vagina.

In the central zone of this protuberance which contains a small quantity of super-absorbent components, there is a recess for the collection of the debris of the mucous membrane.

The pad is moulded from a suspension of fibres in air with a peripheral bead. It presents the form which is best adapted to the feminine anatomy and considerably reduces the possibility of lateral leakage. 20.3.78 as 007934 (11pp)

HOUB/ ★ D22 02186C/02 ★FR 2420-491
Liq. spraying device to disinfect dustbins etc. - immediately after automatic emptying by refuse collection vehicle

HOUBLOUP J 24.03.78-FR-008607

P34 P43 Q35 (23.11.79) A61l-03 B08b-09/08 B65f-03/02 B65f-07

Before the empty bin is lowered, the bin interior is sprayed by an atomising nozzle. The nozzle is supplied with liq. disinfectant from a tank mounted on the vehicle.

The spray action is pref. initiated automatically by the fluid power cylinder which empties the bins. Alternatively the spray can be manually operated by a lever. Liq. spray pressure is pref. obtd. from a pneumatic or hydraulic system provided for other purposes on the vehicle. 24.3.78 as 008607 (4pp448)

JOHJ ★ D22 02231C/02 ★GB 2024-012
Storable, oxygen-generating, surgical dressing - contg. a peroxy cpd., and an initiating agent, for prolonged oxygen release

JOHNSON & JOHNSON 02.07.79-GB-022919 (10.04.78-GB-013959)

A96 P34 (09.01.80) A61l-15/03

New storable, topical wound dressings in contact with a wound are capable, after activation, of generating O₂ gas for prolonged periods of time. The ready-made, pre-packaged hyperbaric O₂ dressings shorten the healing time of wounds.

A suitable dressing consists of a hydrocolloid (I) sheet contg an adsorbed peroxy cpd. (II) (pref H₂O₂), one surface of which is protected by a semipermeable facing material (e.g. microporous polypropylene), the other surface of which is protected by material which allows passage of gases and liq. A sec. dressing is formed from a sheet of (I) contg. adsorbed initiator (III) (pref KI), one surface of which is covered with a larger sheet of impermeable pressure-sensitive adhesive coated material. 2.7.79 as 022919 (5pp478).

TOKE ★ D22 02546C/02 ★J5 4150-366
Deodorising plant for removal of ammonia etc. - comprises a scrubber, humidity controller, an ozone generator, an oxidiser and adsorption tower

TOKYO SHIBAURA ELEC LTD 18.05.78-JA-058203

J01 (26.11.79) B01d-53/34

The plant comprises (1) a scrubber, in which a gas contg. odoring malodorous cpds. are scrubbed with water, etc., (2) a device for controlling humidity of scrubbed gas, (3) an ozone-generator for supplying ozone into the gas, (4)

an oxidn. reactor, in which the gas and ozone is contacted with active carbon, and (5) an adsorption tower in which the gas is contacted with acid-adsorbing active carbon (III).

Treatment with active carbon can easily remove ammonia as well as other cpds. such as methyl mercaptan, methyl sulphide, hydrogen sulphide, trimethylamine, formaldehyde, etc. The active carbon is prepd. by soaking active carbon in an aq. soln. of sulphuric acid, hydrochloric acid or phosphoric acid, and heating it. 18.5.78 as 058203 (3pp42)

MITQ ★ D22 02547C/02 ★ J5 4150-367
Plant for deodorising malodorous gas - has chlorine dioxide generator, mixers, scrubber and gas reactors

MITSUBISHI ELECTRIC CORP 18.05.78-JA-059625

J01 (26.11.79) B01d-53/34

A plant (I) for deodorisation, comprises (1) chlorine dioxide (II)- generator, in which aq. soln. of sodium chlorate is reacted with hydrochloric acid for generation of (II) and chlorine gas (III), (2) mixer for mixing the mixt. of (II) and (III) with a gas (IV) contg. malodorous cpds., (3) a scrubber in which (IV) is scrubbed with an oxidative soln. (V), (4) a mixer for mixing the waste soln. from the (II)-generator into (V), (5) a gas-reactor in which (IV) is retained for a while, for completion of the oxidn., and (6) a scrubber, in which (IV) is scrubbed with a reducing-soln. (VI).

The treatment of (IV) in (I) increases the efficiency of (II)-utilisation. As (V), the waste soln. from the (II)-generator is used. (IV) is oxidised with (II) and (III) in the waste soln., in the scrubber of (3) and the reactor of (5). As (VI), a basic aq. soln. contg. one or more of sodium thiosulphate and sodium sulphite is used. 18.5.78 as 059625 (4pp42)

WATA ★ D22 02671C/02 ★ J5 4151-115
Wet pack dressing for administering drugs, e.g. antiinflammatory - comprises a soft, elastic but self-supporting synthetic resin sheet

WATANABE YAKUHI KO 18.05.78-JA-058262

A96 B05 P34 (B07) (28.11.79) A61k-09/70 A61l-15/06

The plaster base may be a natural high molecular cpd. such as gelatin, alginic acid; derivs. of natural high molecular cpd. such as CMC; synthetic high molecular cpd. such as PVA, polyacrylic acid and/or polyethylene glycol, opt. contg. inorganic filler such as kaoline or zinc oxide, and water and/or solvents such as propylene glycol or glycerine. The prod. may be mixed and treated with cross-linking agent, such as formalin, furfural, glyoxal, glutaraldehyde, dialdehyde starch, alkaline earth metal salt such as calcium chloride, calcium carbonate or magnesium chloride, aluminium cpd. such as aluminum hydroxide alum, epoxy cpd., isocyanate cpd. or urea.

The drug may be produced by mixing or reacting inflammatory substance, such as camphor, menthol or methyl salicylate, or nutrient substance such as tocopherol acetate with the above base and moulding the paste into a sheet. The prod. has excellent expansion, longer effect, good feel etc. 18.5.78 as 058262 (3pp69)

WATA ★ D22 02673C/02 ★ J5 4151-117
Elastic wet pack compsn. - contg., as plaster component, the gel obtd. by treating PVA with an aliphatic aldehyde cpd.

WATANABE YAKUHI KO 18.05.78-JA-058261

A96 B05 (A14 B07) (28.11.79) A61k-09/70 A61k-47

Wet pack compsn. contains as plaster component gel obtd. by treating PVA of polymerisation degree 500-3000 and hydrolysis degree 70-100% with aliphatic cpd. (I) having aldehyde gp. in molecule.

As (I), aliphatic monovalent aldehyde such as formaldehyde or acetaldehyde, divalent aldehyde such as glyoxal, malonaldehyde, succinaldehyde or glutaraldehyde, oxidised hydrocarbon having ≥ 2 aldehydes gps. in molecule such as dialdehyde starch, sodium bisulphite adduct of those aldehydes, acetal are used.

The wet pack compsn. has good elasticity and adhesibility and does not cause sags on sweating. 18.5.78 as 058261 (3pp69)

JAPC ★ D22 02674C/02 ★ J5 4151-118
Thickener for wet pack compsn. - comprises sodium polyacrylate and polyacrylic acid crosslinked derivs.

NIPPON SHOKUBAI KAGAKU 18.05.78-JA-058277

A96 B05 (A14 B07) (28.11.79) A61k-09/70 A61k-47

The thickener comprises (A) Na polyacrylate where viscosity of 1 wt.% aq. soln. is $> 3,000$ cps. determined by Brookfield rotation viscometer (25°C , 12 r.p.m.) and (B) polyacrylic acid cross-linked derivs. where viscosity of 1 wt.% of aq. soln. when the substance is 100% neutralised with NaOH, > 2000 cps. determined by Brookfield rotation viscometer (25°C , 12 rpm) in a ratio of 10-70 wt.% of (B) component to total amt. of (A) component and (B) component. 18.5.78 as 058277 (5pp69)

TAKA/ ★ D22 02682C/02 ★ J5 4151-128
Prepn. of deodorant and disinfectant spray - by mixing ethanol with aromatic soln. and placing in spray vessel with liq. propane gas

TAKAHASHI S 17.05.78-JA-057609

E14 P34 (28.11.79) A61l-03 A61l-09/*

Prepn. of deodorant and disinfection spray comprises mixing 70-80 wt.% of ethanol with 20-30 wt.% of aromatic soln., and charging the resulting soln. into a spray type vessel together with liq. propane gas.

The spray is used for disinfection of pathogenic bacteria and for deodorisation. The spray is applied to the inside of shoes, sporting goods, kitchen, toilet, hands and feet for disinfection and deodorisation and shows the excellent effect. 17.5.78 as 057609 (2pp108)

NIIO- ★ D22 02790C/02 ★ J5 4151-669
Germicidal cloth - is woven from a yarn coated with resin contg. powdered copper, silver or its mixt. or cpd.

NIPPON ION KK 22.05.78-JA-061371

A97 E32 F03 (29.11.79) D03d-15

The cloth is woven from a yarn coated with a resin contg. Cu powder, Ag powder or its cpd. or mixt. Pref. both sides of the yarn surface are continuously or intermittently adhered with a resin before weaving the yarn. Pref. the resin contains water-insoluble salt of Cu or Ag and is foamed.

The resin is polyurethane resin, polyacrylic resin, PVAc (copolymer) resin or synthetic rubber. The Cu and Ag cpds. are the oxides, sulphides, hydroxides, (in)organic salts and complexes. 22.5.78 as 061371 (5pp84)

STRK ★ D22 03004C/02 ★ NL 7806-436
System for conveying trays through airlock doors - uses rack and pinion so that rack on tray is in contact with at least one pinion

STORK AMSTERDAM BV 14.06.78-NL-006436

Q35 + Q21 Q64 (18.12.79) B61b-13/02 B65g-35/06 F16h-55/26

Conveying system comprises rotating gearwheels which engage in gear racks attached to the trays. The gear wheels are spaced in relation to the size of the trays so that each tray is always in contact with $\geq$ gear wheel. The rack and gearwheels are pref. so arranged that the racks engage with gearwheels whose axes are either above or below the rack. The conveying system is used partic. for autoclave towers through which the trays are transported vertically. The uppermost tray in the stack engages with gear pinions above its rack whilst the lowest tray engages with a pinion beneath its rack. The intermediate trays undergo only vertical travel.

The conveying system is used where the arrangement calls for a discontinuity in the conveyor. It is of particular value in conveying jars or cans into a sterilising autoclave via an airlock chamber. 14.6.78 as 006436 (12pp1370)

VENI/ ★ D22 C/02 ★ RU --64-353
Perfume compsn. for rooms and clothes - contains colophony powder, calcium oxide and carbonate, silicate derivs. and aroma mixt.

VENIAMIN N V 19.03.74-RU-078092

(25.11.78) C08l-93/04

ASEL=★ D22 03128C/02 ★SU-658-148
Wound healing porous alginate material - prepd. by treating calcium gluconate and/or lactate aq. suspension with sodium alginate soln. and freeze drying prod.

AS USSR ELEMENT ORG 19.07.76-SU-388457

A96 (28.04.79) C08j-09/16

Porous alginate material for healing wounds, burns, ulcers etc., is prepd. using aq. Ca-gluconate and/or Ca-lactate suspn. of particle size 50-300 micro. m. to give improved mechanical properties and more intense technological process.

The method utilises mixing of Na-alginate soln. and proposed suspn. at 0-30°C to give molar ratio Ca²⁺: alginate macromolecule chains 0.1-0.4:1 (pref. Ca-gluconate: Na-alginate 0.15-0.25:1; Ca-lactate:Na-alginate 0.25-0.35:1) and gel concn. 0.2-0.7 wt. % (pref. 0.35-0.45 wt. %).

The prepd. gel is frozen to -20°C and then vacuum dried to max. moisture content 5%. The process time is reduced from 3 hrs. to 3 mins. and gives properties: tensile strength 40-80 g/cm²; rel. elongation 10-25%; water adsorption 6.8.10³%.

Raskina, L.P., Yakubovich, V.S., Shenker, M.B. et al. Bul. 15/25.4.79. 19.7.76. as 388457 (4pp114)

OWEI ★ D22 03403C/02 ★US 4179-757
Polysulphone prepd. from higher olefin and sulphur dioxide - used for biomedical articles to be contacted with human blood

OWENS-ILLINOIS INC 10.05.76-US-684683 (22.02.72-US-228240)

A96 P32 (A26) (25.12.79) A61f-01/24 C08g-75/22

A copolymer of a 16-18C -olefin and SO₂ is used for the mfr. of biomedical articles adapted for contact with human blood, e.g. surgical implantations, permselective membranes for oxygenating human blood or sepg. gas components in biomedical procedures, wound dressings and surgical tubing for transporting blood to and from a human body. The polysulphone is pref. prepd. by bulk polymerisation using a catalyst such as a free radical source, light, peroxide or azo nitrile. The molar ratio of SO₂ to olefin is typically 1:1.

The highly processable copolymer has good biocompatibility with human blood, oxygen and CO₂ permeability and non-thrombogenic properties. It has good tensile strength and elongation. 10.5.76 as 684683 Div. ex 3928294

(+11.8.72, 2.2.73, 14.5.75-US-279877, 328972, 577533) (14pp558)

NARE-★ D22 03505C/02 ★US 4180-473
Transportation of metal ions in metal-working solns., etc. - by using complex of metal ion and polyfunctional organic ligand

NAT RESEARCH LABS 21.10.77-US-844280 (21.07.75-US-597756)

E12 H08 (25.12.79) C02b-05/06 C09k-03

Metal ions are transported in a medium contg. a moiety demanding the metal ions by introducing a metal complex (I) of a metal ion and a polyfunctional organic ligand. (I) has an aq. proton induced dissociation property represented by a sigmoidally shaped curve on a cartesian co-ordinate plot of the negative log of the metal ion concn. against the negative log of the hydrogen ion concn. This property causes controlled release of metal ions on demand by the moiety.

(I) are stabilisers in oil-and-water emulsions of metal-working solns. to prevent emulsion degradation due to metal particles, microbial attack, polyvalent ions formed etc. (I) may be highly soluble in the media. (I) may be used as antimicrobial agents in industrial coolant liquids, and as preservatives, antiseptics, sanitisers, germicides, bactericides, sporicides, virucides, disinfectants, etc. 21.10.77 as 844280 C.i.p. 4055655, 4129509 (+1.9.76 -US-719813)(11pp1248)

ABBO ★ D22 03516C/02 ★US 4180-508
Biocidal n-(2-methyl-1-naphthyl)-maleimide prepn. - by reacting 2-methyl-1-naphthylamine with maleic anhydride in presence of lower fatty acid

ABBOTT LABORATORIES 13.11.78-US-960314 (19.10.77-US-843610)

A60 C02 E13 (25.12.79) C07d-207/40

N-(2-Methyl-1-naphthyl)-maleimide (I) is prepd. by heating equimolar mts. of 2-methyl-1-naphthylamine with

maleic anhydride in the presence of lower fatty acid to a temp. between 100°C and the b.pt. of the reaction mixt. for 1-10 hrs. Pref. the heating is carried out in the presence of glacial acetic acid, which is esp. used in a volume of 0.2-1.6 l. per mole of reactants. When the process is carried out in the absence of a solvent, a temp. of 130-190°C is pref.

(I) is a potent bioxide used to protect substrates from bacterial or fungal attack. It can be used to treat leather and its substitutes, wood or plastic products, or fabrics made from cellulosic or olefin polymers, formed into structures exposed to outdoor conditions, e.g. tents and swimming pool liners. It can also be added to industrial fluids (e.g. cooling waters or metal cutting fluids), cosmetics and paints. US4/41905 claimed cpd. (I). 13.11.78 as 960314 Div. ex 4141905(4pp990)

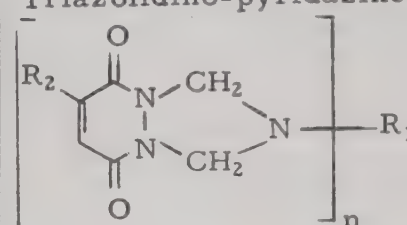
FARH D22 25383Y/15 #US 4180-575
Pesticidal triazolidino-pyridazin-diones - prepd. by reacting pyridazin diones with prim. amine and formaldehyde

HOECHST AG 27.09.75-DT-543241 (22.03.77-US-780244)

C02 E13 F09 +P34 (F06) (25.12.79) *DT2543-241 A01n-09/22

C07d-487/04 +A61k-31/50

Triazolidino-pyridazine diones of formula (I) are new.



In (I) n is 1-3; R₂ is H or CH₃; Where n=1, R₁ is 1-18C alkyl, 5-8C (methyl)cycloalkyl, or norbornylmethyl, hydroxyalkyl, alkoxyalkyl, or alkylmercaptoalkyl of 2-8C, or phenyl or benzyl, either

of which is opt. mono- or disubstd. by halo, haloalkyl, NO₂, CN, 1-4C alkyl or 1-4C alkoxy; if n=2, R₁ is 1-36C satd. aliphatic hydrocarbyl opt. mono or di-substd. by halo, 1-4C hydroxyalkyl, 1-4C alkoxyalkyl or 1-4C alkylmercaptoalkyl; or R₁ is 5-8C satd. 5-8C cycloaliphatic hydrocarbyl opt. mono- or disubstd. by 114C alkyl; or R₁ is phenylene opt. mono or di-substd. by 1-4 hydroxyalkyl, haloalkyl, alkoxyalkyl, alkylmercaptoalkyl, alkyl, NO₂, CN or halo, if n=3 R₁ is 3-36C aliphatic satd. hydrocarbyl opt. mono- or disubstd. by halo, 1-4C hydroxyalkyl, alkoxyalkyl, or alkylmercaptoalkyl; or R₁ is 5-8C satd. cycloaliphatic opt. mono- or disubstd. by 1-4C alkyl or R₁ is trivalent benzene ring opt. substd. for phenylene (in n=2 definition)

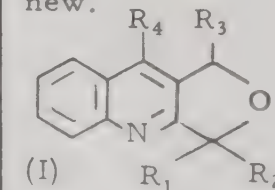
Cpds. (I) are fungicidal and bactericidal agents, and are useful in plant protection and e.g. glues, paints, cutting oils and for protection of wood, paper and textiles. 22.3.7 as 780244(7pp963)

AMHP ★ D22 03552C/02 ★US 4180-580
1,3-Di:hydro-3,3-di:alkyl-furo-(3,4-b)quinoline cpds. - useful as antimicrobial and antihypertensive agents

AMERICAN HOME PROD CORP 03.05.78-US-902463 (08.11.76-US-739779)

B02 C02 (25.12.79) A61k-31/47 C07d-405/02

Furo 3,4-6 quinolines of formula (I) and their salts are new.



and R₅ is phenyl.

Cpds. of formula (II) are also new. R₆ is lower alkyl or (CH₂)_mC(=O)-NR₈R₉ where m is an integer of 1-5 and R₈ and R₉ are each lower alkyl. R₇ is H, lower alkyl or (CH₂)_nNR₁₀R₁₁ where n is an integer of 1-6 and R₁₀ and R₁₁ are each lower alkyl.

(I) are antimicrobial and antihypertensives. Cpds. (II) are intermediates for prepn. of (I). The Parent Patent claimed cpds. of formula (I) with variations in definitions of substituents. 3.5.78 as 902463 Div. ex 4108998(11pp927)

FARB D22 78356A/44 = US 4180-617
Composite porous acrylonitrile copolymer fibres - having a high moisture absorption to swelling ratio, useful in clothing
BAYER AG 28.04.77-DT-719019 (02.12.75-DT-554124)
A14 F01 (25.12.79) *BE-866-473 + D02g-03

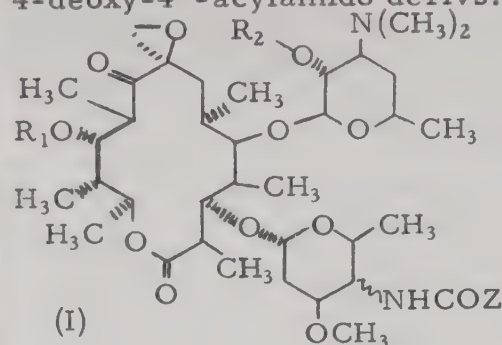
Hydroscopic filament or fibre of a fibre-forming synthetic polymer, has a water permeable sheath and a micro-porous core. Both the sheath and core contain voids. The voids in the core forming an interconnected system open to liquids through voids in the sheath.

The average size of the voids in the core is $>100000\text{\AA}$ and is larger than the size of the voids in the sheath. The filaments or fibre has a water retention capacity $\geq 10\%$, of porosity of $\geq 10\%$, and a fibre swellability of $\leq 10\%$ which is lower than the water retention capacity.

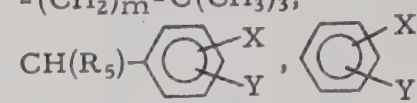
The wearing comfort of textile produced from the fibres is improved. Pref. the fibres are of acrylonitrile polymer.
29.7.77 as 820240 (+ 2.12.76-US-746727)(11pp924)

PFIZ D22 49015B/27 = US 4180-654
Antibacterial 4-deoxy-4-acylamido macrolide cpds. - derived from oleandomycin, erythromycin carbonate) and erythromycyl-amine
PFIZER INC 29.08.78-US-937640 (03.01.78-US-866722)
B03 C02 E13 (D15) (25.12.79) *BE-873-267 C07h-17/08

4-deoxy-4"-acylamido derivs. of cpds. of formula (I): and their acid addn. salts are useful as antibacterial agents.



R_1 and R_2 are H or 2-3C alkenyl, Z is $-(CH_2)_m-C(CH_3)_3$,



or $-(CH_2)_m$ -heterocyclyl. m is 0 or 1.

R_5 is H, Cl, OH, CH_3 , NH_2 or 1-4C alkoxy. X is H, Br, Cl, F, 1-4C alkyl or 1-4C alkoxy. Y is X, CF_3 or 2-5C carbalk-oxy. Heterocyclyl is thienyl, pyrazinyl, pyridyl, furyl, imidazolyl, thiazolyl, isothiazolyl, oxazolyl, isoxazolyl, pyrrolyl, thiadiazolyl, or monomethyl derivs. of the heterocyclyls. 29.8.78 as 937640 (26pp393)

See Also

D13 EP 0006532

D21 J5 4150459

D25 J7 9041566

D23: OILS; FATS; WAXES

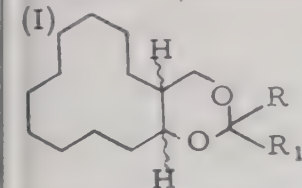
HENK ★ D23 02158C/02 ★ EP ---6-5/2
13,15-Di-oxa-bi-cyclo-(10,50)-heptadecane cpds. - used as perfumes with amber note

HENKEL KG AUF AKTIEN 26.06.78-DT-827979
E13 (09.01.80) A61k-07/46 C07d-321/10 C11b-09
D/S: E(DT, FR, GB, NL).

13,15-Dioxabicyclo-(10,5,0)-heptadecanes of formula (I) are new (where R and R_1 are each H or Me).

(I) are perfumes or components of perfume compns. for direct use, for scenting cosmetics or for improving the odour of industrial prods., e.g. detergents. (I) have a warm, amber note, cling well and combine easily to form

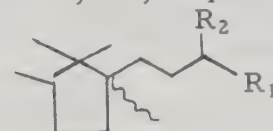
new perfume compns. Conc. of (I) in perfume compns. is 1-50 wt. %. Conc. of (I)-contg. compns. in scented prods. may be 0.05-2 wt. %.
20.6.79 as 102031 (10pp200)



(G) ISR: DT2550610; DT2407863; CH-435521; CH-474567; CH-530460.

DRAG-★ D23 02270C/02 ★ GB 2024-208
2,2,3-tri:methyl-cyclopent-3-ene(s) - useful as stable perfumes with sandalwood aroma, etc.

DRAGOCO GERBERDING 26.06.78-DT-827957
E15 (09.01.80) A61k-07/46 C07c-33/05 C07c-69/14 C07d-47/40
Trimethyl-cyclopentenenes (I) are new:



(where R_1 is 1-3C alkyl; and R_2 is CH_2OH , CH_2OAc , (I) or CHO).

(I) are stable perfumes, In partic., (I; R_1 is Me, Et or n-Pr; and R_2 is CH_2OH)

have a mildly woody, pronounced sandalwood scent.
18.5.79 as 017371 (6pp478).

D24: SOAP; SOAP DETERGENTS

NOTHING TO REPORT

D25: OTHER DETERGENTS

ESSO D25 92598R/50 = DS 2027-812
Boron-contg detergent additives

EXXON RES & ENG CO 06.06.69-GB-028834
A17 E12 H07 (A97) (03.01.80) *DT2027-812 C07f-05/04
Additives which contain boron, are prep. by heating a sulphonic acid or an alkali-metal sulphonate of m. wt. 350-1000 with boric acid (opt. mixed with boron oxide), in the presence of an alkaline earth metal alkoxy alkanolate (derived from $<8C$ alkoxyalkanols). The additives are recovered after filtration of the reaction mixt., as the filtrate.

The additives are useful as detergents and anticorrosion agents in Cuboils, fuels, solvents and functional liquids. 5.6.70 as 027812 (3pp549)

HENK D25 10314U/08 = DS 2138-584
Bleaching aids - for use in washing and bleaching powders
HENKEL KG AUF AKTIEN 02.08.71-DT-138584
A97 E13 (03.01.80) *NL7209-314 + C11d-07/54 D06l-03/02
A storage stable, powdery bleaching agent comprises (a) a powdery component of spherical particles, of which $\geq 70\%$ have an average dia. of 0.1-1mm and at most 30%

have an av. dia. of $\geq 0.01-2.5\text{mm}$. The particles are made of 10-70 wt. % of at least one activator for per-cpds. chosen from N-acyl and O-acyl cpds., carbonic acid and pyrocarbonates with an activity value of >3 and 30-90 wt. % of 12-24C fatty acids and a polyethylene glycol of average mole. wt. 1000-20,000 in a wt. ratio 5:1 to 1:4 and (b) a granular to powdery per cpd.

The per-cpd. releases H_2O_2 in aq. soln., and is of particle size such that $\geq 50\%$ is of dia. 0.05-2.5mm. The wt. ratio of (a) to (b) is 1:5 to 5:1 and there is present 0.05-2 moles activator per gram. atom. active oxygen.
2.8.71 as 138584 (8pp068)

HENK D25 86153A/48 = DS 2724-350
Rinsing prod. for dish washing machines, contg. draining cpd. - which comprises reaction prod. of sugar cpd. and polyglycol ether
HENKEL KG AUF AKTIEN 28.05.77-DT-724350
A97 (A25) (03.01.80) *BE-867-523 C11d-03/22
Clear rinsing agent (I) for dishwashing machines is based on sugar derivs., as draining components (II).
(II) are acid-catalysed reaction prods. from 5-6C re-

ducing monosaccharides (or oligosaccharides comprising these and contg. ≥ 4 monosaccharide units) and polyglycol ethers (III) having a mean mol. wt. of 190-450, pref. 300-400, in mol. ratio of 1 : 0.4 - 1.5. Pref. the mol. ratio to (III) is 1 : 0.75 for monosaccharides and 1 : 1.4 for oligosaccharides. Pref. the proportion of (II) is 10-80, esp. 15-60 wt. % of (I). Pref. 10-40 wt. % of (II) can be replaced by weakly-foaming non-inorganic tensides.

(I) contains, as (II), exclusively active components and does not require co-use of foam-suppressing ballast-tensides and other foam depressers; (I) has good biological decomposability and min. toxicity for organisms living in H_2O . 28.5.77 as 724350 (7pp481)

CONO ★ D25 01993C/02 ★EP---6-105;
Ethoxylated alcohol mfr. - by reaction of alcohol with ethylene oxide using barium-contg. catalyst
CONTINENTAL OIL CO 16.06.78-US-916421
A25 E17 (09.01.80) B01j-23/02 C07c-41/02
D/S: E(BE, DT, FR, GB, SW).

Alcohols are contacted with ethylene oxide in the presence of a catalyst chosen from (hydrated) barium hydroxide, barium oxide and barium metal at 200-500°F to form ethoxylated alcohols.

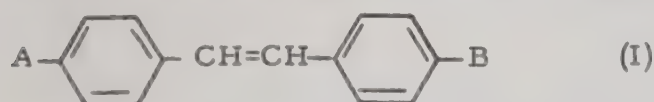
The process is used to form products for use as detergents and cleaning agents, domestic and industrial laundry detergents, detergent builders, polishes, sanitisers and dry cleaning materials. They can also be used in the pulp and paper industry and in the fibre industry.

By use of the specific catalyst, the process provides a narrow distribution at high mole ethylene oxide adducts while yielding a very low level of free alcohols and undesirable by-products.

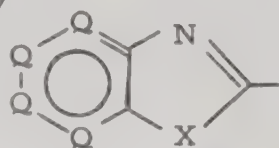
12.2.79 as 100410 (15pp914)
(E)ISR: 2 Journal References.

FARH ★ D25 02006C/02 ★EP---6-176
Pyrido:oxazolyl or pyrido:thiazolyl subst. stilbene derivs. - useful as optical brighteners, scintillators and laser dyes
HOECHST AG 09.06.78-CH-006347
A60 E23 F06 (09.01.80) C07d-498/04 C07d-513/04 C08j-03/20
C11d-03/42 D06l-03/12
D/S: E(CH, DT, FR, GB, IT).

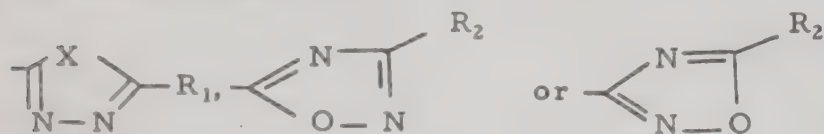
Stilbene derivs. of formula (I) are new:



(A is an opt. subst. gp.



one Q is -N=, the others -CH=. B is CN, COOR₃, CONR₄R₅ or a gp.



R₁ = opt. subst. aryl or aralkenyl, or heteroaromatic gp. R₂, R₃, R₄ and R₅ are as R₁ or also 1-18C alkyl, cycloalkyl aralkyl, (CH₂CH₂O)_nR, or alkyl subst. by halo, alkoxy, OH, alkylamino, COOH or carbalkoxy. (R^F = H or 1-4C alkyl; n = 1 or 2).

R₃, R₄ and R₅ can also be H or R₄R₅N=morpholino, piperidino or piperazino. X is O or S).

(I) are optical brighteners for natural or (semi) synthetic materials such as polyolefins, polyamides, cotton, paper etc. and are esp. useful as additives for laundry compns. (I) are also useful as scintillators, e.g. for electrophotography or for supersensitisation, and, depending on substituents, as laser dyes.

5.6.79. as 101763 (42pp1251).

(G) ISR: FR2046545.

PROC ★ D25 02033C/02 ★EP---6-26
Textile softening and detergent compsn. - contg. nonionic surfactant, cationic softener, builder and polyphosphonic acid
PROCTER & GAMBLE CO 20.06.78-GB-027380
A97 E11 F06 (09.01.80) C11d-01/83 C11d-03/36
D/S: E(BE, DT, FR, GB, IT, NL, SW).

Softening and detergent compsn. comprises (by wt.) (a) 3-30% ≥ 1 polyethoxy nonionic surfactant (I) of HLB 8-15 with ≥ 16 ethoxy gps. per molecule on average; (b) 1-15% ≥ 1 cationic textile softeners (II); (c) 10-80% ≥ 1 builder and (d) 0.1-5% water soluble polyphosphonic acid $Z-\left[P(O)(OH)_2\right]_n$ (III) ($n \geq 2$; Z = organic connecting gp. of valency n).

Pref. Z is hydrocarbyl-substd. amine and esp. (III) is an alkali metal or NH₄ salt of ethylenediamine tetramethylene phosphonic acid (IIIa) or diethylenetriamine pentamethylene phosphonic acid (IIIb).

The granular compsns. have good cleaning and textile-softening properties. (III) reduces deposition of suspended organic matter in the water and improves removal of bleachable stains.

11.6.79 as 200295 (28pp1251).

(E) ISR: US3591405; US3609075; EP---1853.

PROC ★ D25 02034C/02 ★EP---6-271
Washing and textile softening compsn. - contg. nonionic surfactant, cationic softener and nonionic optical brightener
PROCTER & GAMBLE CO 15.01.79-US-003567 (20.06.78-GB-027378)
A97 E13 F06 (E14) (09.01.80) C11d-01/83 C11d-03/42
D/S: E(BE, DT, FR, GB, IT, NL).

Detergent and fabric softening compsn. comprises (a) 10-30 (10-20) wt.% ≥ 1 polyethoxy nonionic detergent (I) of HLB 8-15 with ≥ 16 ethoxy units per mole on average; (b) 1-15 (3-10) wt.% ≥ 1 cationic softener (II); (c) 0.001-3 (0.01-0.5) wt.% nonionic optical brightener (III); (d) 0-80 (20-70) wt.% builder and (e) 0-5% discolouration inhibitor (IV). The wt. ratio of any anionic surfactant (V) present to (I) is $< 1:1$, and wt. ratio (V):(II) is $< 1:1$.

(III) are benzoxazoles, coumarins, 2,5-bis(benzimidazolyl) furans or 4,4'-bis(2-sulphonamidostyryl) diphenyls.

Pref. (IV) is 0.3-5% of (a) 10-20C monohydric alcohol condensed with ≥ 17 moles ethylene oxide (EO); (b) polyethylene glycols of mol.wt. 1000-30000 or (c) polyvinyl alcohols of mol.wt. 1000-20000.

Used esp. in granular compsns. with excellent cleaning and softening properties. These brighteners avoid the yellowing problems caused by cationic surfactants upon repeated washing.

13.6.79 as 200302 (41pp1251).

(E) ISR: US3689424; DT2021678; DS1922047; FR1583335; DT2000231; DT2308072.

AIRW- ★ D25 02267C/02 ★GB 2024-193
Pouch for uniform release of chlorinating agents etc. - to media, is made of insol. PVA

AIRWICK AG 04.05.79-US-035369 (26.06.78-US-919120)
A96 B07 C03 (D15) (09.01.80) C02f-01/50

Sealed pouch for controlled release of an active ingredient (I) to an aq medium at $\geq 60^\circ C$ is an envelope of cold-water soluble polyvinyl alcohol film with min degree of swelling water 120% (I), having at least some solubility in water, enclosed in the film, and gives an aq. soln. of pH 2.5-10 pref 4-10). The max ratio wt of (I):pouch vol is 50lbs/ft³ 800 kg/m³). (I) are esp detergents, bleaches, pesticides, chlorinating agents, drugs, bactericides, water-treatment chemicals and dyes.

Pouch gives uniform (zero-order), controlled release, esp of chlorinating agents to swimming pools and water towers. Over chlorination is thus avoided. 25.6.79 as 021971(11pp1251)

LIOY ★ D25 02428C/02 ★J5 4149-706
Clothes cleaning compsn. contg. anionic and nonionic surfactants - e.g. sulphonate salts, polyoxyethylene cpds., and also contg. builder and ion-exchange clay, e.g. montmorillonite
LION FAT & OIL KK (KUNI-) 17.05.78-JA-058478
A97 E12 (E34) (24.11.79) C11d-03/14

Granular cleaner compsn. contains (a) 2-40 (pref. 10-30) wt.% of non-soap synthetic anionic and nonionic surfactant,

(b) 5-60 (pref. 10-40) wt. % of builder and (c) 1-30 wt. % of clay mainly consisting of montmorillonite having 10-45 meq/100 g of cation-exchange capacity.

Anionic surfactants are e.g. alkali metal or Mg salt of 10-16C alkyl-benzenesulphonic acid, Na- 11-18C alkylsulphate alkali metal or Mg salt of 10-20C α -olefin sulphonic acid, alkali metal or Mg salt of ethylene oxide adduct 8-22C alcohol, alkali metal or Mg salt of 10-22C alkanesulphonic acid. Nonionic surfactants are e.g. polyoxyethylenealkylether, polyoxyethylenealkylphenyl ether, polyoxyethylene-fatty acid esters, polyoxyethylene-sorbitan fatty acid ester, etc. and have HLB values 8-18.

The builder is Na- or K-tripolyphosphate, Na- or K-hexametaphosphate, Na- or K-pyrophosphate, Na-carbonate, Na- or K-silicate, Na- or K-polycarboxylate, Na- or K-nitrilotriacetate, etc. The clay is montmorillonite, nontronite, hectorite, saponite, etc.

It is used to clean clothes e.g. of polyester. Substances that cause stains are not redeposited after removal.

17.5.78 as 058478 (6pp170)

ECON ★ D25 C/02 ★ J5 4152-007

Prod'n. of solid casting detergent-contg. product

ECONOMICS LAB INC 07.02.78-US-875874

(29.11.79)

7.2.79 as 013169.

KAOS D25 63453V/36 = J7 9041-566

Powdered quaternary ammonium salts - containing long alkyl chains useful as textile softeners, as rinsing agents and in sterilization

KAO SOAP KK 20.02.73-JA-020408

E19 (D22) (08.12.79) *DT2406-965 C07c-87/30 C07c-91/26 + C07c-85 C07c-93/02

Title cpds. (I) e.g. dimethylmyristylbenzyl ammonium chloride are obtd. from a mixture of (1-33) wt. % (w. r. t. mixt.) of the long chain ammonium salt with ≥ 2 of water and alcohol(s) (which are liq. at room temp.), which is spray dried to yield the powdered prod. 20.2.73 as 020408 C07c-87/30; 91/26; 93/02; 85/00 (8.12.79) KAO SOAP CO. LTD. (2pp) (J4 9108008)

UNIL D25 13127U/10 = J7 9041-612

Washing compsn - contg citric acid salt as builder

UNILEVER NV 17.08.71-GB-038471

E17 (10.12.79) *DT2239-646 C11d-03/08

Citrates can replace polyphosphates as builders in washing compsn. provided that their sequestering action is enhanced by proper selection of washing-active substances.

Suitable compsns. contain ≥ 20 wt. % of a citrate (pref. sodium citrate), ≥ 15 wt. % of a non-ionic washing agent or ≥ 25 wt. % (w. r. t. total compsn.) of an anionic, amphoteric or hybrid-ionic washing agent. The compsn. is esp. suitable for laundering. 16.8.72 as 082056 (clg. 17.8.71 -GB-038471) C11d-3/08 (10.12.79) UNILEVER NV (11pp) (J4 8029806)

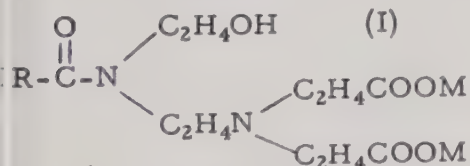
LIOY D25 48066A/27 = US 4180-468

(N)-Hydroxyethyl-(N)-bis:carboxyethyl-aminoethyl carboxamide derivs. - useful as amphoteric surfactants in detergents fibre treating agents, antistatic agents and shampoos

LION FAT & OIL KK 01.12.76-JA-144356

E16 (D12 E12) (25.12.79) *DT2752-116 A61k-07/06 C11d-09/30 + C09f-05

Disubstd. aliphatic carboxylamidoamines of formula (I) are new, where R is a 7-17C aliphatic hydrocarbyl, and M is H, Na or K. The acyl gp., RCO is lauroyl, stearoyl or an acyl gp. derived from coconut oil fatty acids.



(I) is prepd. by reacting an imidazoline deriv. with an alkyl acrylate and water, and saponifying the reaction prod. with an alkali hydroxide.

(I) is esp. used in detergents or toiletry compsns. in amt. 0.1-30 wt. %. Compsns. are extremely low in irritating property to skin, eyes and mucous membranes. 25.11.77 as 855056(5pp931)

FARH

D25

40739B/22 = US 4180-471

Crystalline zeolite and sodium triphosphate mixt. prepn. - by simultaneously spray-drying zeolite and sodium orthophosphate solns. or dispersions

HOECHST AG 17.11.77-DT-751354

E33 (E34) (25.12.79) *DT2751-354 C11d-11 + C01b-33/28 C02b-01/44

Blends of ≥ 1 crystalline zeolite and sodium triphosphate are prepd. by spray-drying a zeolite suspension jointly with an aq. sodium orthophosphate soln. or suspension. The molar ratio of Na : P in the soln/suspension necessary to produce zeolite-free sodium triphosphate contg. sodium and phosphorus in a theoretical ratio of 1.66 is reduced by decrements of 0.01% per each 10 wt. % proportion of zeolite in the blend.

The zeolite suspension is sprayed separately from the orthophosphate soln. or suspension at a sepn. necessary for the resulting zeolite particles to dry superficially, and for the resulting phosphate particles to undergo $\geq$ partial condensation. The superficially dry particles are then contacted with the partially condensed particles.

The blends obtd. combine particles fineness with flowability and storability. 13.11.78 as 960240(2pp931)

PROC ★

D25

03504C/02 ★ US 4180-472

Compsns. for oily soil removal - contg. water-insol. solvent, solvent-soluble water-in-oil emulsifier, water and detergency builder

PROCTER & GAMBLE CO 03.10.77-US-838788

A97 E19 (A25) (25.12.79) C11d-07/24

Compsn. for removing oil soil from fabrics in an aq. wash-ing medium contains : (a) 20-97 wt. % of an H₂O-insol. solvent (I); (b) 3-30 wt. % of an H₂O-in-oil emulsifier (II) which is soluble in (I); (c) 0-77% H₂O; and 0-77% detergency builder (III). (I) may be (i) 10-18C alkane or alkene of flash pt. $\leq 65^\circ$ (tag closed cup), initial b.pt. $\leq 130^\circ$, solidification pt. $\geq 20^\circ$; or (ii) a fatty ester R₁CO₂R₂ (R₁ = 7-17C alkyl; R₂ = 1-10C alkyl; R₁ + R₂ = 8-23C).

(II) has HLB 2-12, and consists of 25-100% of emulsifier cpds. with ≤ 2 alkyl gps. (9-20C each) from (unless stated, alkyl=9-20C): (i) dialkylsulphosuccinic acid (and alkali(ne earth)metal, NH₄, and mono-, di-, or tri- (1-4C)alkyl or alkanol NH₄ salts; (ii) dialkyl NH₄ chloride, bromide, Me sulphate, nitrate, or acetate or dialkyl imidazolinium quat. NH₄ cpds.; (iii) phosphoric acid esters MOP(O) [O-(C₂H₄O)_mR₂] [O(C₂H₄O)_nR₁] (where R₁R₂=alkyl; nm=0-8; M=H or salt (forming cation); or 8iv) mixts. (III) may be an H₂O-soluble ortho- or polyphosphate, phosphonate (bi)-carbonate, polyhydroxysulphonate, silicate, or (poly)carboxylate, or an H₂O-insol. aluminosilicate or mixts.

Economical compsn. rapidly and effectively removes oily soils from fabrics (esp. polyesters) and is partic. suitable for use in domestic washing machines. 3.10.77 as 838788(11pp478)

PROC

D25

81243B/45 = US 4180-485

Detergent compsn. produced by atomising drying process - comprises powdery mixt. contg. water soluble organic surfactant and crystalline or amorphous aluminosilicate

PROCTER & GAMBLE CO 02.11.77-US-847983

E33 (25.12.79) *J54108-813 C11d-03/08 + C11d-11/02

A granular detergent compsn. comprises 5-40% of a water-soluble organic surfactant, 10-60% of a finely divided water-insoluble aluminosilicate ion exchange material, 5-30% of an alkali metal oxide silicate solid of wt. ratio SiO₂: alkali metal oxide of 1.6, and 0.5-20% of a water-soluble salt of acetic acid.

The granular detergent is prepd. by mixing the components to form a slurry, and then drying. The organic surfactant is a linear alkyl benzene sulphonate, alkyl sulphate alkyl ethoxy ether sulphate or their mixts. The ion exchange material is a crystalline aluminosilicate, an amorphous hydrated aluminosilicate material or their mixts.

The compsn. is an effective laundry detergent, in the form of crisp, free-flowing granules which are highly soluble when made, and maintain their solubility on ageing. 2.11.77 as 847983(8pp931).

UNVO ★ D25 03605C/02 ★US 4180-691
Olefin alkylation of aromatic hydrocarbon - in presence of
surfactants, giving prod. useful as detergent precursors

UOP INC 04.08.78-US-931048

E14 (25.12.79) C07c-03/54

In the prodn. of detergent alkylates (I) (linear alkylaromatic hydrocarbons) by the acid catalysed liq.-phase reaction of a 7-20C mono-olefin (II) with benzene, the levels of undesired 2-phenyl-isomer (III) are reduced to acceptable levels by effecting the alkylation in the presence of a surfactant (IV).

(IV) is pref. hydrophilic, and may be 16-19C organic acids (prepd. by addn. of CO/H₂O to 15-18C linear olefins) alkyl or aryl sulphates, paraffin or olefin sulphonates, alkyl or aryl polyethers, or alkyl or aryl quat. NH₄ halides esp. a sulphonate, partic. an alkylbenzene sulphonate. Amt. of (IV) used is pref. 0.1 wt. % (by wt. of (I)).

When the reaction is effected in the presence of (IV), the levels of the undesired (III) are reduced (even when α-olefins are used). (I) are intermediates (sulphonation then neutralisation) for detergents. 4.8.78 as 931048 (4pp478)

CPI INDEXES

ALERTING PATENTEE INDEX (III)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

In Country Alerting Bulletin only

M22
*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502-292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or # sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U A97D15M14
*645 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
*654 49862X A88H01Q4
*655 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A-M cumulations of from a quarter up to 5 years are available as COM.

CALI
Nitrile rubber smooth rolled sleeve for well impression packer - also contg natural rubber, hydrated 49862X/26 *US 3963-654
CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01
Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying earth in dams 49433X/26 *DT 2554-327
CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02
CANA
Emulsifying agents of microbial origin - used esp. for oil spills, are made by cultivating a species of 48076X/26 *CA -990-668
CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX

IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180
Europe	150
France	740
Germany, W. unexamined	1050
Japan unexamined	845*
Netherlands unexamined	240
PCT	40
Research Disclosure	20
South Africa	100
Sweden	260
United Kingdom unexamined	600
	<u>3325</u>

Slow publishing

Canada	450
Germany, E.	100
Germany, W. examined	465
Japan examined	340*
Netherlands examined	60
Soviet Union	1200
Switzerland	260
United Kingdom examined	300
United States	1200
	<u>4375</u>

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140
Denmark	120
Finland	60
Norway	80
Portugal	30
	<u>430</u>

Slow publishing

Austria	125
Czechoslovakia	180
Hungary	35
Israel	40
Italy	155
Rumania	25
	<u>560</u>

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MV
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

- * ABBO 19.10.77 ABBOTT LABORATORIES A60 C02 D22 E13 *US 4180-508
Biocidal n-(2-methyl-1-naphthyl)-maleimide prepn. - 03516C/02
- ABBO 20.03.78 ABBOTT LABORATORIES A96 B04 D16 J04 = FR 2420-762
Stable reagents for hepatitis testing - 69922B/39
- ADWA- 18.02.78 ADWATRE INC D15 = CH -614-914
Aerobic treatment of waste water by activated sludge - 65803B/36
- * AGEN 17.05.78 AGENCY OF IND SCI TECH D16 (D17) *J5 4151-190
Alpha-1,6-glucosidase prepn. - 02696C/02
- * AGEN 17.05.78 AGENCY OF IND SCI TECH D16 (D17) *J5 4151-191
Alpha-1,6-glucosidase prepn. - 02697C/02
- * AGEN 18.05.78 AGENCY OF IND SCI TECH D16 (D17) *J5 4151-192
Fermentative prodn. of alpha-1,6-glucosidase - 02698C/02
- * AGEN 19.05.78 AGENCY OF IND SCI TECH A88 D15 J01 *J5 4151-572
Semipermeable membrane for dialysis, ultrafiltration, etc. - 02753C/02
- * AGRI= 17.02.77 AGRIC ELEC RES INST D14 *SU -658-378
Agricultural prod. e.g. vegetable and flower seed dryer - 03175C/02
- AGRO- 15.06.78 AGROTECHNIKA N P D15 = NL 7904-599
Biological sewage treatment with sludge sepn. by fluid filtration - 00256C/01
- * AGRO= 15.06.76 AGROPRIBOR SCIE RES D13 *SU -658-428
Laboratory sampler for pulp of potato tuber - 03192C/02
- * AIRL 20.03.78 AIR LIQUIDE L' A97 D13 (A16) *FR 2420-542
Preparing immobilised rennet type enzymes for cheese mfr. - 02188C/02
- * AIRW- 26.06.78 AIRWICK AG A96 B07 C03 D25 (D15) *GB 2024-193
Pouch for uniform release of chlorinating agents etc. - 02267C/02
- * AJIN 22.05.78 AJINOMOTO KK D13 *J5 4151-577
Natural system aggregating agent for use in food industries - 02758C/02
- ALKU 18.05.78 AKZO NV A96 D21 (A25) = DT 2821-654
Copolymers of ethylene oxide and/or propylene oxide - 71727B/40
- ALKU 18.05.78 AKZO NV A96 D21 (A25) = J5 4151-138
Copolymers of ethylene oxide and/or propylene oxide - 71727B/40
- ALLI- 28.01.75 ALL INDIA INST SCI B04 D16 = CH -614-626
Contraceptive vaccine for women - 03897X/03
- ALZA 03.03.78 ALZA CORP A96 B07 C03 D21 (A23) = US 4180-646
Biodegradable ortho-ester polymers - 48032X/26
- AMAL 04.04.74 A D INT LTD A96 D21 (A14) = CH -614-623
Compsns. for dental applications - 72744W/44
- * AMAT/ 13.06.78 AMATO C D13 *DT 2914-916
Continuous curds mfr. - 01894C/02
- AMCY 29.01.76 AMERICAN CYANAMID CO B04 D16 = OE 7700-547
Extracting membrane or surface antigens - 54082Y/31
- AMCY 29.07.76 AMERICAN CYANAMID CO B03 D16 #IL --50-162
Broad-spectrum antibacterials from nocardia sp. NRRL 5646 - 12591Y/07
- AMCY 10.08.76 AMERICAN CYANAMID CO A96 D22 F01 (A17 A32) = IL -52-415
Polypropylene thread for surgical stitching - 12265A/07
- AMCY 20.06.77 AMERICAN CYANAMID CO B04 C03 D16 = OE 7804-395
Antibiotic BL 580 ZETA useful as anticoccidiosis agent - 00004B/01
- AMHP 02.11.76 AMERICAN HOME PROD CORP A96 D22 = IL --52-941
Orthopaedic bandage impregnated with thermoplastic soln. - 35211A/20
- * AMHP 08.11.76 AMERICAN HOME PROD CORP B02 C02 D22 *US 4180-580
1,3-Di:hydro-3,3-di:alkyl-furo-(3,4-b)quinoline cpds. - 03552C/02
- ANIS 30.10.74 ANIC SPA D23 E19 = SW 7907-995
Octene-nitrile derivs for perfumery use - 36385X/20
- * ANTI- 09.04.76 INTR ANTIBIOTICE D21 *RU --66-648
Aromatised, soothing ointment - C/02
- * ANTI- 19.10.76 INTR ANTIBIOTICE D21 *RU --68-935
Soothing aromatised ointment - C/02
- * APIL- 24.03.78 API LAB RECHERCHE D13 *FR 2420-761
Enzymatic test for detecting cows milk in goats milk - 02204C/02
- APOT 28.01.74 APOTHEKERNES LAB FU A/S D15 (D13) = CH -614-915
Recovery of stabilised fatty sludge - 02042W/02
- AQUA/ 12.05.78 AQUARIUS CH D13 = DT 2919-526
Low noise and wear machine for forming lollies - 82175A/46
- AQUA/ 12.05.78 AQUARIUS CH D13 = GB 2024-089
Low noise and wear machine for forming lollies - 82175A/46
- ASAH 23.03.78 ASAH KASEI KOGYO D16 J04 = FR 2420-763
Membrane potential of vesicles determ. - 73829B/41
- * ASBI= 30.12.76 AS USSR BIOCHEM D13 *SU -659-129
Preserved dry tea prod. contg. milk prodn. - 03230C/02
- * ASEL= 19.07.76 AS USSR ELEMENT ORG A96 D22 *SU -658-148
Wound healing porous alginate material - 03128C/02
- * AUME= 10.11.77 AS UKR MECHANICS D15 *SU -659-532
Aerator for surface layers of effluents - 03338C/02
- AUTO- 15.06.78 AUTOLYSATS FRANCAIS C03 D13 = NL 7904-705
Stabilisation of lipid complexes of oats and oat products - 75369B/42
- BADG 03.07.78 BADGER CO INC A35 D23 = GB 2024-239
Removal of polymer fines from tallow - 54405B/29
- BADI 22.03.74 BASF AG D25 E16 F06 (E12) = CH -614-985
Surface active extraction agent for cellulosic fibres - 67304W/41
- BADI 29.04.74 BASF WYANDOTTE CORP A25 D25 (A18) = CA 1068-439
Stable low-viscosity polymer dispersions contg. polyols - 62264W/38
- * BADI 24.06.78 BASF AG D22 *EP ---6-548
Aq. iodophor solns. for disinfectant use - 02145C/02
- BARH/ 19.05.78 BARHAM H N JR C03 D13 = DK 7902-066
Cereal and seed grain modification - 86240B/48
- BATT 17.06.76 MICROMEDIC SYSTEMS D16 J04 = CH -615-019
Automatic heated block type incubator - 19747Y/11
- * BATT 23.06.78 BATTELLE-INSTITUT EV D22 L02 *DT 2827-529
Implantable synthetic bone prosthesis - 01835C/02
- BATT 23.06.78 BATTELLE-INST EV D22 L02 = EP ---6-544
Implantable synthetic bone prosthesis - 01835C/02
- * BAZI/ 29.03.77 BAZIKOV V I D13 *SU -659-128
Dried agglomerated milk prodn. appts. - 03229C/02
- BEAF 26.09.74 BEATRICE FOODS CO D13 = CA 1068-152
Shelf-stable fruit flavoured compsn. - 43987A/24
- BECT 31.05.77 BECTON DICKINSON CO B04 D16 = US 4180-383
Stable carriers, esp for immunoabsorbents - 80578X/43
- BEEC 20.05.78 BEECHAM GROUP LTD B03 D16 = DK 7902-065
Stable crystalline lithium pseudominate - 86306B/48
- * BEGH- 20.03.78 BEGHIN-SAY D22 *FR 2420-339
Protective pad for menstrual and pathological flow - 02176C/02
- * BERL/ 04.06.75 BERLEJEV G D15 *IL --47-422
Installation for desalinating brine - C/02
- BIFO- 14.06.78 BIFOK AB D16 J04 = DT 2923-970
Continuous flow analysis device - 00375C/01
- * BIOT= 17.10.77 BIOTECH RES INST D16 *SU -658-168
Cultivation of hemicellulase-producing strain of fungus *Aspergillus* - 03146C/02
- BIWA- 04.05.78 BIWATER SHELLABEAR D15 = BR 7805-758
Water treatment and storage unit - 84131B/46
- BOEF 02.08.72 BOEHRINGER MANNHEIM GMBH B04 D16 = J7 9041-359
Enzymic detn of uric acid - 14866V/08
- BOEF 18.08.72 BOEHRINGER MANNHEIM GMBH B04 D16 = US 4180-060
Staining biological substances - 07402V/05
- BOEF 29.01.76 BOEHRINGER MANNHEIM GMBH A96 B04 D16 = IL --51-126
Immobilised proteins e.g. enzymes, hormones, antigen-antibody cpds. - 52211Y/30
- BOEF 20.03.78 BOEHRINGER MANNHEIM GMBH A89 B04 D16 J04 = FR 2420-759
Analytical determ. of alpha amylase - 69916B/39
- BOEF 12.06.78 BOEHRINGER MANNHEIM GMBH A96 B04 D16 J04 = EP ---6-192
Microbiological test materials e.g. for detecting microorganisms - 00076C/01
- BOEF 14.06.78 SUDDEUT ZUCKER AG D17 E17 = EP ---6-162
Xylitol recovery from residual syrups - 00106C/01
- BOEH 29.07.75 CELAMERCK GMBH B03 C02 D22 = CA 1068-283
(1)-Acylamino-(2,2,3)-trichloropropyl-triazoles and -imidazoles - 09294Y/06
- BONG- 22.07.76 FILS BONGARD O & CI D11 = CH -614-842
Multideck baking oven control - 08601A/05
- * BREA= 30.09.74 BREAD-BAKING RES D11 *SU -510-889
Protein enriched bread prodn. - 03023C/02
- BRTA 16.05.78 BRIT AMER TOBACCO LTD D18 = DK 7901-993
Tobacco smoke filter pref. for cigarettes - 71731B/40
- BRTA 16.05.78 BRIT AMER TOBACCO LTD D18 = J5 4151-200
Tobacco smoke filter pref. for cigarettes - 71731B/40
- BRWI 15.06.78 BROWN & WILLIAMSON CORP D18 (D16) = DT 2922-284
Treating tobacco to reduce the nitrate content - 80848B/45
- BRWI 15.06.78 BROWN & WILLIAMSON CORP D18 (D16) = GB 2023-995
Reducing nicotine and nitrate contents of tobacco - 75362B/42
- * BUCY 16.06.78 BUCKEYE CELLULOSE CORP A94 D22 F04 (A11) *EP ---6-263
Rayon web stabilised by thermoplastic web - 02031C/02
- * BUCY 16.06.78 BUCKEYE CELLULOSE CORP A94 D22 F04 (A18 A23) *EP ---6-264
Laminated nonwoven fibrous web - 02032C/02
- CALI 19.06.78 CHEVRON RESEARCH CO C02 D13 E13 (D16) = NL 7904-565
Acceleration of cellulose fermentation - 00245C/01
- CARM/ 09.02.76 CARMAN V E D15 J01 = IL --51-439
Purification of liquids partic. water by pressure distillation - 51966Y/29
- * CART/ 19.06.78 CARTIER JE D15 (D18) *EP ---6-101
Reducing BOD and increasing hepavalent chrome recovery - 01992C/02
- CASH- 22.05.78 CASHIN SYSTEMS CORP D12 = US 4179-987
Safety device for bacon press - 88129B/49
- CELA 13.03.78 CELANESE CORP A88 D18 (A11 A32) = US 4180-536
Cellulose acetate foam cigarette filter rod - 68589B/38
- CHAR/ 20.01.76 CHARM S E B04 D16 K08 (B02) = IL --51-285
Antineoplastic methotrexate radiological determination - 52632Y/30
- * CHCC 18.05.78 CHISSO CORP A88 D18 (A11) *J5 4151-199
Tobacco filter prepn. - 02701C/02
- CHET 28.11.75 CHEMETRON CORP D12 = IL --50-848
Mechanical sepn. of meat and bone by screening - 23641Y/14
- CHIN 09.07.73 CHINOIN GYOGYSZER B02 C02 D13 E13 = CH -614-950
Isoflavone derivs for mixing with feedstuffs - 08505W/05
- CHIN 02.05.74 CHINOIN GYOGYSZER B02 C02 D22 (D21) = CH -614-604
2-(5-Nitro-2-furoyl-amino)-1-carbamoyl-benzimidazoles - 67346W/41
- CHRI/ 14.06.78 CHRIST C D13 (D15) = NL 7904-640
Treatment of sauerkraut mfr. effluent - 00348C/01

CHTI-

- *CHTI- 20.03.75 CENT CHIM TIMISOARA A97 D21 E11 *RU --65-386
Bacteriostatic soap prepn. - C/02
- CHUR- 18.05.78 CHURCH & DWIGHT CO D15 E34 M14 = J5 4150-336
Inhibiting lead corrosion in drinking water systems - 14192B/08
- CIBA 13.06.75 CIBA GEIGY AG A97 D05 F06 (A26 A87 E14 F09) = IL --49-767
Wetting and antifoaming compsn. for treating aq. liquors - 96263X/52
- *CIBA 20.10.76 CIBA GEIGY AG D14 E24 J04 *CH -614-865
Agglomeration of solid substance e.g. pigment - 01750C/02
- CIBA 02.05.77 CIBA GEIGY CORP A96 D21 = US 4180-084
Cosmetic products based on polymers contg. quat. ammonium gps. - 78369A/44
- *COHA/ 29.04.77 COHAN A N D13 *US 4180-593
Round blown bead food prod. mfr. - 03557C/02
- *COLG 29.05.69 COLGATE PALMOLIVE CO D21 E19 (E37) *US 4180-467
Denture soaking cleaning compsn. - 03501C/02
- COLG 21.09.70 COLGATE PALMOLIVE CO D21 = DS 2146-224
Optically clear dentifrice - 21107T/13
- COLG 02.02.76 COLGATE PALMOLIVE CO D22 = CH -614-609
Baby napkin with fixing strip - 39878Y/23
- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) = DK 7901-977
Detergent compsn. for washing powders contg. specified clays - 69974B/39
- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) = DK 7901-978
Detergent compsn. for washing powder contg. meta-kaolin - 69975B/39
- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) = SW 7903-997
Detergent compsn. for washing powder contg. meta-kaolin - 69975B/39
- COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) = SW 7903-998
Detergent compsn. for washing powders contg. specified clays - 69974B/39
- COLG 19.05.78 COLGATE PALMOLIVE CO D21 E37 (E24) = DK 7901-742
Dentifrice of specified compsn. contg. fluoride and colourant - 71736B/40
- COLG 19.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25) = DK 7902-052
Transparent gel dentifrice of specified compsn. - 71735B/40
- *CONO 16.06.78 CONTINENTAL OIL CO A25 D25 E17 *EP ---6-105
Ethoxylated alcohol mfr. - 01993C/02
- CRDC 22.04.77 CORDIS DOW CORP A88 D15 F01 J01 (A17) #GB 1558-856
Microporous hollow polyethylene fibres - 81520A/45
- CRIN- 13.09.77 CRINA CENT RECH INT C03 D13 = CH -614-844
Ruminant feed prodn. from straw - 44435B/24
- CSIR 04.05.70 COMMONWEALTH SCIENT ORG A97 D15 J01 = DS 2122-045
Phase sepn process - 74209S/47
- CURZ/ 18.02.76 CURZIG D22 = CH -614-855
Expanding sealing plug for tampon - 61475Y/35
- DAGM- 21.03.75 DAGMA DEUT AUTOMATE D15 = DS 2559-651
Carbonated drinks mfr and distribution - 61611X/33
- *DAVY/ 27.12.76 DAVYDENKO N M A11 D15 E34 (A35) *SU -659-527
Extraction of sodium sulphate from industrial aq. waste - 03334C/02
- DEGM 19.09.74 DEGREMONT SA D15 = CH -614-681
Oxygenation appts. for waste water and sewage - 81496W/50
- DEGS 24.12.73 DEUTSCHE GOLD & SILBER A97 D25 E34 = OE 7410-208
Alkali per-carbonate prodn. in presence of poly carboxylate - 46390W/28
- DEWD/ 12.04.78 DEWD D12 = BR 7807-719
Treating poultry carcasses - 00428B/01
- *DIGE/ 21.03.78 DIGEOS J D13 *FR 2420-308
Machine to open eggs individually and collect contents - 02168C/02
- DIGG/ 28.10.75 DIGGS RE D15 = IL --50-575
Desalination of water using solar energy - 74277A/41
- *DRAG- 26.06.78 DRAGOCO GERBERDING D23 E15 *GB 2024-208
2,2,3-tri:methyl-cyclopent-3-ene(s) - 02270C/02
- DUCH/ 27.06.78 DUCHSTEIN S C03 D13 = GB 2023-993
Non-digestible expanded perlite granules as pig feed additive - 79135B/44
- DUVE/ 22.02.78 DUVERNE J C M D15 = GB 2024-285
Solidifying mud etc. for infilling building foundations - 88025B/49
- DYNL 24.02.75 DYNAPOL A12 B07 D13 = IL --49-084
Polymers having hydroquinone structural units - 54246X/29
- DYNN 19.05.78 DYNAMIT NOBEL AG B04 D16 = DK 7902-056
Regeneration of enzyme immobilisates - 71746B/40
- DYNN 19.05.78 DYNAMIT NOBEL AG B04 D16 = J5 4151-189
Regeneration of enzyme immobilisates - 71746B/40
- EAST 19.05.78 EASTMAN KODAK CO B04 D16 = J5 4151-193
Fungal enzyme from Agaricus bisporus - 86317B/48
- *EAUG- 21.03.78 EAU GAZ ASSAINISSEM D15 *FR 2420-602
Moving comb type sewage detritus extractor - 02194C/02
- *ECON 07.02.78 ECONOMICS LAB INC D25 *J5 4152-007
Prodn. of solid casting detergent-contg. product - C/02
- ELIL 31.07.72 ELI LILLY & CO B04 C03 D16 = RU --64-170
Antibiotic A-2315 prepn - 12766V/07
- ELIL 02.10.75 ELI LILLY & CO B04 C03 D16 = IL --50-412
Antifungal antibiotic A-22082 - 25226Y/15
- ELIL 02.10.75 ELI LILLY & CO B04 C03 D16 = IL --50-429
Antifungal antibiotic mixt. A-30912 - 25225Y/15
- ELIL 25.05.78 ELI LILLY & CO B04 D16 = US 4180-564
Antibiotic A-38533 complex contg. four separate factors - 89800B/50
- ENGH 29.12.75 ENGELHARD MINERALS CORP D21 M26 = CA 1068-129
Composition for forming dental amalgam - 97825X/52
- ESPE 16.03.77 ESPE FAB PHARM PRAPARATE A14 D21 (A60 A96) = OE 7801-844
UV curing acrylic compsn. e.g. for dentistry - 71709A/40
- ESSO 06.06.69 EXXON RES & ENG CO A17 D25 E12 H07 (A97) = DS 2027-812
Boron-contg detergent additives - 92598R/50
- ESSO 13.04.70 EXXON RES & ENG CO D15 J01 = US RE30-179
Liquid membrane separation process - 36439A/20
- ESSO 14.04.78 EXXON RES & ENG CO D16 E17 = J5 4151-194
Methyl ketone prodn. from n-alkane sec. alcohol - 75324B/42
- FARB 19.04.73 BAYER AG B02 C02 D13 = RU --64-148
Penicillin antibiotics - 77491V/45
- FARB 22.03.75 BAYER AG D15 = CH -614-683
Biological treatment of effluent contg. activated sludge - 75668X/41
- FARB 28.10.75 BAYER AG A60 B02 C02 D13 (D22) = IL --50-760
Broad spectrum antimicrobial cephalosporins - 30933Y/18
- FARB 28.10.75 BAYER AG B02 C02 D13 = IL --50-761
Broad spectrum antimicrobial cephalosporins - 30932Y/18
- FARB 02.12.75 BAYER AG A14 D22 F01 = US 4180-617
Composite porous acrylonitrile copolymer fibres - 78356A/44
- FARB 13.07.76 BAYER AG D22 = CA 1068-065
Radiation sterilisation in solid-particle-free atmos. - 09739A/05
- FARB 09.11.76 BAYER AG A96 D22 (A25) = OE 7707-940
Orthopaedic medical or veterinary dressing - 35142A/20
- FARB 23.12.76 BAYER AG B03 C02 D16 (B04 C03 D13) = OE 7709-185
Amino sugar derivs. - 51041A/28
- FARB 23.12.76 BAYER AG B03 C02 D16 (B04 C03 D13) = OE 7903-389
Amino sugar derivs. - 51041A/28
- *FARE= 11.03.74 FAR-E POLY D12 *SU -659-123
Fish dresser knife setter - 03225C/02
- *FARE= 13.10.75 FAR-E POLY D12 *SU -659-124
Fish processing machine decapitating unit - 03226C/02
- FARH 05.08.74 HOECHST AG A97 D25 E11 = CH -614-736
Washing agents contg. tricarboxypentane-3 phosphonic acid builder - 14357X/08
- FARH 11.09.75 HOECHST AG B04 C03 D13 = IL --50-457
Salinomycin and salts an esters for feed utilisation improvment - 19921Y/12
- FARH 27.07.76 HOECHST AG C03 D13 E35 = OE 7705-440
Treating microbial cellular mass with ammonia and alcohol solvent - 08318A/05
- FARH 22.03.77 HOECHST AG C02 D22 E13 F09 (F06) #US 4180-575
Pesticidal triazolidino-pyridazin-diones - 25383Y/15
- FARH 17.11.77 HOECHST AG D25 E33 (E34) = US 4180-471
Crystalline zeolite and sodium tri:phosphate mixt. prepn. - 40739B/22
- FARH 10.05.78 HOECHST AG A60 D25 E13 F06 = J5 4151-977
Optical brightening stilbene derivs. - 84282B/47
- FARH 11.05.78 HOECHST AG D25 = NO 7901-567
Washing and cleaning prod., esp. washing powder - 82551B/46
- *FARH 09.06.78 HOECHST AG A60 D25 E23 F06 *EP ---6-176
Pyrido:oxazolyl or pyrido:thiazolyl substd. stilbene derivs. - 02006C/02
- *FARH 19.06.78 HOECHST AG D15 J01 *DT 2826-631
Filtration of suspensions, esp. for drinking water - 01796C/02
- *FARH 19.06.78 HOECHST AG C02 D22 E13 F09 *DT 2826-760
3-(1,2,4-Triazolyl)-cinnamic and crotonic acid derivs. - 01804C/02
- *FEPU 30.08.77 DONETSK FERR METAL A97 D15 G04 *SU -659-530
Water desalination and recirculation systems - 03336C/02
- FERR/ 16.06.78 FERRUTIP A96 B07 D22 L01 (B04) = NL 7904-683
Rendering glass non-thrombogenic - 75368B/42
- FINA- 05.06.78 FINANZPAT AG D16 (D13) = EP ---6-181
Softening tough parts of mushrooms - 89577B/50
- *FIND- 13.06.78 PRODUITS FINDUS SA D13 *EP ---6-455
Frozen fried vegetables - 02109C/02
- FIRM 15.06.78 FIRMENICH SA B05 D13 E15 (B07) = NL 7904-658
Alpha-di:hydro-ionone used as aroma for foods and pharmaceuticals - 00240C/01
- *FLET- 30.06.78 FLETCHER W&R NZ D12 *GB 2023-992
Method and apparatus for washing animal bungs - 02229C/02
- FMCC 11.10.74 FMC CORP D25 E17 = CH -614-690
Carboxymethyloxysuccinic acid prodn in high purity - 30025X/16
- FMCC 16.12.76 FMC CORP D14 = US 4179-986
Pressure vessel steriliser for batches of canned food prods. - 28857A/16
- *FOOD= 15.10.76 FOOD IND WKS DES IN D16 *SU -659-606
Beer prodn. grain malting process automatic control - 03356C/02
- FREN- 10.09.70 FRENCH R T CO D13 #DS 2044-890
Agglomerating dehydrated potatoes - 51285S/31
- FREU 04.12.76 FREUDENBERG, CARL FA A88 D15 F04 J01 = US 4180-611
Semipermeable matted fibre diaphragm - 42402A/24
- *FROM 08.06.78 FROMAGERIES BEL-LA VACHE D13 *EP ---6-380
Cheese flavour protein concentrates - 02082C/02

- *FUJI 19.05.78 FUJISAWA PHARM KK B04 D16 *J5 4151-196
Nocardicine-A prodn. - 02700C/02
- *FUJI- 05.07.78 FUJI SYSTEMS CORP A96 D22 *EP ---6-406
Foamed plastic cover for neurosurgical operation - 02094C/02
- *FUJT 15.05.78 FUJISASH IND KK D15 L02 *J5 4149-256
Dewatering and solidifying compsn. for sewage sludge - 02354C/02
- FUKO 20.08.76 FUJI OIL KK D13 (D23) #CA 1068-298
Shea fat extn. with aliphatic alcohol - 16075A/09
- GELM- 16.05.78 GELMAN INST D15 J01 = J5 4150-374
Filter element for cross-flow filtration - 84675B/47
- GELM- 16.05.78 GELMAN INSTRUMENT C D15 J01 = SW 7900-013
Filter element for cross-flow filtration - 84675B/47
- GENA 23.08.78 GAF CORP A14 B04 D13 (A96 A97) = US 4180-633
Prepn. of insoluble PVP homopolymers or copolymers - 00475B/01
- GENO 10.10.75 GENERAL FOODS CORP D12 = IL --50-627
Cooked ham prod. resisting moisture - 27554Y/16
- GENO 12.05.78 GENERAL FOODS CORP D13 #SW 7805-523
Soluble coffee solids powder prodn. - 15665B/08
- GENO 12.05.78 GENERAL FOODS CORP A97 D13 (A11) = SW 7904-171
Stable salad etc. dressing emulsion prepn. - 84399B/47
- GESL 00.00.77 KERNFORSCHUNGS KARLSRUHE D15 = OE 7804-083
Waste liquor purificn. using alumina doped with carbon di:oxide - 82744B/46
- GEVA/ 22.06.78 GEVAERT O D13 = EP ---6-575
Machine for cooking and expanding cereal prod. - 76403A/43
- GILL 23.05.79 GILLETTE CO A96 D21 (A18) = GB 2024-082
Self lubricating safety razor head - 92199B/51
- *GODB- 30.03.78 GODBITEN KONDITOR D11 *SW 7803-568
Cake icing machine with rotating nozzle - 03399C/02
- GOET/ 12.05.78 GOETZ S D15 #BR 7802-994
Swimming pool purificn. using bio-catalyst - 53271A/29
- *GREN/ 23.03.78 GRENET E P D18 *FR 2420-310
Cigarettes of reduced or zero tobacco content - 02169C/02
- GUAL/ 27.06.78 GUALANDI P D22 = GB 2024-014
Deodorising compsn. for ash trays - 71759B/40
- HABE/ 19.11.75 HABERER K D15 = OE 7608-503
Water decarbonation and/or biological oxidn. and nitrification - 40117Y/23
- *HABL/ 13.06.78 HABLITZEL W D18 *DT 2825-863
Animal skin marking device - 01773C/02
- *HADJ/ 08.06.78 HADJERIL D15 *DT 2827-755
Solar energy powered sea water desalinator - 01837C/02
- HAFE/ 04.02.78 HAFELE J D11 = OE 7808-508
Brine treated pastry baking - 22153B/12
- HAGE- 24.08.77 HAGER ELSASSER GMBH D15 J01 = OE 7806-150
Thermal regeneration of water treatment material - 18238B/10
- HAHG 15.10.75 HAHN C GMBH D22 F07 = CH -614-879
Elongated fibrous pressings transfer - 29356Y/17
- *HAIM 21.06.78 ALPMA ALPENLAND-MAS D13 *DT 2827-257
Continuous cottage cheese mfr. - 01823C/02
- *HARB/ 03.02.78 HARBEN G S D12 *US 4179-772
Poultry picking machine - 03405C/02
- HAYB 16.06.78 HAYASHIBARA SEIBUTS B03 D13 E13 (D16) #DT 2826-560
Alpha-glucosyl-stevioside sweetener prepn. - 14731B/08
- HENK 02.08.71 HENKEL KG AUF AKTIEN A97 D25 E13 = DS 2138-584
Bleaching aids - 10314U/08
- HENK 13.04.73 HENKEL KG AUF AKTIEN D25 F06 = DT 2462-958
Textile cleaning bath contg. alumino silicates - 75753V/44
- HENK 07.05.73 HENKEL KG AUF AKTIEN D25 = CH -614-868
Washing agents for dish washing machines - 76861V/44
- HENK 23.05.73 HENKEL KG AUF AKTIEN D25 = CH -614-984
Textile cleaning bath contg. suspended alumino silicates - 85603V/50
- HENK 03.11.73 HENKEL KG AUF AKTIEN A97 C03 D22 E16 (D13 D15 D21) = CH -614-930
Omega-aminocarboxylic acid amides and peptides - 32439W/20
- HENK 29.08.74 HENKEL KG AUF AKTIEN D25 E36 = CH -614-973
Conc aq fluid detergent compsn - 18825X/11
- HENK 19.03.76 HENKEL KG AUF AKTIEN A97 D18 (A11) = CH -614-607
Tobacco foil having improved tearing length - 69150Y/39
- HENK 27.12.76 HENKEL KG AUF AKTIEN D21 E21 = GB 1558-655
Dyeing keratin materials, esp. hair, with developed dyes - 48185A/27
- HENK 05.02.77 HENKEL KG AUF AKTIEN A96 D21 E16 = OE 7800-745
Cosmetic compsns. for the skin - 58757A/33
- HENK 28.05.77 HENKEL KG AUF AKTIEN A97 D25 (A25) = DS 2724-350
Rinsing prod. for dish washing machines, contg. draining cpd. - 86153A/48
- HENK 25.03.78 HENKEL KG AUF AKTIEN D16 = FR 2420-571
Extruding live yeast granulate - 72257B/40
- HENK 05.06.78 HENKEL KG AUF AKTIEN C02 D22 E13 G03 = EP ---6-169
3-Omega-aminoalkyl-oxazolidine derivs. - 89576B/50
- HENK 19.06.78 HENKEL KG AUF AKTIEN D21 E33 (E19) = EP ---6-232
Deodorant compsns. contg. acid aluminium salt - 00156C/01
- HENK 19.06.78 HENKEL KG AUF AKTIEN D21 E17 (E15) = EP ---6-233
Deodorant compsns. contg. hydroxy-carboxylic acid ester cpds. - 00158C/01
- HENK 19.06.78 HENKEL KG AUF AKTIEN D21 E19 = EP ---6-234
Deodorant compsns. - 00157C/01
- *HENK 26.06.78 HENKEL KG AUF AKTIEN D23 E13 *EP ---6-572
13,15-Di:oxa-bi:cyclo-(10,50)-heptadecane cpds. - 02158C/02
- HENK- 08.09.76 HENKELL & CO D15 E17 = OE 7609-858
Beverage treatment unit - 15859A/08
- HERC 23.05.75 HERCULES INC A11 D16 = CA 1068-264
Gel biological prepn. from sugars - 06529Y/04
- HETB 13.02.78 HEINEKEN TEC BEHEER NV D16 J04 #US 4179-918
Beer carbon di:oxide content measurement - 59066A/33
- *HETO 19.01.77 HETEROORG CPDS AS USSR D13 *SU -659-130
Whipped cream substitute for cake filling etc. - 03231C/02
- *HEXC 19.06.78 HEXCEL CORP A96 D22 (A25) *EP ---6-094
Mfg. orthopaedic structures by impregnating fabric with polymer soln. - 01991C/02
- *HITA 16.05.78 HITACHI KK D15 *J5 4150-845
Removing organic cpds., ammoniacal nitrogen and solids from effluent - 02641C/02
- *HITA 16.05.78 HITACHI KK D15 J03 *J5 4150-846
Ammoniacal nitrogen-contg. effluent treatment - 02642C/02
- HLAV/ 27.02.75 HLAVIN Z D22 E13 = IL --49-107
Deodorant paste or cream with prolonged activity - 69101X/37
- HOFF 06.08.76 HOFFMANN-LA ROCHE AG B03 C02 D13 (D22) = OE 7705-777
Antibiotic obtd. by culturing Streptomyces strain - 10289A/06
- HOFM/ 02.07.75 HOFMANN K D12 = DS 2529-446
Water binding capacity of meat determination - 07807Y/05
- *HOUB/ 24.03.78 HOUBLOUP J D22 *FR 2420-491
Liq. spraying device to disinfect dustbins etc. - 02186C/02
- HOYE- 19.05.78 HOYER O G A/S D13 = DK 7802-239
Frozen sweets extraction device - 86191B/48
- HYDR- 27.12.74 HYDROPHILICS INT IN A96 D22 (A14) = IL --48-737
Water-insoluble adducts of iodine - 54459X/29
- ICIL 16.07.74 IMPERIAL CHEM INDS LTD A97 D18 = CH -614-846
Smoking mixt. compsn. - 09601X/06
- *ICIL 16.05.78 IMPERIAL CHEM INDS LTD D16 E19 *GB 2024-205
Microbiological oxidn. of organic cpds. - 02269C/02
- *ICIL 25.05.78 IMPERIAL CHEM INDS LTD D17 E17 *EP ---6-313
Stereoselective prodn. of sugar alcohol - 02046C/02
- *IDEK 17.05.78 IDEMITSU KOSAN KK D16 E14 *J5 4151-195
Phenylphenol prodn. from Pseudomonas SG-1043 strain - 02699C/02
- *IDEN- 16.05.78 IDENTOFLEX AG A96 D21 E37 L02 *J5 4150-790
Grinding material prodn. for use in dentistry - 02637C/02
- IMPU- 22.06.78 VEB KOMB IMPULSA D13 #GB 2023-989
Preparing spreadable milk prod. based on cream - 04091B/03
- *INFI- 16.12.77 IND FILTER & PUMP M C04 D15 *US 4180-459
Agricultural product e.g. fertiliser prodn. from organic sewage sludge - 03496C/02
- INFL 07.08.73 INT FLAVORS & FRAGR INC D13 E13 = CH -614-949
Thiafuran and furanthiol flavouring agents for food - 14727W/09
- *INOZ 19.05.78 INOUE JAPAX RES INC D15 J03 *J5 4151-568
Calcium ion-contg. water prodn. - 02750C/02
- INPL 17.05.78 INT PLAYTEX CORP A11 D22 (A96) = DK 7902-015
Particulate water-insoluble CMC prepn. - 84161B/47
- INPL 17.05.78 INT PLAYTEX CORP A11 D22 (A96) = SW 7904-307
Particulate water-insoluble CMC prepn. - 84161B/47
- *INRG 24.03.78 INST NAT RECH AGRON B04 D16 *FR 2420-572
Reagent for diagnosis of staphylococcus aureus - 02190C/02
- *INRG 13.06.78 INST NAT RECH AGRON C03 D13 *EP ---6-382
Arthrobotrys irregularis 1141 b nematophage - 02084C/02
- INSF 21.03.78 INST FRANCAIS DU PETROLE A97 D15 E17 H03 (D25) = FR 2420-561
Cleaning polluted surfaces, esp. water covered with oil - 68136B/38
- INSP 24.12.71 INST PASTEUR B07 D16 = US 4180-563
Isolation of immunostimulating agents - 39098U/28
- INSP 30.09.74 INST PASTEUR D13 (D16) = CA 1068-151
Food contg. protein derived from osmo-sensitive bacteria - 29466X/16
- INSP 08.06.78 INST PASTEUR D16 = GB 2024-229
Plasmid(s) contg. DNA fragment attached to operon - 91414B/51
- INTO 23.07.74 INT PAPER CO A11 D22 = CH -614-859
Water insoluble hydrogel with haemostatic props. - 11214X/07
- IONI 02.01.79 IONICS INC D13 = US 4180-451
Concn. of whey protein - 29388B/15
- *IPPO/ 28.03.77 IPPOLITOV YU S D17 *SU -659-622
Vegetable material acid hydrolyser - 03359C/02
- *ISHH 23.05.78 ISHIHARA SANGYO KAISHA C03 D16 *J5 4151-901
Antibiotics FA-2713-I and II - 02809C/02
- *ISHI- 13.05.78 ISHIGAKI KIKO KK D15 *J5 4149-257
Treating waste water sludge by compression dewatering - 02355C/02
- *IVAN= 21.10.77 IVANOVO MEDICINE IN D16 *SU -658-167
Enterobacteria type determination - 03145C/02

- *JAPC 18.05.78 NIPPON SHOKUBAI KAGAKU A96 B05 D22 (A14 B07) *J5 4151-118
Thickener for wet pack compsn. - 02674C/02
JELK/ 13.02.76 JELKS J W C03 D13 #IL --49-035
Proc. for incg. digestibility of cellulosic plant matter to ruminants - 16796X/09
JEYE- 21.03.78 JEYES GROUP LTD A97 D25 = FR 2420-570
Preparing tablets for cleaning lavatories - 54534B/30
JOBB 19.06.75 SOC JOB ANC ETAB BARDOU D18 F07 = CH -614-847
Cigarette filter manufacturing process - 70476X/38
*JOHJ 10.04.78 JOHNSON & JOHNSON A96 D22 *GB 2024-012
Storable, oxygen-generating, surgical dressing - 02231C/02
JOHJ 15.05.78 JOHNSON & JOHNSON A96 D22 (A14 A25) = J5 4150-890
Adhesive, workable orthopaedic bandage - 86199B/48
JONS/ 07.07.75 JONSSON URS D16 J01 = GB 1558-603
Filtration of suspensions or colloidal solns. - 08004Y/05
- *KAGG 23.06.78 NAT RES INST METAL D15 J03 M25 *DT 2908-592
Electrolytic removal of ions of chalcophile elements from aq. soln. - 01892C/02
KAMM/ 10.06.78 KAMMER M A97 D21 = EP ---6-200
Mfg. pieces of floating soap - 91296B/51
KAOS 20.02.73 KAO SOAP KK D25 E19 (D22) = J7 9041-566
Powdered quaternary ammonium salts - 63453V/36
KAOS 20.03.78 KAO SOAP KK D25 E19 F06 = FR 2420-593
Bleaching compsn. for patterned or coloured clothes - 72077B/40
*KAOS 15.05.78 KAO SOAP KK D13 *J5 4151-153
Peeling of fruit or vegetables - 02689C/02
*KAOS 15.05.78 KAO SOAP KK D13 *J5 4151-154
Peeling process for fruit and vegetables - 02690C/02
*KAOS 15.05.78 KAO SOAP KK D13 *J5 4151-155
Peeling fruits and vegetables - 02691C/02
KARA/ 17.01.75 KARASS TJ D12 = DS 2501-820
Animal carcass suspension hook - 58015X/31
*KATS/ 27.06.78 KATSUKAWA H D15 *DT 2925-591
Treating agent for waste water contg. dyes - 01961C/02
KATS/ 27.06.78 KATSUKAWA H D15 = GB 2024-191
Treating agent for waste water contg. dyes - 01961C/02
*KAWJ 16.05.78 KAWASAKI HEAVY IND KK D15 *J5 4150-843
Rendering hide treatment sludge harmless - 02639C/02
KERJ 28.06.78 KERNFORSCHUNGS JULICH B04 D16 = GB 2024-228
Recovering pure enzymes from crude tissue extracts - 61567B/34
*KERJ 28.06.78 KERNFORSCHUNGS JULICH B04 D16 *GB 2024-432
Determin. of dielectric breakdown and size - 02312C/02
*KIBL/ 17.05.78 KIBLEUR PPM D13 *EP ---6-369
Heat treatment of foodstuffs etc. - 02075C/02
*KIBU- 17.05.78 KIBUN KK D13 *J5 4151-143
Frying mixed ingredients in stringy form (Kakiage) - 02688C/02
*KIFO= 21.12.76 KIEV FOOD IND TECHN D16 *SU -659-616
Fermenter filler beer wort aerator - 03358C/02
KIKK 16.05.78 KIKKOMAN SHOYU KK B04 D16 = J5 4151-188
Enzyme for decomposing methyl-guanidine - 86211B/48
KIMB 06.03.78 KIMBERLY CLARK CORP D18 = BR 7803-851
Denitrated reconstituted tobacco prepn. - 68333B/38
*KIME= 03.08.77 KIEV MEDICINE INST D16 *SU -658-169
Extending storage viability of microorganisms in dried cultures - 03147C/02
*KIMU/ 17.05.78 KIMURA M D13 *J5 4151-162
Water-soluble and dispersible para-caseinate prepn. - 02692C/02
KING/ 29.06.78 KING A S D14 J01 #GB 2024-039
Suspended solids removal from e.g. dairy fluid - 72456A/40
*KIRI 15.05.78 KIRIN SEAGRAM KK D16 *J5 4151-186
Photosynthetic bacteria prepn. - 02695C/02
*KNAP/ 00.00.76 KNAPPWOST A D22 E12 *DT 2826-558
Bone cement contg. copper salt as local disinfectant - 01789C/02
*KNAU/ 22.06.78 KNAUTH H D17 *DT 2827-388
Acid-hydrolysing cellulose contg. material to sugar - 01830C/02
KOAS- 04.06.76 KOA SEKIYU KK A97 D15 H08 J01 = J7 9041-603
Granular, opt. activated coal, prepn. from pitch particles - 07473A/04
*KOBM 16.05.78 KOBSTEEL KK A97 D15 *J5 4150-844
Dewatering of sewage sludge by centrifuging - 02640C/02
KOCH/ 10.05.77 KOCHER R C03 D13 = DT 2759-711
Straw dissociation appliance - 84262A/47
*KOHL/ 15.09.78 KOHLER V B04 D16 *DS 2840-173
Agents for restoring cell function - 01763C/02
*KRIV/ 10.10.77 KRIVOIBA D16 J02 *SU -659-176
High dispersion systems generation - 03245C/02
KRUC- 18.07.75 KRUCHEN-BETTEN BETT D18 = CH -614-912
Cleaning poultry feathers with chlorinated hydrocarbons - 07461Y/05
*KUBI 15.05.78 KUBOTA KK D15 *J5 4149-258
Dewatering of sludge from effluent treatment - 02356C/02
KUBL- 13.12.76 FIRMA KUBLER H D15 = OE 7708-541
Sewage and waste water treatment plant - 44253A/25
- *KUMA/ 15.05.78 KUMABEK D13 *J5 4151-172
Pasty foodstuff prodn. - 02693C/02
*KUNI- 17.05.78 KUNIMINE KOGYO KK A97 D25 E12 (E34) *J5 4149-706
Clothes cleaning compsn. contg. anionic and nonionic surfactants - 02428C/02
KURE 30.08.76 KUREHA KAGAKU KOGYO B04 C03 D16 = OE 7706-209
Mono:karyotic mycelium of coriolus versicolor mfr. - 15897A/09
*KURK 20.06.78 KURITA WATER IND KK D15 *DT 2838-386
Dewatering slurries contg. organic material - 01885C/02
KYOW 18.02.77 KYOWA HAKKO KOGYO B04 D16 = US 4180-436
Antibiotic S551-II - 75441A/42
*KYOW 07.02.78 KYOWA HAKKO KOGYO KK B03 D16 (B02) *J5 4107-593
Nucleoside-5'-tri:phosphate prodn. - 02327C/02
*KYOW 30.06.78 KYOWA HAKKO KOGYO D12 *DT 2926-089
Pickled meat prod. prodn. - 01977C/02
*KZZA= 07.06.76 KAZAN ZARYA D13 *SU -605-597
Sweet confection e.g. candy mass prodn. - 03034C/02
- *LAMA/ 24.03.78 LAMARQUE C D12 *FR 2420-306
Scalding cabinet for poultry, partic. geese - 02166C/02
LANG/ 12.06.78 LANG J L C03 D13 H09 #BR 7803-762
Fuel e.g. alcohol and plant and animal nutrient - 89704B/50
*LAUR/ 29.06.78 LAUREDAN B D13 *US 4180-595
Nutritious liquid food compsn. - 03558C/02
*LEEN= 27.12.76 LENGDENG-CONS INST D15 *SU -659-531
Biochemical purificn. of waste water - 03337C/02
*LEME= 06.01.77 LENGDE MEAT DAIRY D12 *SU -659-122
Meat prod. e.g. sausages, handling unit - 03224C/02
*LENL 20.10.75 LENINGRAD FORESTRY ACAD A97 D18 (A11) *SU -658-139
synthetic polymeric tanning agent for leather - 03120C/02
LENO- 22.06.78 LENOX INST FOR RES D15 F09 = DT 2925-269.
Appts. for removing floating solids from settling tank - 00395C/01
LINK- 10.12.76 LINKER MACHINES INC D12 = OE 7708-775
Sausage casings peeling apparatus - 30193A/16
*LIOC 13.05.78 LION DENTIFRICE KK B04 D21 *J5 4151-113
Wound-healing compsn. applied topically - 02670C/02
*LIOC 19.05.78 LION DENTIFRICE KK A23 D21 E12 (A60 D22 E37) *J5 4150-459
Stabilised polyamide soln. - 02595C/02
LIOY 01.12.76 LION FAT & OIL KK D25 E16 (D12 E12) = US 4180-468
(N)-Hydroxyethyl-(N)-bis:carboxyethyl-aminoethyl carboxamide derivs. - 48066A/27
*LIOY 17.05.78 LION FAT & OIL KK A97 D25 E12 (E34) *J5 4149-706
Clothes cleaning compsn. contg. anionic and nonionic surfactants - 02428C/02
LIPP/ 27.08.77 LIPPELT W D11 = OE 7806-196
Dough kneading machine - 18290B/10
LLAB 11.03.76 LAB LABAZ B03 D16 = CA 1068-226
Neomycin and paramomycin analogues - 64939Y/37
*LOPE/ 26.06.78 LOPEZ F D15 *EP ---6-409
Inlet and outlet valve block for water treatment column - 02097C/02
- MARM 28.04.78 MARTIN MARIETTA CORP D15 E36 J01 L02 = J5 4151-563
Chalk or lime based compsn. for desulphurisation of gas - 81115B/45
MASI 30.01.74 MASSACHUSETTS INST TECH B04 D16 = CH -614-737
Triglyceride-accumulating clonal cell line - 37341W/22
MATU 17.05.74 MATSUSHITA ELEC IND KK D15 = J5 0147-152
Portable water purifier - 02998C/02
*MATU 17.05.74 MATSUSHITA ELEC IND KK D15 *J7 9042-180
Portable water purifier - 02998C/02
*MATU 30.09.77 MATSUSHITA ELEC IND KK D16 E17 J04 *J5 4105-597
Determining concn. of substrate contg. oxido-reductase - 02321C/02
*MATU 18.05.78 MATSUSHITA ELEC IND KK A89 D15 J04 *J5 4151-094
Cassette tape for use with electrode for ion determination - 02666C/02
*MATU 19.05.78 MATSUSHITA ELEC IND KK D15 J01 *J5 4151-569
Treating oil-contg. waste water - 02751C/02
*MAUC/ 09.06.78 /MAUCHER O M D22 *EP ---6-158
Allergic test plaster strip - 02003C/02
*MAUT- 24.10.78 VER HEFEFAB MAUTNER D16 (D11) *OE 7807-613
Dry biologically active leaven mfr. - C/02
*MCCL/ 23.03.73 MCCLENNY CO D14 *US 4179-904
Home-made ice cream freezer - 03419C/02
MCDD 03.05.76 MCDONNELL DOUGLAS CORP B04 D16 = DS 2717-977
Detection of klebsiella and enterobacter in urine - 75869Y/43
MCDD 03.05.76 MCDONNELL DOUGLAS CORP B04 D16 = DS 2717-981
Culture medium for selective detection of enterococci - 81470Y/46
*MERE 19.06.78 MERCK PATENT GMBH D16 J04 *DT 2826-651
Multiple test strip device - 01798C/02
MERI 19.04.76 MERCK & CO INC B02 C02 D16 = OE 7702-662
Macrolide parasitocidal and pesticidal cpds. - 78836Y/44
MERI 19.05.78 MERCK & CO INC B02 C02 D22 (D13) #J5 4151-996
1-Aza-bis:cyclo(3,2,0)heptene carboxylic acid derivs. - 86053B/48
MESG 21.06.78 MESSER GRIESHEIM GMBH D15 = DT 2827-151
Treating water for drinking using ozone and oxygen - 77237B/43

- META- 20.03.78 METALQUIMIA SA D12 *FR 2420-307
Multi-needle machine to inject brine into meat - 02167C/02
- MEYH- 10.05.78 MEYHALL CHEM AG A11 C03 D17 H01 = NO 7901-547
Phosphated locust bean gum soluble in cold water - 61444B/33
- MEYN/ 05.07.78 MEYN P D12 *EP ---6-410
Weighing and grading fowls hanging from shackles - 02098C/02
- MIES- 22.02.74 INST PRZEM MIESNEGO D13 = CH -614-845
Curing agent and preservative for food - 59122W/36
- MIFI 06.06.78 MILLIPORE FILTER CORP B04 D16 *EP ---5-867
Alpha-amylase assay with limit dextran and an exo:carbohydrase - 01987C/02
- MILE 22.06.78 MILES LABORATORIES INC B04 D16 J04 = DT 2924-249
Specific binding assay esp. for thyroid hormones - 77212B/43
- MILL- 14.10.75 MILLER BREWING CO D16 *US 4180-589
Prodn. of lager beer of milder flavour - 03556C/02
- MITB 22.05.71 MITSUI SHIPBUILDING ENGG D15 = J4 8004-382
Desalination of brine by crystallisation - 32352V/17
- MITB 22.05.71 MITSUI SHIPBUILDING ENGG D15 = J7 9041-559
Desalination of brine by crystallisation - 32352V/17
- MITC/ 30.01.75 MITCHELL JH D13 = IL --48-042
Dried processed peanut products - 65975W/40
- MITQ 23.02.78 MITSUBISHI ELECTRIC CORP D15 J01 *J5 4112-379
Waste water treatment appts. - 02341C/02
- MITQ 18.05.78 MITSUBISHI ELECTRIC CORP D22 J01 *J5 4150-367
Plant for deodorising malodorous gas - 02547C/02
- MLCS = 29.11.76 MOLD CON MAT RES D16 L02 *SU -658-112
Structural, metal casting etc. ceramic material mfr. - 03093C/02
- MLCW 12.12.75 MALLINCKRODT INC D13 = IL --51-064
Dry powder flavouring agents - 41732Y/24
- MOFO = 18.06.76 MOSC FOOD IND TECHN D11 *SU -586-886
Die-held pastry blanks stripper - 03029C/02
- MOFO = 23.12.77 MOSC FOOD IND TECH D11 *SU -658-373
Tubular pasta e.g. macaroni drying - 03170C/02
- MONS 12.04.76 MONSANTO CO B04 D16 = IL --51-858
Reactor for rapid culture of cells - 72511Y/41
- MONS 09.02.77 MONSANTO CO A88 D15 E14 J01 (A17) = GB 1558-745
Hollow fibre membranes of ethylene copolymers - 38324A/21
- MOPO = 25.07.77 MOSC POWER INST D15 J01 *SU -659-529
Multistage evaporator installation for thermal power stations - 03335C/02
- MOSW 19.01.77 MOSCOW NAT ECONOMY INST D13 *SU -659-130
Whipped cream substitute for cake filling etc. - 03231C/02
- MOVE = 22.03.77 MOSC VET ACAD SKRYA B04 C03 D16 *SU -658-170
Inactivation of virus of infective bronchitis of chicken - 03148C/02
- MRSC 02.08.76 MARS LTD C03 D13 = US 4180-592
Protein foodstuff prepd. from blood - 10232A/06
- MULL/ 20.06.78 MULLER A D16 = DT 2827-002
Extracting hops with carbon dioxide under specified conditions - 77230B/43
- MUND 12.06.78 MUNDIPHARMA AG A96 D22 *EP ---6-340
Germicidal iodophor powder prodn. - 02060C/02
- MUZZ/ 14.06.78 MUZZARELLI R A11 B04 D16 F06 (B07 D13 D22 F09) = NL 7904-674
Chitosan-glucan complex from fungal mycelium - 00225C/01
- NAGA 19.06.78 VEB KOMBINAT NAGEMA D13 = DT 2917-544
Control system for hydraulic press for degreasing cocoa mass - 77400B/43
- NAGA 19.06.78 VEB KOMBINAT NAGEMA D13 = NL 7903-669
Control system for hydraulic press for degreasing cocoa mass - 77400B/43
- NARE- 21.07.75 NAT RESEARCH LABS D22 E12 H08 *US 4180-473
Transportation of metal ions in metal-working solns., etc. - 03505C/02
- NATR 18.04.72 NATIONAL RES DEV CORP A96 D21 = J5 4149-296
Dental cements - 69497U/46
- NATR 12.07.74 NATIONAL RES DEV CORP D21 L02 M14 = CH -614-624
Metal-ceramic objects esp. for dentistry - 09597X/06
- NATT 03.07.78 NAT STARCH & CHEM CORP D13 *GB 2023-991
Prepn. of dispersible chocolate liquor - 02228C/02
- NCAU = 01.03.77 N-CAUCASUS ORCHARDS D14 *SU -659-131
Fruit comminuting appts. - 03232C/02
- NEST 07.02.75 SOC PROD NESTLE SA B05 D13 E16 = DS 2512-583
Epsilon (gamma-glutamyl)-lysine prodn. - 65237X/35
- NEST 31.07.75 SOC PROD NESTLE SA D13 = CA 1068-154
Butter substitutes and margarine type food prods. - 05602Y/04
- NEST 07.02.77 SOC ASSIST NESTLE D13 = US 4180-594
Cereal-based food prod. contg. whey powder - 49735A/28
- NIIO- 22.05.78 NIPPON ION KK A97 D22 E32 F03 *J5 4151-669
Germicidal cloth - 02790C/02
- NIRA 03.04.72 UNITIKA KK D15 F06 = J4 8100-965
Decolourisation of dyeing waste water - 02974C/02
- NIRA 03.04.72 UNITIKA KK D15 F06 *J7 9041-824
Decolourisation of dyeing waste water - 02974C/02
- NIRA 16.02.78 UNITIKA KK D15 *J5 4151-565
Purification of waste water - 02749C/02
- NIRA 16.05.78 UNITIKA KK A96 B04 D16 F01 *J5 4151-673
Carrier for fixing physiologically active substances - 02791C/02
- *NIRA 19.05.78 UNITIKA KK A97 B04 D16 J01 *J5 4151-583
Specific adsorbent for physiologically active substances - 02760C/02
- *NISB 16.05.78 JAPAN TOBACCO & SALT PUB D18 E13 *J5 4151-980
Nor:nicotine derivs. - 02852C/02
- NISH- 04.02.75 NIPPON SHOJI KK B05 D23 E11 = CA 1068-291
Lecithins prepn. - 61965X/33
- *NOFO = 11.10.74 MOSC FOOD IND TECHN D17 *SU -658-446
Determining concn. of sugar solns. in sugar industry - 03198C/02
- NORM- 10.11.75 NORM A M C AG C04 D15 J02 (D16) = CH -614-682
Mixing sludge with additives e.g. microorganisms - 36620Y/21
- *OLIV/ 14.06.78 OLIVEIRA H D17 *BR 7803-806
Cane mill hydraulic actuating system - C/02
- OREA 22.02.74 L'OREAL SA A96 D21 E24 = CH -614-625
Dialkyl aminodiphenyl amine dye compsns - 59139W/36
- OREA 15.11.77 L'OREAL SA A96 D21 = DT 2849-710
Cosmetic compsn. based on aq. spherule dispersions - 37155B/20
- OREA 16.06.78 L'OREAL SA A96 D21 E19 = NL 7904-668
Cosmetics for greasy hair and skin - 00260C/01
- *OREA 23.06.78 L'OREAL SA A96 D21 *DT 2925-358
Cosmetic compsn. contg. tetra:polymer - 01949C/02
- *OSTE- 29.06.78 OSTEO AG A96 D21 (A14) *EP ---6-414
Bone cement contg. fibre-reinforced poly:methyl methacrylate - 02100C/02
- *OWEI 22.02.72 OWENS-ILLINOIS INC A96 D22 (A26) *US 4179-757
Polysulphone prepd. from higher olefin and sulphur di:oxide - 03403C/02
- PALL 15.05.78 PALL CORP A23 D15 J01 (A88) = DK 7901-985
Skinless hydrophilic alcohol insoluble polyamide membrane - 86275B/48
- PALL 15.05.78 PALL CORP A23 D15 J01 (A88) = NO 7901-596
Skinless hydrophilic alcohol insoluble polyamide membrane - 86275B/48
- *PEAU 01.11.77 OMSK PETROCHEM PROC D13 *SU -651-315
Porous confectionary products e.g. chocolate prepn. - 03047C/02
- PECP- 04.03.77 PEC PROCESS ENG CO SA D15 = OE 7801-538
Biological effluent treatment - 65642A/37
- PEKT- 29.10.76 PEKTIN-FAB H HERBST D13 = OE 7707-539
Fruit pectin deriv. prepn. - 33647A/19
- PENT- 23.06.75 PENTAPHARM AG B04 D16 = IL --49-774
Chromogenic or fluorescent tripeptides - 83127X/45
- PERM- 24.03.78 PERMELEC ELECTRODE D15 E36 J03 M13 = FR 2420-579
Electrode for aq. metal halide soln. electrolysis - 72055B/40
- *PERO- 16.06.78 PEROZIN A & FILHOS D14 J02 *BR 7803-850
Combined mixer and grinder - C/02
- *PERR- 16.06.78 HEINZ PERRIER SA A92 D16 (A17 A23) *NL 7904-646
Sterilisable plastic bags - 03012C/02
- PETR- 03.02.78 PETRIS C F EFTF D13 = J5 4151-169
Chewing gum contg. sorbitol as sweetener - 58020B/32
- PFIZ 17.10.73 PFIZER INC B02 C02 D13 (D22) #RU --64-151
7-Amino-4-(tetrazol-5-yl or carbamoyl)-ceph-2 or 3-ems - 30564W/19
- PFIZ 16.04.76 PFIZER INC B02 C02 D22 #IL --50-205
(6)-Acylamino-(3)-tetrazolyl-penam useful as antibacterials - 14581Y/09
- PFIZ 15.06.76 PFIZER INC B03 C02 D22 E13 (D15) = OE 7703-870
Antibacterial and growth-promoting quinoxaline 1,4)-dioxide derivs. - 00365A/01
- PFIZ 03.01.78 PFIZER INC B03 C02 D22 E13 (D15) = US 4180-654
Antibacterial 4-de:oxy-4-acylamido macrolide cpds. - 49015B/27
- PHIM 24.04.78 PHILIP MORRIS INC D18 E24 F09 = J5 4151-608
Humate-dyed, tobacco paper - 81097B/45
- PITT 02.06.75 PPG INDUSTRIES INC A35 D22 J04 = CH -614-864
Ultraviolet light irradiation plant - 94671X/51
- *PLAV = 26.04.77 PLAVSK SMYCHKA D14 J01 *SU -659-193
Centrifugal separator for suspensions - 03257C/02
- *POKK 10.05.78 POLA KASEI KOGYO KK D21 E12 (E36) *J5 4151-137
Metallic soap-coated fine globular silica gel compsn. - 02685C/02
- POLA 20.03.78 POLAK'S FRUTAL WORKS INC D23 E15 (D21 D25) = FR 2420-525
Nitrile cpds. with a 1-methyl-4 isopropyl:cyclohexane carbon skeleton - 69926B/39
- POLH 03.04.78 POLYCHROME CORP A96 D21 E19 G02 (A11 A82) = J5 4151-142
Non-carcinogenic nail varnish compsn. - 75586B/42
- PORT- 17.11.76 PORTALS WATER TREAT D15 J02 = GB 1559-018
Dissolving gas in liquid - 76235A/42
- PROC 23.06.77 PROCTER & GAMBLE CO D25 E17 (E36) = DT 2857-155
Suds regulated detergent compsn. - 02332B/02
- *PROC 03.10.77 PROCTER & GAMBLE CO A97 D25 E19 (A25) *US 4180-472
Compsns. for oily soil removal - 03504C/02
- PROC 02.11.77 PROCTER & GAMBLE CO D25 E33 = US 4180-485
Detergent compsn. produced by atomising drying process - 81243B/45
- *PROC 20.06.78 PROCTER & GAMBLE CO A97 D25 E11 F06 *EP ---6-268
Textile softening and detergent compsn. - 02033C/02
- *PROC 20.06.78 PROCTER & GAMBLE CO A97 D25 E13 F06 (E14) *EP ---6-271
Washing and textile softening compsn. - 02034C/02
- *PROV = 09.06.77 PROVIS EQUIP RES D13 *SU -659-117
Continuous butter and margarine forming unit - 03223C/02

- PROV= 15.05.78 PROVISIONS EQUIP D12 = NO 7901-585
Small crustaceans processing system - 87930B/49
PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 F09 = DT 2908-993
Recovering cellulose from waste materials - 73955B/41
- QUAK 19.06.78 QUAKER OATS CO C03 D12 = DT 2903-843
Extruded foods esp. meat products for pet foods - 58003B/32
QUAK 19.06.78 QUAKER OATS CO C03 D12 = NL 7900-772
Extruded foods esp. meat products for pet foods - 58003B/32
- RALS 26.07.75 RALSTON PURINA CO D12 F01 = IL --49-609
Prod'n. of protein filaments from cooked meats - 88724X/47
RETO 08.04.75 REYNOLDS TOBACCO CO D18 E13 = CA 1068-095
Improving the taste and/or smell of tobacco products - 63453X/34
*RHEE 03.07.78 RHEEM MFG CO D12 *GB 2023-990
Device for feeding ribbon of sausage clip loops - 02227C/02
RHEO- 22.08.75 RHEON AUT MACH D11 = CH -614-843
Continuous dough stretching machine - 14910Y/09
RHON 14.03.74 RHONE-POULENC INDUSTRIES A82 D16 F09 (A11) = CH -614-747
Paper coatings based on vinyl polymers - 64291W/39
RHON 13.03.75 RHONE-POULENC INDUSTRIES B02 D16 = CA 1068-225
Antitumour naphthacene deriv - 74379X/40
RHON 01.07.75 RHONE-POULENC INDUSTRIES B02 D16 = CH -614-974
Antitumour naphthacene deriv - 74379X/40
*RHON 09.06.78 RHONE-POULENC INDUSTRIES A91 D15 (A14) *EP ---6-370
Water soluble polymer prepn. for use as flocculant - 02076C/02
*RHON 15.06.78 RHONE-POULENC INDUSTRIES D15 *EP ---6-376
Determn. of toxic material in aq. liquids - 02079C/02
ROHG 25.03.78 ROHM GMBH A11 D18 F01 G03 = FR 2420-551
Collagen extn. from ossein, hides and pelts - 75424B/42
*ROMA- 14.06.74 INTR ROMANA PIELE D15 E31 *RU --67-898
Chromium tri:oxide prepn. from exhausted residual waters - C/02
ROQF 17.11.75 ROQUETTE FRERES SA D13 = OE 7608-514
Potato pulp contg. gelatinised starch - 36726Y/21
ROTH- 13.05.78 APPARATEBAU ROTHEMU D15 K07 = J5 4150-600
Decontaminating radioactive liq. effluent - 86069B/48
ROUR 16.07.76 ROURE B DUPONT D23 E15 = CH -614-692
Oxo:cycloalkyl-substd. acetate ester cpds. prodn. - 06772A/04
- *SAKH= 21.06.77 SAKHPROMENERONALADK D17 *SU -657-415
Level control for syrup tank in sugar prodn. - 03061C/02
*SANK- 13.05.78 SANKYO AGENCY KK D15 *J5 4149-260
Seeding agent for activated sludge treatment of waste water - 02357C/02
SANO 14.01.74 SANDOZ-PATENT-GMBH B04 D16 = DS 2500-785
Extn. of immunogens hemagglutine and neuraminase - 50924W/31
SANO 04.11.75 SANDOZ AG B03 D16 = CH -614-931
(Dihydro)cyclosporin C immunosuppressant and antiarthritis prepn. - 32745Y/19
SANY 07.06.74 SANKYO KK B03 D16 = CH -614-975
Hypocholesterolemic, hypolipemic ML-236A, ML-236B and ML-236C - 85001W/52
SANY 23.10.74 SANKYO KK B04 D16 = J7 9041-520
Terminating dehydrogenase enzymatic reactions - 34353X/19
*SANY 19.05.78 SANKYO ALUMINIUM KK D15 E36 *J5 4151-591
Treating sulphuric acid waste contg. aluminium ions - 02768C/02
SANY- 19.05.78 SANYO MOKUZAI BOFU C02 D22 E13 F09 = J5 4151-102
Wood preservative contg. 2-mercapto-benzothiazole - 86218B/48
SANY- 19.05.78 SANYO MOKUZAI BOFU C02 D22 E13 F09 = J5 4151-103
Wood preservative contg. 2-mercapto-benzothiazole - 86218B/48
SAOC 14.05.76 SANRAKU OCEAN A97 B04 D16 (A11 A14) = OE 7703-454
Prepn. of gels for immobilising microbial cells - 75925Y/43
SCAD 20.06.78 SCA DEVELOPMENT AB A11 D22 F04 (A96) #BR 7803-920
Cellulosic material for absorbent sanitary prods. - 46196A/26
SCHN/ 22.06.78 SCHNELL K D14 = DT 2827-369
Rotary food mincer with trap for metal foreign bodies - 77233B/43
SCHN/ 22.06.78 SCHNELL K D14 = EP ---6-529
Rotary food mincer with trap for metal foreign bodies - 77233B/43
SCHR/ 27.06.78 SCHRODER H D22 = DT 2923-793
Deodorising compsn. for ash trays - 71759B/40
*SCOL 02.11.77 SCHOLL CANADA INC A83 D22 F08 *CA 1068-107
Deodorising footwear insole - 01735C/02
SEAF 15.05.78 SEA FISHERY RES INST D12 = NO 7901-585
Small crustaceans processing system - 87930B/49
SHEL 12.05.78 SHELL INT RES MIJ BV D23 E15 = NO 7901-571
Ester(s) of (1,5)-di:methyl-bi:cyclo-(3.2.1)octanol-8 - 82556B/46
SHEL 12.05.78 SHELL INT RES MIJ BV D23 E15 = SW 7904-140
Ester(s) of (1,5)-di:methyl-bi:cyclo-(3.2.1)octanol-8 - 82556B/46
SHIE 18.05.78 SHINETSU CHEM IND KK C02 D13 E13 = J5 4151-978
Tetra:hydro-pyranone derivs. - 44451B/24
SHIG/ 20.02.74 SHIGEHIO M D15 = J5 0114-048
Wheat starch-contg. waste water treatment - 02999C/02
- *SHIG/ 20.02.74 SHIGEHIO M D15 *J7 9042-181
Wheat starch-contg. waste water treatment - 02999C/02
*SHIS 16.05.78 SHISEIDO KK A96 D21 (A14) *J5 4151-139
Cosmetic make/up compsn. - 02686C/02
*SHIS 17.05.78 SHISEIDO KK D21 *J5 4151-140
Hair cosmetics - 02687C/02
SHON- 28.10.76 SHONO DENPUN KK D13 = US 4180-590
Liq. condiment of high nitrogen content - 35206A/20
SHON- 28.10.76 SHONO DENPUN KK D13 = US 4180-591
Liq. condiment of high nitrogen content - 35206A/20
SHOW- 25.02.77 SHOWA OIL CO D16 E17 H04 = US 4180-626
Fermentative prepn. of citric acid from crude olefin - 75353A/42
*SHUC/ 03.07.78 SHUCK W D D15 *GB 2024-028
Appts. for agitating sludge in lagoon bottom - 02234C/02
*SIDO/ 11.11.75 SIDOROV V M D16 *SU -659-167
Determining foaming tendency of liquids - 03237C/02
*SIMO/ 18.06.75 SIMONE B D11 *IL --47-506
Proofing device for Pitah loaves - C/02
SNAM 12.05.78 SNAMPROGETTI SPA A96 B04 D16 = NO 7901-557
Reduction of phenylalanine levels in blood and other media - 82559B/46
SNAM 12.05.78 SNAMPROGETTI SPA A96 B04 D16 = SW 7904-161
Reduction of phenylalanine levels in blood and other media - 82559B/46
*SOAF- 28.09.77 SOAF D15 *FR 2420-363
Purificn. of waste water with lime and carbon di:oxide - 02178C/02
SPEC- 14.05.76 SPECIAL FOOD CORP D11 = OE 7703-359
Alimentary paste and pastry prepn. using soya - 83190Y/47
STAU 30.05.75 STAUFFER CHEMICAL CO D13 = CA 1068-153
Egg white substitutes from whey - 95557X/51
*STEI- 27.06.78 STEINMANN & ITTIG G D15 *DT 2828-115
Toxic refuse dump effluent - 01849C/02
STER 05.02.75 STERLING DRUG INC D15 E35 = CH -614-684
Elimination of ammonia from waste water - 63430X/34
STER 18.02.75 STERLING DRUG INC B03 D16 = IL --49-053
Aminocyclitol antibiotics of the streptomycin type - 67317X/36
STER 24.02.75 STERLING DRUG INC D15 J04 (J01) = CH -614-866
Run off tank for high pressure reactor - 67325X/36
STIC/ 01.08.74 STICKL H B04 C03 D16 = CH -614-627
Medicaments contg. attenuated chicken pox virus - 83277W/51
STRK 14.06.78 STORK AMSTERDAM BV D22 = GB 2024-130
System for conveying trays through airlock doors - 03004C/02
*STRK 14.06.78 STORK AMSTERDAM BV D22 *NL 7806-436
System for conveying trays through airlock doors - 03004C/02
SUCR- 25.03.76 SUCRERIE COUPLET D17 = DS 2709-683
Syrup filter requiring short regeneration time - 63443X/34
SUDC 08.10.75 SUD-CHEMIE AG D17 E13 (D13) = DS 2545-110
Xylose recovery from xylan-contg. natural products - 12795Y/08
SUMO 12.05.78 SUMITOMO CHEMICAL KK B04 D16 = SW 7904-118
Fibrinolytic enzyme urokinase lyophilisate stabilisation - 86170B/48
SVME- 10.05.77 SVENSKA MEJERIERNAS D13 = OE 7803-358
Desalting whey using anionic and cationic exchangers - 65363A/37
- *TAJA 16.05.78 TAKAOKA ELECT MFG KK D15 J03 *J5 4149-264
Waste water treating appts. - 02359C/02
*TAKA/ 17.05.78 TAKAHASHI S D22 E14 *J5 4151-128
Prepn. of deodorant and disinfectant spray - 02682C/02
TAKE 08.09.76 TAKEDA CHEMICAL IND KK B02 C02 D22 = OE 7807-906
Cephalosporin antibiotics active against resistant strains - 00060A/01
*TAKE 15.05.78 TAKEDA CHEMICAL IND KK D15 *J5 4149-261
Phosphate ion removal from aq. soln. e.g. sewage - 02358C/02
*TAKE- 17.05.78 TAKENAKA DOBOKU KK D15 L02 *J5 4150-369
Solidification of waste contg. heavy metal cpds. etc. - 02549C/02
*TANA 16.05.78 TANABE SEIYAKU KK B04 D16 *J5 4151-184
Compsns. contg. washed microorganisms - 02694C/02
TEIJ 22.05.78 TEIJIN KK A88 D15 J01 = J5 4151-570
Semipermeable water-desalination membrane - 87961B/49
*TEKH= 01.03.77 TEKHRYBROM PRODN D12 *SU -659-126
Fish dresser setting unit - 03227C/02
*TEMR= 22.12.76 TEMRYUK FISH CANNIN D12 *SU -659-127
Flour coater for fried fish prodn. - 03228C/02
TENC 23.06.71 TENNECO CHEMICALS A11 D17 G02 (A82) = DS 2230-074
Aq surface coating compsns contg hydroxyalkyl ether - 72164T/45
*TERA- 02.02.76 TERAPIA INTR MEDIC D21 *RU --65-977
Astringent tonic vegetable extract prepn. - C/02
*THAL 14.06.78 VEB SCHWERMASCH THALMANN C03 D13 (D16) *DT 2922-783
Drying and sterilising protein contg. suspensions - 01907C/02
*THOM 28.06.78 THOMAE K GMBH A60 B02 C02 D13 (D22) *EP ---6-532
Pyrimidyl:ureido:acetamido-penicillin and cephalosporin cpds. - 02133C/02
TIDN- 11.03.75 TIDNINGSPAPPERSBRUKENS F A97 D15 F09 = OE 7601-723
Removing colloidal impurities from aq. dispersions - 74363X/40
TINT- 26.05.77 TINTOMETER GMBH D15 J04 = US 4180-009
Indicating device for swimming pool impurities - 76236A/42
TIPE- 29.11.77 TIPE REVENT AB D11 = OE 7808-211
Convection type baking oven - 42644B/23

- *TKEN 17.05.78 TAKENAKA KOMUTEN KK D15 L02 *J5 4150-369
Solidification of waste contg. heavy metal cpds. etc. - 02549C/02
- *TOKE 18.05.78 TOKYO SHIBAURA ELEC LTD D22 J01 *J5 4150-366
Deodorising plant for removal of ammonia etc. - 02546C/02
- *TORA 22.05.78 TORAY IND INC D15 J01 *J5 4151-571
Liq. separator appts. using semipermeable membrane around tube - 02752C/02
- *TOXF 15.05.78 TOHO BESLON KK D16 *J5 4151-186
Photosynthetic bacteria prepn. - 02695C/02
- TOXN 25.03.78 TOYO JOZO KK B04 D16 J04 = FR 2420-760
Reagent for assay of pyruvate - 73838B/41
- *TOXN 17.06.78 TOYO JOZO KK B04 D16 E17 *DT 2924-470
Lactate oxidase enzyme specific to L-lactic acid - 01925C/02
- *TOXO 15.05.78 TOYO SEIKAN KAISHA D13 *J5 4151-153
Peeling of fruit or vegetables - 02689C/02
- *TOXO 15.05.78 TOYO SEIKAN KAISHA D13 *J5 4151-154
Peeling process for fruit and vegetables - 02690C/02
- *TOXO 15.05.78 TOYO SEIKAN KAISHA D13 *J5 4151-155
Peeling fruits and vegetables - 02691C/02
- *TWE- 12.05.78 TWEEDY BURNLEY LTD D11 *EP ---6-290
Vacuum cooling moisture-contg. foodstuff - 02040C/02
- *ULEA= 02.04.76 UKR LEATHER FOOTWEA D18 *SU -659-624
Animal skins liquid treatment unit - 03361C/02
- UNIC 30.10.75 UNION CARBIDE CORP D12 = CH -614-605
Linked sausage casing stuffing horn - 30567Y/17
- UNIL 17.08.71 UNILEVER NV D25 E17 = J7 9041-612
Washing compsn - 13127U/10
- UNIL 22.03.74 UNILEVER NV D23 (D13) = CH -614-606
Purificn of crude phosphatides - 67306W/41
- UNIL 03.11.75 UNILEVER NV D25 E19 = OE 7608-138
Bleaching auxiliary compsns. - 33143Y/19
- UNIL 10.02.76 UNILEVER NV A97 D25 = OE 7700-816
Spray dried detergent powder contg. nonionic surfactant - 57945Y/33
- UNIL 24.09.76 UNILEVER NV D13 = OE 7706-781
Water-in-oil margarine contg. proteose-peptone - 23360A/13
- UNIL 20.03.77 LEVER BROTHERS CO D21 E34 (E12 E16) *US 4180-470
Acyl isethionate detergent bars - 03503C/02
- UNIL 20.03.78 UNILEVER NV D21 E19 = FR 2420-343
Deodorant non-germicidal toilet soap tablet - 69929B/39
- UNIL 11.05.78 UNILEVER NV D25 (D24) = NO 7901-574
Prepn. of spray dried soap contg. washing powders - 82563B/46
- UNIL 16.05.78 UNILEVER NV A97 D25 = J5 4151-129
Deodorant compsn. contg. abrasive, bleach, wax or polymer carrier - 86309B/48
- UNIL 16.05.78 UNILEVER NV A97 D25 = NO 7901-614
Deodorant compsn. contg. abrasive, bleach, wax or polymer carrier - 86309B/48
- UNNY- 14.08.75 CITY UNIV NEW YORK B04 D16 = OE 7606-047
Blood group determination - 11160Y/07
- UNTC 25.11.77 ECODYNE CORP D15 E37 = US 4180-547
Salt water, e.g. sea water desalination - 42680B/23
- UNVO 04.08.78 UOP INC D25 E14 *US 4180-691
Olefin alkylation of aromatic hydrocarbon - 03605C/02
- UPJO 15.05.78 UPJOHN CO B03 D22 E13 F09 (D15) = SW 7904-163
Alpha-amino-3-chloro-alpha-isoxazoline-5-acetic acid and analogues - 84158B/47
- USDA 17.08.78 US SEC OF AGRICULTURE B04 C03 D16 *US 4180-627
Bovine Transfer Factor prepn. from ground lymph nodes - 03571C/02
- USDC 14.04.77 US SEC OF COMMERCE D13 = GB 1558-958
Fractionation of tallow by crystallisation - 60530A/34
- UYOD= 07.12.76 ODESS UNIV D15 *SU -658-094
Removing ions of non-ferrous metals from waste water - 03077C/02
- *VALC 15.12.76 VER ALUMINIUM WERKE AG D15 E31 M25 = DS 2656-683
Ammonium vanadate prodn. - 15857A/08
- *VENI/ 19.03.74 VENIAMIN NV D22 *RU --64-353
Perfume compsn. for rooms and clothes - C/02
- *VINS/ 21.01.77 VINSON WL D21 *US 4180-561
Hair styling compsn. - 03543C/02
- *VOBR= 14.11.77 VORON BREAD PRODUCT D15 J01 *SU -659-170
Cleaner for spent grain washing etc. water - 03240C/02
- *WAFI- 13.06.78 WAFILIN BV A31 D13 J01 *NL 7806-402
Contn. of polymers in liq. medium - 03002C/02
- *WARN 30.05.75 WARNER-LAMBERT CO D21 *CA 1068-215
Antiperspirant and deodorant stick compsns. - 01737C/02
- *WATA 18.05.78 WATANABE YAKUHIN KO A96 B05 D22 (B07) *J5 4151-115
Wet pack dressing for administering drugs, e.g. antiinflammatory - 02671C/02
- *WATA 18.05.78 WATANABE YAKUHIN KO A96 B05 D22 (A14 B07) *J5 4151-117
Elastic wet pack compsn. - 02673C/02
- *WATA/ 16.05.78 WATANABE H D15 *J5 4150-849
Motorised vehicle for purifying waste water - 02643C/02
- WELT/ 24.03.78 WELTMAN JK B04 D16 = FR 2420-543
Enzyme conjugates for immunoassay - 69942B/39
- WESE 08.05.75 WESTINGHOUSE ELEC CORP D15 E36 K05 = CA 1068-417
Removal of radioactive ions from a nuclear reactor - 84966X/46
- WESE 08.05.75 WESTINGHOUSE ELEC CORP D15 E36 K05 = OE 7603-125
Removal of radioactive ions from a nuclear reactor - 84966X/46
- *WHIT/ 06.09.77 WHITE VC A96 D21 (A14) *US 4179-812
Bonding dental bracket to tooth - 03411C/02
- *WIEL- 00.00.76 FA WIELAND T D21 M26 *DT 2804-577
Premix forming dental filler when amalgamated with mercury - 01766C/02
- WITC 23.12.74 WITCO CHEMICAL CORP D25 E19 = CA 1068-293
New sulphosuccinic ester surfactants - 00117X/01
- WITC 23.12.74 WITCO CHEMICAL CORP D25 E19 = CA 1068-294
New sulphosuccinic ester surfactants - /01
- WITC 07.05.75 WITCO CHEMICAL CORP D25 E19 = CA 1068-295
New sulphosuccinic ester surfactants - 00117X/01
- WOLF- 28.06.78 WOLFF DR A CHEM-PHA A96 B05 D21 = GB 2024-010
Compsns. for seborrhoea treatment - 79155B/44
- WYSS 01.03.78 ESCHER WYSS GMBH A32 D14 J02 = DS 2810-507
Calender with stack of flexible sleeve cylinders - 66516B/37
- YAMA- 19.05.78 YAMAHATSU SANGYO KK D21 E17 (E37) = J5 4151-141
Permanent wave preparation for warm setting - 87939B/49
- YAMA/ 15.05.78 YAMADA H B04 D16 = J5 4151-187
Microbiological prodn. of acyl-coenzyme/A synthetase LCF-18 prodn. - 87919B/49
- *YOSH/ 13.05.78 YOSHIHAMA H B04 D16 *J5 4149-292
Measuring activity of plasmin in blood - 02361C/02
- YTKE- 11.03.75 YTKEMISKA INST A97 D15 F09 = OE 7601-723
Removing colloidal impurities from aq. dispersions - 74363X/40
- *ZAIT/ 04.04.77 ZAITSEV VA D16 *SU -659-608
Microbial biomass e.g. yeast from culture medium sepn. unit - 03357C/02



2598-R ADEH	ZA 7208-959 U43	CA 1036-455 A35+	DL -122-090 X45	DL -116-239 X05	67306-W D	CH -614-626 C02	J7 9041-520 C02
DT 2027-812 R50	J4 8068-729 U48	CH -602-961 A37+	OE 7405-237 Y13	PT --63-220 X27	BE -827-026 W41		
FR 2049-987 S25	GB 1419-969 X01	J5 4000-009 B07+	CS 7404-842 Y40	ZA 7500-259 X37	NL 7503-304 W41	09597-X DLM	36385-X DE
GB 1306-211 U06	IL --41-120 X05	J5 4000-008 B07+	IL --45-123 A06	CH -589-453 Y34	DT 2512-639 W43	DT 2531-113 X06+	DT 2548-502 X20
CA -920-907 U09	CA -991-543 X28	DL -159-712 B13	SW 7711-848 A12	US 4064-232 A01	SW 7503-140 W46	FR 2277-792 X18+	BE -834-896 X20
DS 2027-812 C02	US 4076-801 A11+	NT 2462-958 C02+	OE 7606-950 A22	GB 1498-261 A03	J5 0130-797 W50	GB 1483-362 Y33+	NL 7512-624 X21
	CS 7208-757 A50		CA 1033-750 A28	OE 7500-214 A06	FR 2264-815 X02	US 4064-311 A01+	NO 7503-641 X25
51285-S D	SU -592-333 B01	76861-V D	DK 7801-579 A33	IL --46-426 A09	DK 7501-221 X02	CH -614-624 C02+	SW 7512-121 X25
ZA 7006-094 S31	DS 2262-427 B33	NL 7403-382 V44+	US 4163-746 B34	CS 7500-255 A51	OE 7502-150 A06		J5 1068-523 X31
DT 2044-890 T13	US 4180-563 C02	BE -814-581 V47+	CH -614-950 C02	HU T015-993 B07	GB 1504-125 A11	09601-X AD	DK 7504-842 X32
CA -921-322 U10		DT 2412-836 V48+		US 4140-762 B09	CA 1049-551 B11	DT 2531-127 X06	FR 2289-493 X36
DS 2044-890 C02+	69497-U AD	SW 7403-380 V52+	14727-W DE	CA 1049-406 B11	IT 1030-399 B26	NL 7508-171 X06	PT --64-424 X41
	DT 2319-716 U46	DK 7401-385 W03+	DT 2437-890 W09+	SU -616-997 B22	US 4166-823 B37	BE -831-137 X07	BR 7507-202 X42
4209-S ADJ	FR 2180-945 V04	FR 2236-928 W17+	NL 7408-383 W09+	DS 2500-785 C02	CH -614-606 C02	NO 7502-429 X11	ZA 7506-458 X44
DT 2122-045 S47	FR 2180-944 V04	ZA A742-862 W27	US 3872-111 W13			SW 7508-093 X11	DL -123-318 Y08
NL 7106-097 S47	J4 9018-142 V20	J5 0132-011 W50+	US 3873-731 W14	59122-W D	67346-W BCD	DK 7503-223 X17	US 4028-395 Y24
J4 6006-191 S51	J4 9020-253 V20	GB 1473-571 Y20+	J5 0042-073 W24+	DT 2507-385 W36	BE -828-679 W41	FR 2278-274 X19	OE 7508-231 Y27
ZA 7102-851 T06	CH -567-414 W46	US 4071-377 A07+	FR 2250-754 W35+	NL 7502-109 W37	NL 7505-080 W47	SF 7502-054 X19	HU T013-749 Y37
FR 2088-313 T12	GB 1422-337 X05	CA 1048-909 B10+	GB 1441-491 X27+	NO 7500-544 W42	DT 2518-188 W48	J5 1038-499 X20	GB 1494-940 Y50
GB 1336-908 U46	CH -570-161 X07	NL -159-713 B13+	DT 2462-673 A09+	SW 7501-926 W42	SW 7505-025 W52	DL -118-523 X22	GB 1515-106 A25
US 3890-224 W26	J7 9021-858 B35	CH -614-868 C02+	CH -602-022 A33+	DK 7500-685 W48	SF 7501-289 X07	BR 7504-471 X30	OE 7700-657 A26
US 3923-651 W51	J5 4149-296 C02		SU -583-133 A43	FR 2262-100 W50	FR 2269-343 X08	ZA 7504-360 X31	IT 1025-319 A42
CA -979-373 W52		77491-V BCD	CA 1045-891 B05	SF 7500-433 W51	DK 7501-906 X08	PT --64-064 X33	CS 7608-285 B06
CA -986-421 X16	07402-V BD	BE -813-876 V45	CA 1048-516 B09	J5 1007-159 X10	J5 1004-172 X09	GB 1484-573 Y35	CS 7507-302 B06
US 3951-799 X18	DS 2240-672 V05	NL 7405-358 V45	CH -611-288 B23+	GB 1504-406 A12	DL -120-194 X32	US 4147-172 B15	SU -644-378 B42
DT 2167-145 B09	NL 7311-350 V10	DT 2320-039 V46	CA 1056-837 B27	SU -575-008 A34	US 3978-075 X37	CA 1056-588 B27	SU -648-085 B45
DT 2167-146 B09	FR 2196-387 V20	NO 7401-404 V50	SU -648-100 B45+	US 4136-206 B05	GB 1461-239 Y02	CH -614-846 C02	SW 7907-995 C02
DS 2122-045 C02	GB 1387-086 W11	DK 7402-146 V51	CH -614-949 C02+	CA 1056-645 B27	US 4024-269 Y21		
	OE 7307-214 W19	SW 7405-231 V51+		DS 2507-385 B44	HU T013-595 Y32	11214-X AD	48032-X ABCD
1107-T D	J5 0106-686 W42	SF 7401-149 W06	30564-W BCD	CH -614-845 C02	SU -584-769 A44	BE -831-179 X07+	BE -837-935 X26
BE -772-863 T13+	CA -996-010 X38	FR 2226-158 W07	BE -821-164 W19		CA 1050-552 B15	NL 7508-130 X07+	DT 2602-994 X32
DT 2146-224 T14	CH -579-149 X39	J5 0005-519 W12	NO 7403-667 W24	59139-W ADE	SU -626-694 B30	DT 2533-005 X08+	NL 7600-881 X33
NL 7112-989 T14	US 4180-060 C02	J5 0012-099 W14	DT 2449-834 W19	DT 2507-566 W36	CH -614-604 C02	SW 7508-316 X12+	J5 1100-194 X42
14 7007-000 T16		PT --61-796 W20	SW 7412-602 W23	BE -825-825 W36		DK 7503-324 X18+	DK 7600-320 X43
14 7010-850 T22	12766-V BCD	ZA 7402-488 W22	DK 7405-421 W29	NL 7502-087 W37	72744-W AD	J5 1034-978 X19+	BR 7600-499 X44
NL 7116-326 T24	NL 7310-613 V07	OE 7403-179 W31	FR 2248-044 W30+	FR 2262-022 W50	DT 2514-435 W44	FR 2282-905 X24+	DK 7603-380 X48
DT 2158-122 T27	BE -802-937 V07	DL -113-547 W32	DL -114-266 W36	US 4008-999 Y09	CH -614-623 C02	ZA 7503-747 X26	FR 2299-356 X49
4 7011-300 T29	DT 2336-811 V08	US 3923-789 W51	PT --62-798 W37	GB 1483-862 Y34		US 4002-173 Y04+	SW 7600-760 Y04
FR 2115-323 T43	FR 2194-414 V18	GB 1422-304 X05	FR 2257-298 W44	CA 1062-276 B39	81496-W D	BR 7504-566 Y11+	ZA 7600-493 Y35
CA 7106-073 U21	J4 9055-896 V31	US 8538-753 X08	J5 0121-293 W47	CH -614-625 C02	BE -831-281 W50	CA 1027-557 A12+	GB 1502-082 A08
CA 7107-689 U27	DL -109-027 W03	US 3974-288 X34	ZA 7406-544 W51		FR 2285-347 X27	GB 1509-252 A18+	US 4093-709 A31
GB 1348-492 V12+	ZA 7304-701 W14	US 3993-642 X49	OE 7408-364 Y18+	62264-W AD	CH -614-681 C02	CH -614-859 C02+	US 4131-648 B02+
GB 1349-373 V14+	IL --42-685 X09	US 3993-770 X49	GB 1481-807 Y31	BE -828-525 W38			US 4138-344 B07+
CA -960-968 W05	GB 1433-417 X18	IL --44-642 Y20	GB 1481-809 Y31	DT 2519-099 W45	83277-W BCD	14357-X ADE	IL --48-799 B08
CH -560-540 W21+	CA -989-338 X23	SU -520-920 Y22	GB 1481-808 Y31	NL 7504-873 W46	BE -831-691 W51	NL 7509-156 X08	J7 9010-037 B21
CA -968-713 W25+	CH -584-286 Y09	HU T013-598 Y32	GB 1481-810 Y31	SW 7504-926 W51	NL 7509-136 X08	DT 2437-662 X09	OE 7600-552 B44
CA -971-107 W31	SU -517-265 Y18	CA 1025-849 A08	SW 7710-697 A08	FR 2268-839 X07	DT 2437-166 X09	FR 2281-425 X22	US 4180-646 C02+
CH -564-941 W38+	CS 7305-334 A50	CS 7402-779 A29	CS 7702-901 B14	J5 1017-924 X13	SW 7508-565 X13	CH -614-736 C02	
US 3911-104 W42+	RU --64-170 C02	CS 7704-706 A29	DK 7804-564 B17	US 4014-846 Y14	DK 7503-477 X19		54246-X ABD
US 3911-102 W42+		RU --64-148 C02	DK 7804-563 B17	GB 1497-692 A02	FR 2280-390 X21		BE -838-834 X29+
US 3946-108 X14	14866-V BD		CA 1064-019 B43	ZA 7502-716 X24	J5 1041-420 X21	US 3939-286 X09+	DT 2607-431 X36
US 4066-745 A03+	NL 7310-625 V08+	85603-V D	RU --64-151 C02	US 4093-573 A31	ZA 7504-725 X31	DT 2606-084 Y34+	NL 7601-782 X37
DS 2146-224 C02+	J4 9060-290 V33+	BE -815-398 V50		J7 9015-289 B27	DS 2437-166 Y05	BR 7600-957 Y38+	J5 1110-000 X46
	DT 2326-756 V52+	NL 7403-384 V50	32439-W ACDE	CA 1068-439 C02	US 4053-582 Y42	SW 7601-726 Y39+	US 3996-160 X51
2164-T ADG	US 3862-012 W05+	DT 2412-839 V51	BE -821-585 W20		OE 7505-989 Y44	FR 2340-690 Y48+	US 3996-199 X51
US 3700-612 T45	FR 2231-291 W11+	SW 7403-381 W03	NL 7413-349 W21	64291-W ADF	GB 1517-540 A28	CA 1052-616 B20+	FR 2301-550 X52+
E -784-757 T51	GB 1395-127 W21+	NO 7400-890 W03	DT 2355-026 W21	DT 2510-919 W39	CA 1057-195 B28	SU -651-652 B48+	ZA 7601-104 Y13
NL 7208-566 U03	OE 7306-758 W44+	DK 7401-386 W04	SW 7412-794 W26	BE -826-649 W40	CH -614-627 C02	IL --49-035 C02+	GB 1498-756 A04+
DT 2230-074 U04	CH -576-640 X29+	FR 2230-788 W11	DK 7405-291 W30	NL 7502-674 W40			J7 9003-798 B12
FR 2143-333 U15	CA 1000-599 X51+	SF 7400-764 W16	J5 0071-827 W32	SW 7502-846 W45	85001-W BD	18825-X DE	J5 4039-499 B18
CA 7203-453 U17	J7 9041-359 C02+	ZA 7403-319 W27	FR 2249-871 W34	NO 7500-764 W46	BE -830-033 W52	BE -832-714 X11	IL --49-084 C02
GB 1380-182 W02		OE 7408-758 X46	OE 7408-758 X46	FR 2264-129 X01	NL 7506-848 W52	NL 7509-230 X12	
CA -981-820 X05	32352-V D	PT --61-480 W30	OE 7408-760 X50	DK 7501-030 X01	DT 2524-355 X02	DT 2538-217 X12	54459-X AD
DS 2230-074 C02	US 3803-860 V17	DL -116-645 X10	US 4022-606 Y20	BR 7501-478 X02	SW 7506-498 X08	SW 7412-855 X17	DT 2557-607 X29+
	GB 1397-002 W24	DT 2462-496 Y19	GB 1491-721 Y46	DL -116-276 X05	DK 7502-553 X12	DK 7405-335 X22	NL 7515-143 X29+
314-U ADE	IL --39-334 X32	GB 1473-572 Y20	CA 1044-136 B01	J5 0160-341 X05	US 3983-140 X41	FR 2283-222 X24	SW 7514-644 X33
IL 7209-314 U08+	J4 8004-382 C02	US 4083-793 A22	CH -614-930 C02	GB 1467-127 Y11	GB 1453-425 X43	J5 1050-910 X25	FR 2295-757 X45+
IE -786-985 U09	J7 9041-559 C02	CA 1035-662 A33		CA 1057-872 B29	US 4049-495 Y39	OE 7406-980 X32	J5 1142-094 Y04
DT 2138-584 U10		CH -614-984 C02	37341-W BD	DS 2510-919 B42	OE 7504-304 Y44	GB 1501-286 A07	IL --48-737 C02+
R 2148-203 U20	63453-V DE		US 3884-758 W22	IT 1034-298 B51	J5 0155-690 A12	CA 1058-042 B32	
CA 7205-278 U21	DT 2406-965 V36	02042-W D	J5 0115-588 W45	CH -614-747 C02	CA 1046-439 B05	CH -614-973 C02	61611-X D
4 8024-981 U21	FR 2218-319 V50	BE -818-384 W02	GB 1470-035 Y15		FR 2313-035 Y12		BE -839-758 X33+
DT 2207-974 U38	J4 9108-008 W06	PT --61-320 W30	CA 1033-274 A27	65975-W D	CH -614-975 C02	29466-X D	NL 7602-678 X41+
S 3833-506 V37+	GB 1410-751 W43	DT 2436-858 W32	CH -614-737 C02	DT 2512-560 W40+		NL 7511-440 X16	DT 2556-067 X41+
DE 7206-642 W15+	US 3962-121 X25	NL 7410-668 W33		J5 0132-146 W51+	00117-X DE	DT 2543-647 X18	BR 7601-637 X45+
B 1398-785 W26+	J7 9041-566 C02	ZA 7404-804 W37	46390-W ADE	US 3947-599 X15	BE -832-200 X01+	DK 7504-410 X26	SW 7603-516 X45+
CA -991-363 X28+		SW 7410-168 W38	DT 2364-634 W28	ZA 7501-830 X17	NL 7509-704 X10+	FR 2286-191 X28	US 3991-219 X47
TH -579-146 X39+	75753-V DF	NO 7400-247 W39+	BE -823-794 W28	NL 7600-951 X34	DT 2535-800 X11+	J5 1063-272 X29	FR 2304-566 Y03+
DS 2138-584 C02	BE -813-581 V44+	J5 0103-851 W41	SW 7415-810 W33	BR 7506-069 X42	J5 1043-717 X22+	GB 1532-972 A47	DL -123-590 Y12
	NL 7403-381 V44+	DK 7403-787 W44	FR 2255-255 W41	FR 2298-964 X49	GB 1523-644 A36+	IL --48-199 B08	US 4011-733 Y12
127-U DE	DT 2412-837 V45+	SF 7402-366 W44	US 3983-223 X41	US 4052-516 Y41	CA 1067-092 B50	CA 1068-151 C02	DK 7603-397 Y16
T 2239-646 U10	NO 7400-889 V49+	FR 2259-147 W46	GB 1491-225 Y45	SF 7600-263 Y42+	CA 1068-293 C02		SF 7602-129 Y16
L 7211-114 U10	DK 7401-384 V51+	US 3974-069 X34	CA 1036-792 A36	GB 1509-022 A17+	CA 1068-295 C02	30025-X DE	ZA 7601-694 Y17
E -787-682 U12	SF 7400-763 W01+	GB 1468-092 Y12	IT 1027-155 B06	CA 1052-172 B16+		US 3948-985 X16+	DT 2559-651 Y22+
R 2149-500 U22	FR 2225-568 W06+	OE 7406-447 Y44	CH -609-649 B16	IL --48-042 C02	03897-X BD	BE -834-412 X18	CA 1038-345 A39+
8029-806 U24	SW 7403-379 W12+	CA 1041-233 A45	OE 7410-208 C02		BE -831-786 X03+	NL 7511-851 X18	OE 7602-062 A44
CA 7205-617 V16	J5 0012-381 W14+	CH -614-915 C02		67304-W DEF	DT 2518-546 X32	DT 2545-577 X18	GB 1534-362 A49
B 1397-245 W24	ZA 7402-360 W22		50924-W BD	BE -827-010 W41	NL 7505-412 X33	SW 7511-411 X22	GB 1534-361 A49+
CA -971-070 W31	DL -112-673 W24+	08505-W BCDE	BE -824-372 W31	DT 2413-867 W43	SW 7505-411 X37	J5 1065-716 X30	OE 7800-581 B35
H -572-976 X15	PT --61-480 W25+	NL 7408-995 W05	NL 7500-301 W31	FR 2264-910 X02	NO 7501-680 X38	FR 2287-438 X30	IL --49-232 B48+
IE 7207-068 X28	AR -201-687 W46+	DT 2432-799 W06	DT 2500-785 W32	BR 7501-441 X02	DK 7502-069 X43	CA 1038-884 A40	DS 2556-067 B

CA 1068-291 C02	CH -614-847 C02	NL 7607-389 Y08	09294-Y BCD	DL -128-412 A08	CH -614-605 C02	41732-Y D	IL --51-858 C02
63430-X DE	74363-X ADF	SW 7607-433 Y10	BE -844-613 Y06+	FR 2361-875 A20	BE -849-319 Y24	BE -849-319 Y24	75869-Y BD
BE 838-258 X34	DT 2610-277 X40	NO 7602-601 Y11	DT 2533-792 Y08	OE 7606-752 B26	NL 7613-760 Y26	J5 2094-452 Y38	BE -853-719 Y43
NL 7601-143 X34	NL 7602-000 X40	FR 2319-303 Y19	NL 7608-362 Y08+	CS 7605-894 B34	FR 2334-309 Y39	DT 2656-418 Y46	DT 2717-977 Y46
DT 2604-479 X35	SW 7502-720 X44	J5 2064-454 Y27	DK 7603-396 Y16+	IL --50-457 C02	DT 2656-418 Y46	BR 7608-358 A01	SW 7705-041 Y50
J5 1103-671 X44	NO 7600-840 X45	HU T016-175 B15	FR 2319-633 Y19+	23641-Y D	J5 2053-893 Y23	GB 1550-008 B32	J5 2134-017 Y51
SW 7601-157 X47	SF 7600-583 X48	CS 7604-155 B34	DT 2602-739 Y31	BE -848-814 Y14	SW 7611-925 Y23	IL --51-064 C02	FR 2350-398 A08
FR 2302-972 Y02	FR 2313-500 Y12	CA 1059-819 B34	ZA 7604-532 A20	US 4025-001 Y22	DK 7604-856 Y29	51966-Y DJ	US 4072-571 A08
ZA 7600-523 Y07	J5 2031-563 Y16	GB 1552-680 B38	US 4087-533 A25+	DT 2653-956 Y23	SF 7603-047 Y30	US 4035-241 Y29	BR 7702-806 A14
GB 1533-462 A47	US 4043-908 Y35	IL --49-609 C02	GB 1519-914 A31+	DL -128-096 A08	FR 2329-284 Y31	DT 2705-345 Y34	DL -130-504 A23
CH -614-684 C02	GB 1546-813 B22	94671-X ADJ	OE 7605-090 B09+	ZA 7606-633 A12	DL -127-949 A06	J5 2097-373 Y39	GB 1530-428 A44
63443-X D	DS 2610-277 B51	DT 2624-224 X51	CA 1068-283 C02+	GB 1536-039 A51	OE 7608-022 B01	US 4120-756 A43+	DS 2717-977 C02
BE -839-979 X34	CA 1068-019 C01	SW 7602-800 Y03	11160-Y BD	GB 1536-038 A51	GB 1537-903 B02	FR 2380-049 A46	75925-Y ABD
NL 7702-286 Y41	OE 7601-723 C02	US 4010-374 Y10	BE -845-201 Y07	OE 7608-778 B22	IL --50-761 C02	IL --51-439 C02	BE -854-625 Y43
DT 2709-683 Y41	74379-X BD	FR 2313-118 Y12	NL 7609-061 Y09	CH -611-490 B29	30933-Y ABCD	BE -847-730 Y18	DT 2721-829 Y47
FR 2345-198 A03	DT 2610-557 X40+	CA 1059-092 B33	DT 2636-616 Y09	CA 1062-539 B40	BE -847-730 Y18	DT 2548-248 Y19	NL 7705-329 Y48
DS 2709-683 C02+	BE -839-540 X40+	GB 1552-919 B38	SW 7609-089 Y13	CH -613-096 B42	DT 2548-248 Y19	NL 7611-854 Y20	J5 2138-482 A01
63453-X DE	NL 7602-342 X40+	CH -614-864 C02	NO 7602-801 Y14	IL --50-848 C02	NL 7611-854 Y20	J5 2053-892 Y23	SW 7705-501 A01
BE -840-037 X34	SW 7602-796 X44+	95557-X D	DK 7603-648 Y18	25225-Y BCD	J5 2053-892 Y23	SW 7611-926 Y23	J5 2145-584 A03
NL 7603-694 X44	NO 7600-873 X45+	NL 7604-847 X51	FR 2321-127 Y21	BE -846-829 Y15	SW 7611-926 Y23	DK 7604-855 Y29	DK 7702-107 A06
J5 1123-899 X50	J5 1115-992 X48+	DT 2621-965 X52	ZA 7604-880 A16	NL 7610-808 Y16	DK 7604-855 Y29	SF 7603-046 Y30	FR 2350-874 A09
US 3996-940 X52	SF 7600-645 X48+	DK 7602-319 Y07	GB 1555-142 B45	DT 2643-485 Y16	SF 7603-046 Y30	FR 2329-285 Y31	J5 3099-380 A40
FR 2306-643 Y06	DK 7601-101 X49+	FR 2312-202 Y11	OE 7606-047 C02	J5 2042-801 Y20	FR 2329-285 Y31	DL -127-948 A06	US 4148-689 B17
GB 1485-103 Y36	FR 2315-941 Y15	US 4029-825 Y25	12591-Y BD	SW 7610-943 Y20	DL -127-948 A06	OE 7608-021 A40	GB 1556-584 B48
CA 1068-095 C02	ZA 2607-615 Y17	GB 1487-169 Y39	US 4007-167 Y07+	DK 7604-402 Y25	OE 7608-021 A40	IL --50-760 C02	OE 7703-454 C02
65237-X BDE	OE 7601-858 Y35	CA 1068-153 C02	BE -845-336 Y08	FR 2326-200 Y27	IL --50-760 C02	US 4119-589 A42	78836-Y BCD
DT 2512-583 X35	FR 2340-096 Y47+	96263-X ADF	DT 2637-545 Y10	PT --65-617 Y36	32745-Y BD	DS 2603-319 B01	NL 7703-810 Y44
J5 1105-014 X44	OE 7702-878 A02	BE -842-868 X52+	J5 2025-089 Y14	DL -127-442 Y51	BE -847-941 Y19	IL --51-126 C02	BE -853-702 Y46
FR 2300-075 X50	OE 7702-877 A06	NL 7606-348 Y01+	FR 2321-296 Y21	OE 7607-309 A13	NL 7612-026 Y20	52632-Y BDK	DT 2717-040 Y46
ZA 7600-550 Y07	GB 1510-571 A19+	DT 2625-707 Y01+	ZA 7604-338 Y35	ZA 7605-320 A20	DT 2648-121 Y20	DT 2701-928 Y30	SW 7703-592 Y48
GB 1471-850 Y17	SF 7802-168 A46+	DT 2625-706 Y01+	DS 2637-545 B43	HU T015-618 A45	SW 7611-906 Y24	BE -850-526 Y30	NO 7701-211 Y49
US 4052-372 Y41	SF 7802-167 A46+	J5 1151-285 Y07+	IL --50-162 C02+	SU -620-215 B24	NO 7603-667 Y25	US 4043-759 Y35	DK 7701-490 A03
IL --48-920 A09	HU T017-196 B45+	J5 1151-284 Y07+	12795-Y DE	IL --50-429 C02	J5 2059-180 Y26	FR 2339-620 Y46	SF 7701-124 A04
CH -596-150 A12	CA 1068-225 C02+	J5 1151-284 Y07+	BE -847-080 Y08	25226-Y BCD	SF 7603-049 Y30	DL -128-404 A08	J5 2151-197 A05
CA 1055-046 B23	CH -614-974 C02+	BR 7603-799 Y08+	DT 2545-110 Y18	BE -846-830 Y15	DK 7604-831 Y31	GB 1521-243 A33	FR 2348-970 A06
DS 2512-583 C02	75668-X D	BR 7603-810 Y08+	SW 7611-093 Y21	NL 7610-857 Y16	FR 2338-251 Y44	US 4119-589 A42	PT --66-445 A47
67317-X BD	BE -839-847 X41+	DK 7602-642 Y09+	J5 2048-700 Y22	DT 2643-487 Y17	PT --65-791 A12	IL --51-285 C02	ZA 7702-345 B05
DT 2606-517 X36+	NL 7602-978 X41+	DK 7602-643 Y09+	SF 7602-664 Y24	J5 2042-802 Y20	ZA 7606-340 A29	54082-Y BD	DL -137-727 B49
BE -838-630 X36+	DT 2512-815 X42+	FR 2313-958 Y13+	FR 2327-314 Y28	SW 7610-942 Y20	US 4108-985 B11	BE -850-847 Y31+	OE 7702-662 C02
NL 7601-655 X36+	DT 2516-914 X44	US 4071-468 A07+	US 4072-538 A08	DK 7604-399 Y25	IL --50-836 B48	DT 2701-643 Y32+	81470-Y BD
NO 7600-472 X41+	SW 7602-245 X45+	US 4092-266 A29+	GB 1513-196 A23	FR 2326-201 Y27	CH -614-931 C02	NL 7700-479 Y33+	DT 2717-981 Y46
US 3982-996 X41	J5 1117-453 X48+	GB 1522-121 A34+	OE 7606-899 A35	PT --65-626 Y36	33143-Y DE	J5 2094-419 Y38+	J5 2134-016 Y51
J5 1108-041 X45+	DK 7601-211 X51+	GB 1523-509 A36+	DS 2545-110 C02	DL -127-443 Y51	DT 2650-429 Y19	DK 7700-280 Y42+	FR 2350-399 A08
DK 7600-631 X46+	FR 2305-400 Y04+	IL --49-767 C02+	14581-Y BCD	OE 7607-310 A13	BE -847-937 Y19	FR 2339-622 Y46+	BR 7702-808 A14
SF 7600-387 X48+	GB 1527-424 A40+	97825-X DM	BE -845-520 Y09	ZA 7605-321 A20	NL 7612-164 Y20	ZA 7607-577 Y50	DL -130-488 A23
SW 7601-810 X48+	OE 7602-058 B13	US 3997-329 X52	US 4026-881 Y23	HU T016-398 B20	SW 7612-254 Y24	SW 7700-949 A13+	GB 1530-247 A43
FR 2301-265 X52+	CA 1063-263 B41+	J5 2082-627 Y34	PT --62-797 Y29+	SU -632-307 B34	NO 7603-733 Y25	DL -130-435 A43+	DS 2717-981 C02
PT --64-816 Y04+	CH -614-683 C02+	CA 1068-129 C02	ZA 7604-716 Y35+	IL --50-412 C02	DK 7604-965 Y29	HU T017-193 B45+	83190-Y D
PT --64-816 A12+	80578-X BD	05602-Y D	DL -126-519 Y39+	25383-Y CDEF	SF 7603-142 Y30	OE 7700-547 C02	DT 2621-545 Y47
SF 7800-198 A24+	NL 7603-439 X43	BE -843-798 Y04	SF 7600-325 Y42+	DT 2543-241 Y15	FR 2329-747 Y31	57945-Y AD	NL 7704-193 Y48
SF 7800-197 A24	DT 2612-948 X44	DT 2541-590 Y06	OE 7606-169 A06+	BE -852-923 Y39	J5 2084-189 Y35	DT 2704-507 Y33	SW 7705-629 A01
FR 2366-309 A26	J5 1123-819 X50	NL 7608-371 Y08	DT 2636-966 A09+	NL 7703-151 A41+	PT --65-784 A23	BE -851-068 Y33	J5 2145-545 A03
GB 1529-376 A42+	DK 7601-648 Y01	SW 7608-474 Y11	NL 7609-159 A10+	FR 2384-768 B01+	ZA 7606-592 A29	NL 7701-333 Y34	FR 2350-787 A09
GB 1543-518 B14	FR 2307-268 Y06	J5 2018-860 Y12	SW 7608-647 A11+	OE 7701-685 B01+	US 4111-826 B13	J5 2096-606 Y38	DS 2621-545 A12
CA 1061-731 B38+	SW 7604-097 Y10	NO 7602-438 Y12	NO 7602-696 A12+	US 4180-575 C02+	OE 7608-138 C02	SW 7701-466 Y38	GB 1541-797 B10
OE 7800-468 B40	ZA 7601-751 Y17	FR 2319-300 Y19	J5 3028-189 A17	27554-Y D	36620-Y CDJ	FR 2340-984 Y48	OE 7703-359 C02
DK 7901-771 B51	US 4059-685 Y48	ZA 7604-095 Y32	DK 7603-864 A18	DT 2644-497 Y16	DT 2600-607 Y21	ZA 7700-732 A42	00060-A BCD
DK 7901-772 B51	GB 1527-264 A40	DL -127-670 A06	GB 1509-695 A18	NL 7610-987 Y17	CH -614-682 C02	US 4126-586 A48	BE -856-045 A01
IL --49-053 C02+	US 4166-102 B37+	GB 1525-315 A38	FR 2362-626 A21	SW 7611-273 Y21	6726-Y D	GB 1558-481 C01	NL 7707-129 A12
67325-X DJ	DT 2660-445 B49	US 4112-132 B13	SF 7602-457 A21	NO 7603-248 Y22	DT 2651-791 Y21	OE 7700-816 C02	DT 2727-753 A12
DT 2607-453 X36	US 4180-383 C02+	OE 7605-658 B13	J7 9020-517 B33	SF 7602-864 Y24	BE -848-446 Y21	61475-Y D	SW 7707-176 A16
NL 7601-834 X37	83127-X BD	CH -609-535 B16	CH -612-681 B38	FR 2326-871 Y28	NL 7612-590 Y22	DT 2706-332 Y35	NO 7702-170 A17
J5 1109-284 X46	BE -843-245 X45	CA 1068-154 C02	IL --50-205 C02	J5 2072-853 Y31	SW 7612-797 Y26	FR 2341-793 Y49	J5 3034-794 A19
SW 7602-174 X48	NL 7606-768 Y02	06529-Y AD	14910-Y D	GB 1491-666 Y45	NO 7603-687 Y27	CH -614-855 C02	DK 7702-703 A20
FR 2301-296 X52	DT 2627-925 Y02	J5 1142-552 Y04	DT 2601-883 Y09	CA 1064-415 A47	FR 2331-293 Y33	64939-Y BD	ZA 7703-775 A25
ZA 7600-963 Y13	NO 7602-163 Y06	US 4012-333 Y12	NL 7600-150 Y10	CA 1063-422 B42	SF 7603-273 Y34	BE -852-142 Y37	PT --66-735 A29
GB 1537-084 B01	DK 7602-785 Y11	GB 1490-322 Y44	FR 2321-240 Y21	IL --50-627 C02	PT --65-801 Y43	DT 2710-694 Y38	SF 7701-951 A34
CH -614-866 C02	SW 7607-173 Y11	CA 1068-264 C02	GB 1535-353 A50	29356-Y DF	US 4160-849 B30	NL 7702-341 Y39	OE 7704-424 B09
69101-X DE	FR 2315-695 Y14	07461-Y D	CA 1045-904 B05	DT 2546-245 Y17	OE 7608-514 C02	SW 7702-721 Y43	FR 2408-612 B34
DT 2607-441 X37	US 4070-245 A06	BE -844-190 Y05+	CH -614-843 C02	FR 2327-942 Y29	39878-Y D	NO 7700-852 Y44	OE 7807-906 C02
FR 2302-083 Y01	OE 7604-538 A35	NL 7605-929 Y06+	19747-Y DJ	BR 7606-899 Y38	BE -850-967 Y23	FR 2343-751 A01	00365-A BCDE
ZA 7600-811 Y07	GB 1553-272 B39	SW 7606-396 Y09+	US 4011-048 Y11	DS 2546-245 A06	DT 2703-585 Y32	J5 2142-044 A02	DT 2725-023 A01
CH -600-880 A28+	IL --49-774 C02	DK 7602-910 Y14+	NL 7703-678 A02	PT --65-712 A21	NL 7701-086 Y33	DL -130-047 A30	NL 7705-938 A02
GB 1525-971 A39	84966-X DEK	FR 2318-264 Y17+	DT 2726-323 A02	US 4113-083 A38	DK 7700-441 Y42	GB 1549-320 B30	SW 7705-744 A04
IL --49-107 C02	BE -841-243 X46	DT 2612-589 Y41+	SW 7707-018 A07	GB 1527-278 A40	FR 2339-350 Y46	J5 2153-986 A06	NO 7701-903 A05
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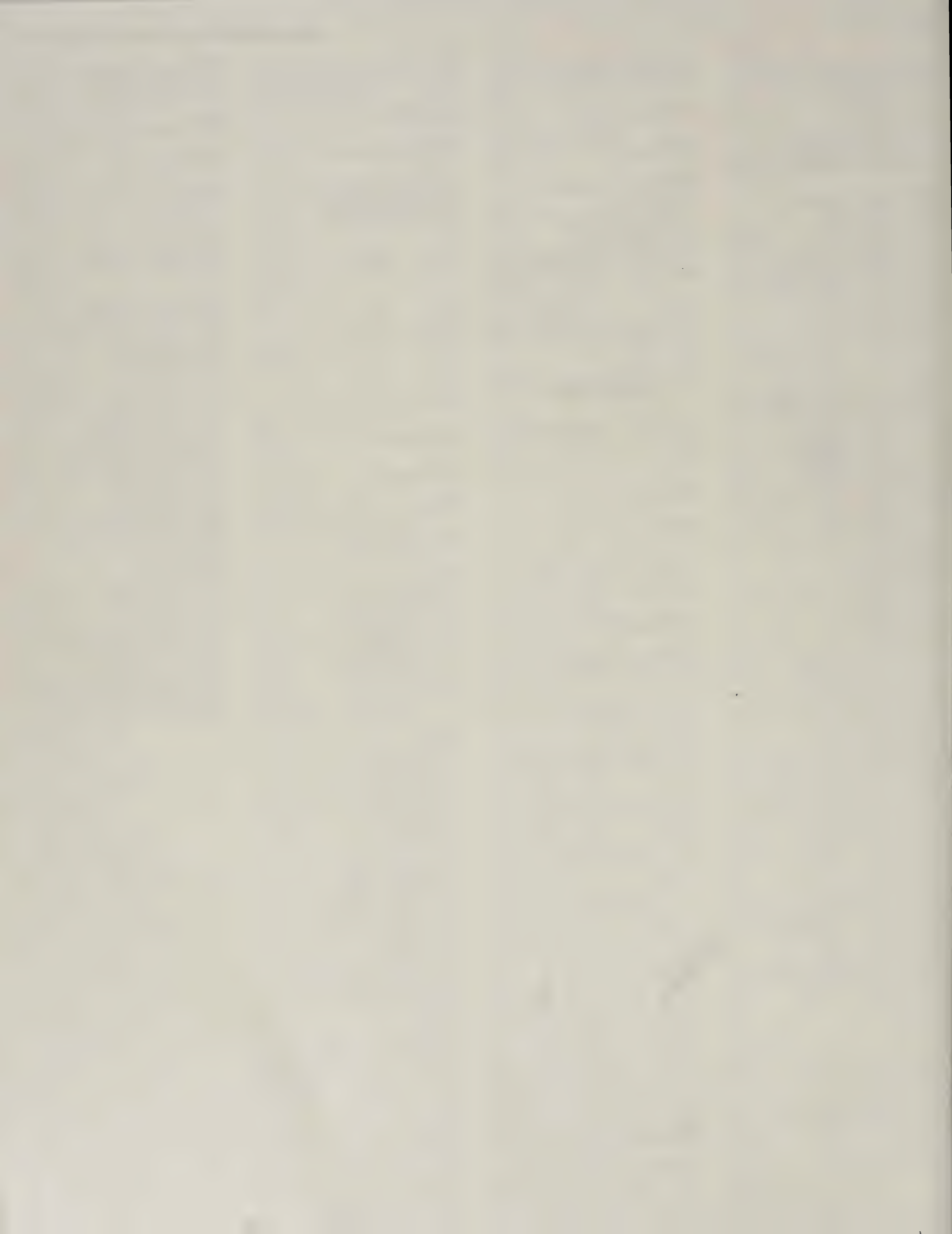
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CENTRAL PATENTS INDEX CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

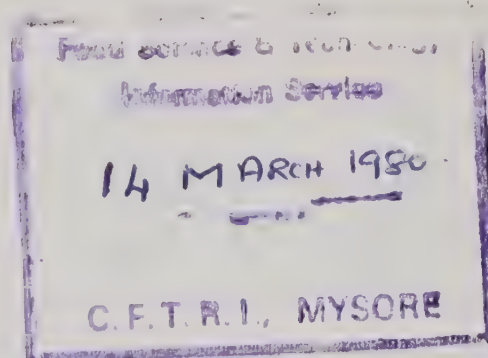
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ABSTRACTS

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COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	4 DEC - 17 DEC 79	876,753 - 877,023
BRAZIL	26 DEC 79	
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CANADA	25 DEC 79	1,068,451 - 1,068,850
CZECHOSLOVAKIA	31 AUG 79	6,707,279 - 7,900,508
DENMARK	17 DEC 79	7,802,270 - 7,907,155
W. GERMANY		
-DAS	10 JAN 80	1,420,737 - 2,910,808
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*Printed patents actually published mid - late December 1979

Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Other Classes	Publication Date	Main CPI Class for Section	Latest Priority	Earliest Disclosure Basic Patent	Accession No	Earliest Priority	Patent No	IPC
MEDA-				A89			69369W/42		=US 3964-992	
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)										
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)										
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26										

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

SCHNEIDER/ ★ D11 C/03 ★ CS 7800-282
Oven inner walls hermetisation
SCHEINER A 16.01.78-CS-000282
(31.08.79) A21b-03/04

TWEEDY- D11 43260U/31 = DS 2301-807
Vacuum drying/cooling plant - esp for cooked bakery goods or prepared pig meat
TWEEDY OF BURNLEY (TWE -) 13.09.72-GB-042453 (14.01.72-GB-001859)
Q76 + Q75 (D12) (10.01.80) *NL7300-451 A21c-15 A23p-01

Freshly baked bread or pastry cases are cooled in a vacuum chamber to evaporate the moisture and reduce the temp. The evacuation process, represented by a curve of pressure versus time, is controlled by reducing the flow resistance in the pump circuit so that it differs from the normal hyperbolic shape. The actual optimum shape of the curve depends on the type of pastry and is adjusted so that on the one hand the pastry does not crumble away and, on the other hand, does not lose too much moisture from the outside.

This eliminates the damage done to the baked prods. by uncontrolled evacuation. 15.1.73 as 301807
(+20.4.72-GB-018265)(13pp39)

WEISERT- ★ D11 03676C/03 ★ DT 2827-522
Dough rolling machine control - by program cam discs for gradual roll gap reduction plus final gap control disc
WEISERT LOSER & SOH 23.06.78-DT-827522
(10.01.80) A21c-03/02

A dough rolling machine with reversible feed belts and reversible rolls has a control for the successive reduction of the roll gap, based on cam discs on a control shaft. Three program control discs can be turned through a limited angle relative to the disc for the control of the gap extremes; they are separated from it by a friction clutch with a greater holding force than the friction clutch driving the control disc of the final gap.

The final roll gap and the thickness of the rolled-out dough band can thus be selected independent of the position of the program. 23.6.78 as 827522 (13pp39)

SWIL D11 91700A/51 = US 4181-213
Biscuit counting stacker - with biscuits transferred from inclined pockets of endless conveyor by rod pairs on second conveyor (NL 85.12.78)

SIG SCHWEIZERISCHE 02.06.77-CH-006812
Q31 Q36 + Q35 (01.01.80) *DT2823-690 B65g-57 + B65g-47/26

Stacks of flat articles, e.g. cookies, are formed by conveying the items in successive pockets along a conveying

path and moving vertical rod assemblies parallel to the path but at a different speed from the pockets to cause the rods to engage items in each pocket and push them onto items in an adjacent pocket. Each rod assembly forms a stack of progressively increasing height as the pockets and rod assemblies travel along a common path.

Increased operating speeds are obtd. 1.6.78 as 911308 (7pp976).

SHIN/ ★ D11 05139C/03 ★ US 4181-746
Prepn. of steam-kneaded vermicelli prods. - by kneading with water and compressed steam under controlled conditions
SHIN SH 30.10.76-JA-130712
(01.01.80) A23l-01/16

Vermicelli (I) prods. are prepd. by (a) placing (I) material and H₂O (35-40 pts/100 pts. (I)) at 36-60°C in a kneading vessel; (b) adding steam (at 0.6-2.5kg/cm²) to the vessel at the same as or just after the H₂O to steam-knead the contents; (c) heating (I) to 50°C within 15-60 sec. by the steam; (d) continuing the steam-kneading until the (I) temp. reaches 90-100°C and (e) recovering a semi-transparent yellowish-white (I) paste with high viscoelasticity.

Extremely rapid, efficient process afford (I) pastes of excellent appearance, texture, eating feel, digestibility, processability and boiling time. In addn., the prepd. (I) pastes are stable to prolonged storage. (I) pastes may be processed to a variety of materials. 22.9.77 as 835770 (14pp478).

ACEC- D11 86869Y/49 = US 4182-230
Macaroni frying method - using containers on endless chain with telescopic spill frame depressed during frying by perforated overhead conveyor lids
ACECOOK CO LTD 19.05.76-JA-058224
+ P28 (08.01.80) *DT2720-584 A23l-01/16 A47j-37

Noodle-frying apparatus includes a heated oil tank and liquid-permeable frying vessels with open frames slidably fitted to the vessel peripheries to telescope over without detachment. Each frame is spring-biased so that it extends above the vessel top to temporarily enlarge the inner volume.

Caps each engage the open end of a frame face-to-face. A conveyor carrying the vessels and frames periodically positions them within the tank, and a second conveyor moves the caps into the tank synchronously with the vessels. The conveyors progressively converge within the tank so that the caps increase the force to push the frames down and reduce vessel volume so that the noodles are formed into a lump of uniform density and given shape. 9.5.77 as 795222 (5pp1358)

See Also

D16 SU 659617

D12: MEAT; FISH PROCESSING

TEXAS- ★ D12 03635C/03 ★ CA 1068-544
Appts. for rendering and dehydrating animal by-products - in which processing stream speed is controlled by temp. sensors
TEXAS RENDERING CO 23.12.76-US-753642 (12.01.76-US-648195)
Q76 (25.12.79) A23l-03 F26b-17

Appts. includes a device feeding the raw materials continuously through a closed flow path. The feed speed through the path may be varied as a function of the temp. of the material as it passes ≥ 2 predetermined flow positions. The materials are heated as they pass along the path to a progressively higher temp. sufficient to drive off water. The path is divided into sub-paths and the feed speed to each subpath is separately controlled. The discharged materials are recovered.

Appts. is used to render animal and poultry by-products to obtain dehydrated meal and grease. It is fully automated to accommodate large changes of raw material moisture content. 12.1.77 as 269567 (16pp295)

PRIB/ ★ D12 C/03 ★ CS 7604-596
Appts. forming coatings on smoked products
PRIBIK I 12.07.76-CS-004596
(31.08.79) A22c-13

LUKE/ ★ D12 C/03 ★ CS 7802-063
Fine collagen casing prodn.
LUKES E 31.03.78-CS-002063
A11 (31.08.79) A22c-13

POLA= D12 49984A/28 =DS 2700-068
Fish filleting machine - has pairs of disc cutters with automatic adjustment of cutter gap by threaded hubs and torsion spring
POLAR MARINE FISH 03.01.77-DT-700068
(10.01.80) *DT2700-068 A22c-25/16

A fish filleting machine uses a pair of circular cutter blades which are coupled to each other by a dog clutch and are automatically adjusted axially on the drive spindle to suit the thickness of the fish backbone. The hubs of both cutter discs are joined to the drive spindle by threads of opposite hand. A torsion spring inside a bush, keyed to the drive spindle, responds to the greater cutting torque required when contacting the backbone and allows the gap between the cutter discs to be increased until just soft meat is cut.

The result is a very high efficiency in filleting fish by minimising waste even though the sizes of fish may vary. 3.1.77 as 700068 (7pp39)

MUDD/★ D12 03660C/03 ★DT 2827-158
Sausage skin hose clamp - with hinged halves and eccentric cam on hand lever
MUDDER H 21.06.78-DT-827158
(10.01.80) A22c-11/12

Sausage skin hoses, made up of a material such as nylon tube, lose their stability if handled without a tubular core on which the hose is gathered in close corrugations. Their transfer to the filler spout requires manual handling and loses productive machine time. This can be saved if the hose is pushed complete with tubular core over the filler spout and is held at the machine end by a split clamp with a hinge at one end and an eccentric cam with operating lever at the other end.

Such a clamp can be readily made by any user to save valuable time. 21.6.78 as 827158 (4pp39)

VOGT ★ D12 03749C/03 ★DT 2829-882
Carcass skinning device - with rope on ring and chain to release skin from loop on completion of flaying
VOGT KG 07.07.78-DT-829882
(10.01.80) A22b-05/16

A skinning device for animal carcasses in abattoirs consists of a drum on which the hide is wound up. A chain with a ring is attached to the inner side wall of the drum to form a loop. A length of rope is fixed from a diametrically opposed point of the side wall to the junction of chain and ring.

The rope automatically releases the loop in which an end of the skin was trapped for the skinning process, after the drum has been reversed to unwrap the skin. No manual labour is now required for this operation. 7.7.78 as 829882 (9pp39)

KORH/★ D12 03796C/03 ★DT 2925-325
Meat holding tool for carving operations - with grip plate hydraulically moved towards hook plate
KORHONEN K J 22.06.78-SW-007190
(10.01.80) A22c-17/02

Tool for holding meat during carving operations off animal rumps in abattoirs consists of a handle with a protruding interchangeable hook and a hydraulic cylinder which can move a piston rod with a grip plate towards the hook. The hook can have a serrated edge or a knife edge.

Arrangement simplifies the steady holding of meat during the carving operation without causing damage to the meat. The cut-off portion can be pulled off mechanically and saves heavy manual labour. The risk of injuries to the steadying hand of the carver is eliminated. 22.6.79 as 925325 (14pp)

FARH ★ D12 03834C/03 ★EP ---6-601
Continuous mfr. of fibre-reinforced, cellulose hydrate-based hose - by treating it during its downward movement internally and externally with precipitating liquids
HOECHST AG (KALL) 03.07.78-DT-829102
A11 (A35 A97) (09.01.80) A22c-13 B29d-23/06
D/S: E(BE, DT, FR, GB).

Fibre reinforced hose based on cellulose hydrate is mfd. continuously by feeding it downwardly at a constant speed, treating it along its outer wall at at least peripheral zone with a precipitating liquid, exposing it to air,

washing and treating it with an aq. soln. containing a plasticising agent. Hose is then dried and opt. wetted with water.

Used for sausage skins mfr.

Rate of mfr. is increased whilst sulphur disulphide and hydrogen sulphide are eliminated. Also hose can be guided in a simple manner during the coagulation stage and cutting of the hose at frequent intervals for the purpose of venting of gases and removal of unwanted liquids from hose interior is dispensed with.

25.6.79. as 102094 (31pp536).

(G) ISR: FR 2013806; DS 1504982; DS 1107928;
DT 2100210; US 2144900; GB 1336850.

GETP-★ D12 03948C/03 ★FR 2420-926
Food moulding machine partic. for beefburger etc. - presses mince directly into preformed packaging tray to avoid handling prod.

GETPLAST REP 31.03.78-FR-010313

(30.11.79) A22c-07 A23I-01

The machine is of the type in which a mould plate reciprocates in a plane beneath and at right angles to the axis of the outlet of a mincing machine. The plate dwells alternately in two extreme posns., i.e., a filling posn. with the mould cavity directly under the mincer outlet and a demoulding posn. for cake removal.

The empty mould cavity is now lined with a corresp. preformed tray of packaging material. At the filling posn. the mincer injects material into the tray to form a prod. which is then demoulded complete in tray. Prior to demoulding, the mould plate pref. locates the filled tray under a closing head where a cover is heat-sealed on to the tray so that the prod. is completely enclosed.

The mould plate, filling head and plate guides are pref. made of food quality plastic partic. polythene. 31.3.78 as 010313 (13pp448)

BECK- D12 48842Y/28 =GB 1559-215
Packaging food portion with liq. in plastic dish - esp. sausages in brine with air excluded before sealing cover film
NATURIN WERK BECKER 11.03.76-DT-610083
A97 Q31 (16.01.80) *BE-852-365 B65b-03

Foods contg. liq. are packaged by placing a flexible cover over the food when placed in a horizontal container so that only limited gap is left between an edge of the container and the cover, moving the container into a vertical position until the gap upwards, pressing the cover so that the liq. rises towards the gap to displace gas, and, when the liq. is sensed at the gap, sealing the gap.

Container is pref. vibrating to facilitate the removal of the gas. A diaphragm is pref. used to press the cover. Foods contg. pickles, sauces, or liq. preservatives can be packaged. 10.3.77 as 010189 (6pp1376)

UENS ★ D12 04476C/03 ★J5 4154-560
Frozen minced fish prepn. - by mixing the fish with hydrophilic solid colloid contg. sorbitol and surfactant poly:phosphate and opt. sugar before freezing

UENO SEIYAKU OYO KE 22.05.78-JA-059967

(05.12.79) A23b-04/06 A23I-01/32

The method comprises combining (a) 1-7 wt. % powdery hydrophilic solid colloid which is composed of 85-98 wt. % sorbitol and 15-20 wt. % of surfactant of food additive use and/or edible oil and has the particle size 16 mesh, (b) 0.1-0.4 w/w% of polyphosphate and opt. (c) 1-7 wt. % sugar in minced fish. Frozen minced fish of excellent preservative property, whiteness and elasticity can be obtd.

The hydrophilic solid colloid can be prepd. by (a) dissolving the surfactant and edible oil in heat-melted sorbitol, (b) adding sorbitol as the seed crystal, (c) crystallising the mixture to the solid colloid, (d) drying the colloid and (e) crushing.

As the surfactant glycerin fatty acid ester, propylene-glycol fatty acid ester, sorbitan fatty acid ester, sucrose fatty acid ester, polyoxyethylene sorbitan fatty acid ester and lecithin can be used. 22.5.78. as 049967 (11pp5)

NORD/ ★ D12 04556C/03 ★ NL 7904-841
Mechanical application of classification stamp to slaughtered carcass - where stamp and support are mounted on pistons to hold and stamp carcass legs automatically
NORDFLEISCH AG 21.06.78-DT-U18590
P75 (28.12.79) A22c-17/10 B41k-03

Classification marks are applied to the hind legs of slaughtered animals, partic. pigs, by means of stamps mounted on a guide rail system which permits the stamps to move in a horizontal plane and supports which come into contact with the back of each leg as the stamp is applied. The stamps and supports are moved in a direction perpendicular to the guide rails pref. by means of hydraulic or pneumatic cylinders, the stamps and supports being mounted on the ends of the piston rods.

The support is in the form of a fork to ensure that the leg is held securely during the stamping action. The pig is usually suspended by the front legs and opened out in two halves. In this case, the stamp and supports are arranged in pairs so that both legs of a single pig are stamped simultaneously. A dye pad, also actuated by a cylinder, swings over the stamp when it is withdrawn.

The device eliminates the manual application of classification marks to the legs of the animal in the slaughterhouse. 20.6.79 as 004841 (7pp1370)

CHUB/ ★ D12 04728C/03 ★ SU -660-650
Cleaning, degreasing and cutting of poultry stomachs - using sectional equipment with disc knife, fluted feeding rollers, troughs and screw conveyor
CHUBATYUK I F 15.06.77-SU-498008
(11.05.79) A22c-21/06

Device for the sanitary processing of the stomachs of poultry, comprises disc knives, attachment for withdrawing the cut stomachs, and a cleaning mechanism. Processing quality and productivity are increased, by including a degreasing mechanism located in front of the disc knife, with two symmetrically-positioned horizontal, driven, fluted rollers. These are placed above the disc knife in such a way that its cutting edge is located below the horizontal axis of symmetry of the rollers.

The degreasing mechanism is connected to the fluted rollers by means of a trough and a screw. The degreasing and cleaning mechanisms are made in the form of a vertical stationary cylinder with rotating bottom, the internal surface of which has a carborundum coating.

Chubatyuk, I. F., Medvedev, A. D. Bul. 17/5.5.79.
15.6.77 as 498008 (2pp29)

MOVE= ★ D12 04732C/03 ★ SU -660-654
Animal feed prodn. from meat processing waste - includes boiling fragmented bones etc. sepn. evapn., addn. of bone fat, antioxidant and mineral salts
MOSC VETERINARY ACA (MOGE=) 22.07.77-SU-510350
C03 (11.05.79) A23k-01/10

Feed produced from waste animal materials, esp. wastes from the processing of collagen-contg. materials (gelatin prodn.), contains bone fat stabilised with an antioxidant, and proteinaceous and mineral components.

This compsn. is improved by using as a protein source a dry concentrate of the broth obtained by cooking bones and, as a minerals source, a ppte. formed by neutralisation of maceration lyes obtained by decalcification of the bone material. By this method, the nutritive value of the feed is increased by enrichment in proteins and improvement of the minerals content.

The compsn. contains (in wt.%) evapd. broth from bone cooking 60-86.4, precipitate (as described above), bone fat (contg. 0.015-0.020% of santoxin antioxidant) 3.3-9.1. The ppte. contains mainly CaHPO_4 . The feed may contain 5% of fish flour.

Isaeva, I. A., Kasparyan, S. A., Arkhipov, A. V. et al.
Bul. 17/5.5.79. 22.7.77 as 510350 (3pp70)

JOFF/ ★ D12 04969C/03 ★ US 4180-889
Hamburger patty mould - with integral plastics side wall and diametrically hinged top for easy removal
JOFFEE J 02.08.78-US-930134
A88 (01.01.80) A22c-07

A mould has integral plastic flat top and sidewalls defin-

ing a cavity. The walls are notched at two points on opposite sides, and the top has a U-shaped slot with its ends on a line between the points. The top is of reduced thickness between the slot ends and notches to form hinges.

The mould is pref. circular in plan and the notches are at diametrically opposed points, the slot extending almost to the walls. Thickness is pref. reduced by grooves formed in the underside. There may be a lateral tab at a point adjacent the slot. The mould is e.g. of polypropylene and the hinges facilitate removal from a pressed patty.
2.8.78 as 930134 (5pp1358).

NIUS ★ D12 05135C/03 ★ US 4181-739
Processing of loose Atlantic herring roe - by successive soaking in increasing salt concns.
NIPPON SUISAN KK 17.01.78-JA-003525
(01.01.80) A23c-19

Loose roe (I) of the Atlantic herring is soaked in aq. NaCl soln. in a container. (I) is then soaked in 2-4 fresh NaCl solns., when it is formed into a prod. of the shape corresp. to a container. The aq. NaCl solns. used increase in strength from $\frac{1}{2}$ 2% in the initial soln. to saturation in the final soln.

A cohesive prod. is obtd. (even after desalting) which is devoid of alien characteristics, retains the crispness of the raw roe, and has a texture and feeling similar to that of salted kazunoko (cured Pacific herring roe).
21.4.78 as 898854 (3pp478).

SNOW D12 32361B/17 = US 4181-749
Minced fish meat prodn. - giving a good quality prod. from various fish of low freshness
SNOW BRAND MILK PRODUCTS 19.08.77-JA-099986
(01.01.80) *J54035-238 +A22c-25

Prodn. of surimi suitable for the prodn. of fish meat jelly (Kamaboko) comprises (a) mincing fresh raw fish meat to convert the myofibrils into a sol.; (b) washing the sol with water to remove water-soluble proteins, and dewatering the sol; (c) mixing with a salt soln. to solubilise salt-soluble proteins; (d) diluting this mixt. with water to form a ppte. and dewatering the ppte.; (e) heating water effluent from step (b) to coagulate the water-soluble proteins; and (f) compounding the protein coagulate with the ppte. to obtain the surimi.

Satisfactory surimi can be produced from fish meats hitherto considered unsuitable, and even from fish meats of degraded freshness. Fresh and frozen fish with white and red muscles can be used, as well as cuttlefish, shell fish, krill, etc. 21.2.78 as 879500 (4pp997).

HOLE/ ★ D12 05190C/03 ★ US 4182-002
Meat tenderiser injection syringe - with discharge passages diverging through pointed projections at barrel end
HOLECL 01.03.76-US-662518
(08.01.80) A22c-09

The syringe comprises a tubular body with an enlarged head at one end, a reciprocable sealing plunger, spaced axial projections on the head with tapered free ends forming points, and a straight passage within each projection from a point short of the free end to open into the body.

Each passage has the major part of its length within the head and extends axially and radially inwardly from the peripheral surface of the projection. The projections are pref. bullet-shaped and the passages are of uniform cross-section throughout their length. The arrangement provides a simple low-cost unit. 1.3.76 as 662518 (4pp)

FORM- ★ D12 05191C/03 ★ US 4182-003
Patty moulding in reciprocating plate - loaded by plunger with fast retraction cycle to minimise food working
FORMAX INC 28.02.78-US-882121
(08.01.80) A22c-07

A hopper holds food which is transferred to the cavity in a reciprocating plate. The mould plate is then moved to a discharge position where the patty is removed by an ejector. A plunger receives food from a feed auger in the base of the hopper and transfers this to the mould in a synchronised sequence. The plunger is driven by a double-acting ram to provide fast retraction and slow delivery strokes.

The auger is only activated while the plunger is being

retracted although the dominant effect is the suction caused by the fast retraction. Pref. the entire appts. is driven from a single hydraulic pump.

The appts. forms food patties. The fast retraction of the plunger draws food without excessive working. 28.2.78 as 882121 (11pp295)

HARI/ ★ D12 05192C/03 ★ US 4182-004
Thermoplastics meat hook - with semicircular ends on shank, all of annular cross/section and with stiffening ribs

HARING S S JR 27.02.78-US-881728

A88 (08.01.80) A22c-15

A hook has a shank, an integrally attached semicircular

bottom part with a stiffening rib extending outwardly and around its outer circumference, then up the shank to distribute load equally, and a pointed end to the bottom part for insertion into meat.

A semicircular top part is integrally attached to the shank, and also has a stiffening rib extending downwardly along the shank, the top part tip being rounded to facilitate placing on a support rack. All parts are of annular cross-section and the shank centre has stiffening ribs on opposite sides so that the whole shank length is stiffened. The top part end may also be sharpened so that the hook is reversible. 27.2.78 as 881728 (4pp1358)

See Also

D11 DS 2301807

D13: OTHER FOODSTUFFS

KADL/ ★ D13 C/03 ★ CS 7801-530
Fermentation processing of acid whey

KADLECK 10.03.78-CS-001530

(31.08.79) C12d-11/18

DOHN/ ★ D13 C/03 ★ CS 7802-214

Straw treatment with soda lye

DOHNALEK R 05.04.78-CS-002214

C03 (31.08.79) A23k-01/12

SUKO/ ★ D13 C/03 ★ CS 7803-345

Wood waste continuous hydrolysis appts.

SUKOVATY J 23.05.78-CS-003345

C03 F09 (31.08.79) A23k-01/12 A23n-17

KOSF/ ★ D13 C/03 ★ CS 7804-780

Vegetables dicing appts.

KOSTALOVA N 18.07.78-CS-004780

(31.08.79) A23n-15

KRKO/ ★ D13 C/03 ★ CS 7805-004

Butter freezing

KRKOSKOVA B 28.07.78-CS-005004

(31.08.79) A23c-15 A23l-03/36

BRAT/ D13 28165R/17 = DS 1792-620

Whipping cream contg not more than 25% fatty materials

BRATLAND A OT (BRA /) 30.09.67-NO-169929

(10.01.80) *FR1582-743 A23c-13/02

Process for the prodn. of whipping cream with reduced fat content comprises treating cream (with fat content >30wt%), in a centrifugal homogeniser at temps. above 37°, at about half the normal feed rate and twice the usual rotation speed, the butter fraction(containing >90 wt. % fat) separates and is removed at 37° until the fat content < 25 wt. %. 26.9.68 as 792620 (2pp047)

MUNK/ D13 70972A/40 = DS 2712-560

Dried fruit esp. apple chips prepn. by freeze-drying - after dipping in aq. esp. ascorbic acid soln. to prevent browning

MUNK W G 22.03.77-DT-712560

(10.01.80) *DT2712-560 A23b-07/02

Freeze-dried applie slices are packed in container impervious to air or steam and used as crunchy chip products for immediate consumption. These products do not contain added SO₂, ascorbic acid or other preservativies, but are stable on storage. They provide a nutritious snack of low energy value. 22.3.77 as 712560 (3pp047)

SNOW D13 48161A/27 = DS 2757-496

demineralisation of milk by electrodialysis in two stages - using minerals sepd. in first stage to adjust mineral equilibrium

SNOW BRAND MILK PRODUCTS (TOKU) 23.12.76-JA-154269

J03 (10.01.80) *DT2757-496 A23c-09/14

Process for adjusting the ash content of cows milk and similar fluids comprises removal of the natural mineral content by ion exchange, followed by addn. of mineral salts as required. The process is operated in two stages, first removing 50% of the mineral content, and then removing 60% of the residual minerals. The prod. from the second stage can be recycled or used directly.

Pref. cation ad anion exchange membranes, or cation

exchange membranes and neutral membranes are employed alternately. The prods. are valuable nutrients.

22.12.77 as 757496 (6pp047)

FRES- ★ D13 03740C/03 ★ DT 2829-036

Liq. feed mixt. contg. protein and carbohydrate components - sterilised separately to avoid formation of colour and off flavour

DRE FRESENIUS CHEM 01.07.78-DT-829036

(10.01.80) A23l-01/30 A61k-37/18

Prodn. of balanced, synthetic, liq. feeding mixt. comprises making up separately aq. solns. and/or suspensions of (a) protein component (A) contg. protein hydrolysate, peptides and/or L-amino acids and (b) a carbohydrate component (B). These are sterilised separately then opt. mixed together before packaging under sterile conditions. The compsn. also contains vitamins, fats, minerals, trace elements and/or flavourings.

By sterilising (A) and (B) separately Maillard reactions which cause discolouration and off-flavours are avoided. The two sterilised solns. or suspensions are easily mixed together, and final compsn. has good long-term stability. 1.7.78 as 829036 (8pp1251)

MEGG ★ D13 03767C/03 ★ DT 2923-788

High protein cheese prodn. - includes adding extra casein protein to the mild and not using soft cheese

MEGGLE MILCHIND GMB 21.06.78-OE-004513

(10.01.80) A23c-19/02

The parent patent describes a method for making matured soft cheese from milk of elevated whey protein content by standard cheesemaking methods, in which extra casein protein (A) has been added to the milk.

In this addn., the method is applied to types of cheese other than soft cheese. Pref. enough (A) is used to provide (A): whey protein ratio of 25-6:1 in the final prod. Esp. a sol. whey protein concentrate or heat-coagulated whey protein is used, or the milk for cheese prodn. is concn. by ultrafiltration, with (A) added before or after the concn. stage.

Hard and semi-hard cheeses of high protein content can be made without losing the normal coagulation characteristics of the milk. 12.6.79 as 923788 Add to 2728105 (9pp1251)

TRAN- ★ D13 03778C/03 ★ DT 2924-914

Extending storage life of vegetables - by packaging in permeable foils under atmos. contg. carbon mon:oxide enriched in oxygen (NL 28.12.79)

TRANSFRESH CORP 08.06.79-US-045881 (22.06.78-US-917929)

A92 + Q31 Q34 (10.01.80) A23b-07/14 B65b-25/04 B65b-31 B65d-81/18

The storage life of plant material in a package permeable to O₂, CO and CO₂ is extended by providing an atmos. in the package of > 25 (> 40) vol% O₂; > 3 vol% CO and the balance mainly N₂. The permeability of the package is at least comparable to that of a < 50 μm thick film of low-density polyethylene. Pref. the package is stored at 7°C to freezing pt., esp. < 3.5°C.

Used esp. for vegetables, partic. chopped lettuce. The package allows normal respiration but inhibits microbial deterioration. The inward diffusion of O₂ and outward diff

fusion of CO₂ ensures a CO₂ concn. $\leq$ 20-25 vol. %, while the CO prevents undesirable colour changes. 20.6.79 as 924914 (37pp1251)

VECO- ★ D13 03802C/03 ★DT 2925-568
Fresh cheese of high protein content prodn. - by adding whey protein concentrate obtd. by ultrafiltration (BE 27.12.79)
VER COOP MELKIND CO 27.06.78-NL-006917
(10.01.80) A23c-19/02

Prod. of fresh cheese (contg. prods) of high protein content comprises adding a whey protein concentrate (A) obtd. by ultrafiltration, to a conventionally prepd. fresh cheese. The (A) used is made by subjecting whey, derived from curds prodn., to ultrafiltration; acidifying the concentrate to pH 4-5, then heating until $\geq$ 50% of the whey protein has been insolubilised. Pref. enough (A) is added to give a casein:whey protein ratio in the finished prod. of 90:10-50:50.

Finished prods. have very good taste, consistency and odour. 25.6.79 as 925568 (7pp1251)

BENC ★ D13 03828C/03 ★EP ---6-592
Polyalcohol esp. xylitol prepn. - with decolouration and ion exchange of sugar solns. and polyalcohol solns. in same ion exchange plant

BENCKISER-KNAPSACK 22.06.78-DT-827477
E17 (D17) (09.01.80) C07c-29/74 C13k-13

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Prod. of polyalcohols, esp. xylitol, from hardwood or 1-year old plants, by decompn. with dil. inorganic acid at higher temps. to form a sugar soln. which is deionised in an ion exchanger, decolourised and hydrogenated to a polyalcohol soln., which in turn is also deionised with an iron exchanger and decolourised before recovering the pure polyalcohols by crystallisation.

The novelty is that decolourisation and the ion-exchange of the sugar soln. and of the polyalcohol soln. take place in the same ion exchanger plant.

Xylitol is a non-toxic sweetener tolerated by diabetics and having anti-carries properties. Investment, regeneration and concn. costs are saved. Exchanger plant vol. can be reduced by 48 or 57% w.r.t. CaO or H₂SO₄. Number of process steps is reduced, whereby sugar processing loss is reduced by 23%.

22.6.79 as 102074 (21pp200)

(G) ISR: DT2418800; DT1165565; CS-159583; 1 Journal Reference.

PROC ★ D13 03858C/03 ★EP ---6-646
Instant coffee type drink - based on refined grain extract and cryogenically collected coffee aroma-flavour cpds.

PROCTER & GAMBLE CO 22.06.78-US-918019
(09.01.80) A23f-05/44

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

Instant coffee-type drink comprises a mixt. of (a) 15-98 wt.% refined grain extract, (b) 0-84 wt.% coffee base extract and (c) 0.05-3.0 wt.% cryogenically collected coffee aroma-flavour compounds. The refined grain extract is obtd. e.g. from roast and ground malted barley, barley, rye, wheat, corn, chicory and soya beans.

The dry mixt. smells and tastes like 100% real coffee and in the preferred form is as acceptable to coffee drinkers as commercial 100% coffee drinks.

07.06.79. as 200282 (29pp513).

(E) ISR: FR2164618; GB-687175; FR2340053; US3997685; FR-896201; NL--58301; CH-171028; DS-356026; FR--53526; 1 Journal Reference.

UNIL ★ D13 03861C/03 ★EP ---6-654
Detoxified rapeseed protein concentrate prodn. - by autolysis and solvent extraction, for use in foods and feedstuffs

UNILEVER NV 26.06.78-GB-027852
C03 (09.01.80) A23j-01/14 A23l-01/20

D/S: E(BE, DT, FR, GB, IT, NL, SW).

Process comprises (a) autolysing a mixt. of rapeseed meal, water, myrosinase and ascorbic acid to hydrolyse glucosinolates present in the meal; (b) extracting the autolysed mixt. with a polar organic solvent; (c)

separating the solvent phase (contg. the glucosinolate hydrolysis products) from the protein-contg. residue; and (d) drying the residue.

The obtd. protein concentrate is sufficiently free of glucosinolates and their toxic hydrolysis products (e.g. nitriles, isothiocyanates such as 3-butenyl-isothiocyanate (I), and 5-vinyl-oxazolidine-2-thione (II)) to be used in human foods or animal feedstuffs. Products have (I) content 0-0.004% and (II) content 0-0.009%, and are thus suitable for human consumption.

12.6.79. as 200301 (11pp941).

(E) ISR: FR 2253463; GB -883836; DT 1940222; 10 Journal References.

LOHR- ★ D13 03928C/03 ★EP ---6-803

Fractionation process and machinery for green plants e.g. lucerne - allows separate recovery of juice and pulp in desired ratio, by grinding and bursting stems followed by separation of fractions

LOHR SA 08.05.79-FR-012254 (28.06.78-YU-001529)
C03 P71 (09.01.80) A23n-17/02 B30b-09/12

D/S: E(BE, CH, DT, GB, IT, LU, NL, SW).

(A) Fractionation of green plants, allowing separate recovery of the juice and the pulp in various percentages and in desired concentration for better use of the compounds (in particular, for better use of the proteins), comprises a first grinding and stem bursting stage without malaxage of the cellulose, and a second stage giving the desired fractionation.

Process gives pulps suitable for animal feeds by a pressing process which may be preserved anaerobically without any dehydration processes (which gives considerable energy savings over known processes). The juice which has a high protein content may be used as a substitute for expensive fish meal and soya meal when feeding monogastric animals.

19.6.79 as 400403 (15pp395).

(F) ISR: FR1091618; FR2323340; DT1692760; DT2238578; FR--93303.

DELA/ ★ D13 03935C/03 ★EP ---6-821

Preserved mushroom prods. - obtd. by treating mushrooms in sugar syrup contg. a preservative

DELAVEYNE J A A 03.07.78-FR-019775
(D16) (09.01.80) A23b-07/08 A23l-01/28

D/S: E(BE, CH, DT, GB, IT, LU, NL, OE, SW).

Preserved mushroom prods. are made by treating whole, chopped or pureed mushrooms with sugar syrups contg. a preservative for the colour and flavour, and opt. a gelling agent. Pref. the preservative treatment is continued until the sugar content is ca. 60%. A suitable preserving agent is ascorbic acid and the gelling agent is e.g. pectin. Other whole or extracted flavours may be incorporated into the preserves, such as ginger.

Mushrooms are a valuable source of protein, phosphorus, potassium and iron and some B gp. vitamins. The process allows mushrooms to be preserved for long periods and can be carried out on an industrial scale to give canned and bottled prods. useful as additives to ice cream, sorbets, cheese, yoghurt, confectionery, sweets, chocolate, etc.

02.07.79 as 400449 (6pp513)

(F) ISR: FR2034749; GB1322432; US3962355.

DOPP/ ★ D13 03946C/03 ★FR 2420-924

Film linings for slit centrifugal casting moulds e.g. for chocolate - eliminate mould cavity contamination and cleaning, and are pref. made of food grade crystalline PVC

DOPPLER R 28.03.78-FR-009202
A97 (30.11.79) A23g-01/20

Moulds for producing hollow mouldings of e.g. chocolate by centrifugal casting are fitted with loose liners which are removed with the individual mouldings. The liners act as a parting agent which keeps the mould surfaces clean, and may become part of the wrappings for the mouldings.

Pref. the liners are made of food-grade crystalline PVC film and have radial flanges which butt together in the interface of the joint between the split mould halves.

28.3.78 as 009202 (5pp515)

SIMO/ ★ D13 03947C/03 ★FR 2420-925
Animal feed from vegetable pulp e.g. grape pressings - is esp. suitable for ruminants and prepd. by homogenising, grinding, granulating and drying in two phases with an equilibrium period between

SIMON V 31.03.78-FR-010314

C03 (30.11.79) A23k-01/14

Process for conversion of vegetable pulps into animal feeds by (a) mixing and tritulating the pulp to give a homogeneous mass having a relative humidity of about 60%; (b) coarsely grinding the pulp; (c) still in the wet phase, granulating the pulp to give fragments; (d) in a first drying stage at low temp., lowering the relative humidity of the fragments to about 40%; (e) leaving the fragments at rest; (f) in a second drying stage at low temp., lowering the relative humidity of the fragments to about 9% and (g) conditioning the cooled fragments.

Animal feed is prepd. from vegetable pulps, such as fruit pulps e.g. grape pulps which have been pressed but not ground, prepd. by simple economic process. The feed is partic. suitable for ruminants. It may be used without any additions and has good nutritional value. 31.3.78 as 010314 (7pp395)

GOUP/ ★ D13 03951C/03 ★FR 2420-970
Anticariogenic chewing gum compsn. - contg. gum base, water soluble fluorine salt, xylitol and sorbitol

GOUPIL J J 28.03.78-FR-008856 (04.04.77-FR-010051)

(30.11.79) A61k-09/68

The compsn. contains a base gum free from alkaline earth metal, a water-soluble fluorine salt, xylitol and sorbitol. A partic. tablet contains NaF (0.00025g), xylitol (0.867g), sorbitol (0.833g) and an alkaline earth free gum to a total tablet wt. of 2.5g.

Sorbitol is used instead of L-sorbase without any change in properties of the compsn. Sorbitol is not fermented by bacterial agents and their enzymes. 28.3.78 as 008856 Add to 4.4.77-010051 (3pp597)

HERV/ ★ D13 03959C/03 ★FR 2421-114
Cheese mould adaptor enabling full moulds to be stacked - by mould surround frame nesting on periphery of lower mould

HERVEY 31.03.78-FR-010172

P13 Q32 (30.11.79) A01j-25/13 B65d-21/02

An adaptor for fixing to a cheese mould so that moulds can be stacked on top of each other in axial alignment, is described. The adaptor of one mould nests around the upper periphery of the mould below.

The adaptor is pref. a welded, metal structure comprising an open base frame from which spaced, side bars rise to support an upper frame. The base frame fits under the mould base and the adaptor is secured by screws to the mould. Since the base frame sits around the open top of the mould below, resting on the peripheral ledge, the moulds can be stacked in the filled condition.

The adaptor can be a frame of plastic moulded to the base of the mould, or simple fingers fixed to the base. 31.3.78 as 010172 (4pp448)

NEST D13 45843A/26 #GB 1559-064
Butter prepn. by mixing fat and viscous aq. phase - using milk fat subjected to molecular distn. to reduce cholesterol content

SOC PROD NESTLE SA 23.12.77-BE-862264 (31.07.75-CH-009984) (16.01.80) *BE-862-264 A23d-03/02

An edible prod. of the butter type is prepd. by the process of GB1525315. In this addn. the medium contg. fats contains a fraction of lactic fat, the cholesterol content being reduced by molecular distillation.

Pref. the distillation is carried out in a vacuum of 0.0005-0.005 Torr at 160-230°C., on the evapn. surface. The throughput of material to be distilled is 0.5-0.8kg/h. Distillation can be carried out in any suitable appts., such as a falling-film evaporator or a centrifugal rotating-disc evaporator. The cholesterol content of the fraction of lactic fat is reduced by 70-90% in producing the butter/-margarine-type prod. 12.1.78 as 001236 Add to 1525315 (4pp931)

LAFO D13 49152Y/28 =GB 1559-275
Prepn. of stable red dyestuff from beetroot - by extraction, absorption on a column, elution and complex formation
LAB LAFON L 07.10.75-GB-041067
A97 B07 E24 + R32 (16.01.80) *FR2327-292 + G09b-61

Prepn. of stable Beta vulgaris extract comprises (1) solvent extracting Beta vulgaris raw material at least once, (2) contacting the soln. obtd. or a soln. obtd. by redissolving pptd. pigmentary material extd. in (1) with a support which is capable of absorbing the pigmentary material, (3) eluting the support with audified water and (4) treating the eluate resulting, or pigment sped. from it by drying, with as sequestering agent to stabilise the pigment.

Pref. the raw material is edible red beetroot roots sliced and dried, and/or crushed fresh beetroots. The solvent is pref. ≥ 1 lower alcohol or a lower alcohol-water mixt. The support is pref. a PVP, polyamide or cellulose or its derivs.

The prod. is partic. useful in the pharmaceutical and food industries. 7.10.76 as (4pp393)

TEAR- ★ D13 04009C/03 ★GB 2024-599
Continuous tea leaves rolling machine - has roller outlet end surrounding axially movable pressure cap
TEA RES ASSOC 27.05.78-IN-000574
(16.01.80) A23f-03/12

A machine compresses withered tea leaves to produce black tea. The machine has a rotary or oscillatory roller supported within a stationary or reciprocatory barrel. Leaves enter the barrel at one end and are squeezed out of the other end around an annular pressure cap.

The cap is axially located around the roller to determine pressure of the leaves by a sleeve with fingers. The sleeve axial position is varied by rotation on a threaded end plate. The end plate is axially biased by a spring whose force is varied. 24.5.79 as 018108 (8pp1375)

KONZ- ★ D13 C/03 ★HU T017-550
Determining the degree of contamination of foodstuffs - esp. tomato juice or puree, by treating with surfactants and settling
KONZERV-PAPRIKAIPAR 19.11.77-HU-KO2887
R16 (28.12.79) G01n-33/02

YOKO- ★ D13 04457C/03 ★J5 4154-514
Fine powdery coated L-ascorbic acid (salt) prepn. - by adding to organic solvent soln. of hydrophilic wax, oil, fat etc. which is pptd. out onto the L ascorbic acid (salt)

YOKOHAMA YUSHI KOGY 23.05.78-JA-060618

C02 E13 (05.12.79) A21d-02/22 A23I-01/30 A61k-09/50

The method comprises (a) adding ≥ 1 of hydrophilic wax, oil and fat, fatty acid, natural resin, etc., of which ≥ 1 has crystallising property, to an organic solvent, in which L-ascorbic acid or its salt shows low solubility and the hydrophilic substance shows high solubility, so that its concentration is 5-50 w/w%. (b) dissolving the hydrophilic substance with heating, (c) adding L-ascorbic acid or its salt to the solution, (d) keeping the suspension for 0.5-24 hours at the optimum crystallising temperature of the hydrophilic substance for crystallising out the hydrophilic substance including L-ascorbic acid or its salt as the nucleus and (e) removing the organic solvent. The fine powder is so prepared that L-ascorbic acid or its salt is included 1-80 w/w% in the fine powder. As organic solvent hydrocarbon, ketone, halohydrocarbon, etc. having b. pt. $< 100^\circ\text{C}$ can be used. 23.5.78. as 060618(5pp)

QPPP ★ D13 04471C/03 ★J5 4154-541
Fried foods prepn. - immersing the food in aq. soln. of wetting agent prior to frying

Q.P. CORP 26.05.78-JA-063111

(05.12.79) A21d-13/08 A23I-01

The fried foods can be prepd. by immersing food material of desired form in aq. soln. of wetting agent and frying as usual. Fried foods (e.g. sausage, meat, apple pie or corn) without coating are excellently glossy and non-sticky.

As wetting agent dextrin, malbitol, propyleneglycol, corn syrup or sorbitol can be used. The melting agent is used in aq. soln. having concn. 20-60 w/w%. The immersion is practised for 5-60 minutes. 26.5.78. as 063111 (3pp5)

TSU-★ D13 04474C/03 ★J5 4154-554
Dry vegetable or fruit juice compsn. - is prepd. by adding glucose oxidase to dry foodstuff contg. pulpy substance
OTSUKA EIYO KENKYUS 26.05.78-JA-063465
(D16) (05.12.79) A231-01/21 A231-02/26
The compsn. can be easily restored to natural vegetable or fruit juice by resuspension in water. The suspension is stable for long periods. Addn. of glucoseoxidase prevents the pulpy substance from being sepd. and floating out. Thus uniform suspension, similar to the natural juice is obtd.

The dry food compsn. can be prepd. from vegetables such as spinach, radishes, cabbage, carrots, lettuce, celery, parsley, burdock, egg-plants, cucumbers, etc. and fruits such as oranges, lemons, grapefruit, apples, peaches, plums, grapes, pineapples, etc. Glucoseoxidase can be obtd. from moulds, such as *Aspergillus niger*, *A. oryzae*, *Penicillium glaucum*, etc. 26.5.78. as 063465 (5pp5)

UJI/★ D13 04475C/03 ★J5 4154-556
Processing wakame seaweed - by treating with weakly alkaline aq. soln. contg. sodium phosphate and acetic acid, to provide dried prod.

FUJINAKA Y 24.05.78-JA-061116
(05.12.79) A231-01/33
The method is effected by treating 'wakame' seaweed with the aq. weakly alkaline soln. which contains sodium phosphate and acetic acid and shows buffering activity. Dry 'wakame' which can be easily restored to 'wakame' having required rigidity, good colour and desirable texture as natural 'wakame' can be obtd.

By treating 'wakame' with aq. weakly alkaline soln. Defects of prior art can be avoided. Aq. buffer soln. which contains sodium phosphate 0.1-5% pref. 0.5-3% and acetic acid 0.01-0.5% pref. 0.05-0.3% and has pH 7.5-9.5 pref. 8-9, can be used. 24.5.78. as 061116(3pp)

LOTT★ D13 04477C/03 ★J5 4154-569
Chewing gum for sportsman - contg. increased glucose and sodium chloride content with citric acid, potassium salt and vitamin(s)
LOTTE KK 20.05.78-JA-059510
(05.12.79) A23g-03/30 A61k-09/68

Chewing gum of sportsman use is prepd. by mixing 5-80 wt. % glucose, (b) 0.5-10 wt. % organic acid, (c) 0.01-2 wt. % potassium salt and 0.01-2 wt. % sodium chloride and opt. vitamins, bitters.

The chewing gum contains 5-10 times more glucose than the conventional chewing gum of high energy source, large amt. of sodium chloride for supplementing that lost in sweat and vitamins for quick recovery from fatigue.

Potassium salt (e.g. potassium phosphate) shows the contracting activity on muscle and the stimulative activity on nerves. Citric acid, tartaric acid, malic acid and fumaric acid, can be used singly or together and as potassium salt, potassium dihydrogen phosphate, potassium phosphate, dipotassium hydrogen phosphate, potassium polyphosphate, potassium pyrophosphate, potassium metaphosphate, potassium tartrate, potassium chloride, etc. can be used singly or together.

As bitter component caffeine, tannic acid, hesperidin, naringin and bismaroma, can be used singly or together. 20.5.78. as 059510 (5pp5)

CSPK-★ D13 04478C/03 ★J5 4154-571
Food seasoning and preserving agent - prepd. from aminoacid, organic acid and salt mixt. using wine and alcohol
CSP KK 25.05.78-JA-062483
(D16) (05.12.79) A231-01/22 C12g-03

Matured seasoning is prepd. by dissolving amino-acids and their salts in starting wine, adding other seasonings agents and glucose soln., putting the mixt. in a closed vessel, degassing it, maturing it at ca. 25°C for 24-48 hrs., crushing it, screening it, mixing concd. ethanol having ca. 95% concn. with it and maturing the mixt. at below 20°C. By using various kinds of wines (e.g. 'sake', grape wine, fruit wine, whisky, 'mirin', etc.) various kinds of matured seasonings can be obtd. and they can be properly combined in various foods. (e.g. bread excellent in texture, water-holding property, preservative

property and volume can be obtd. and the ice cakes excellent in taste, texture and overrun can be obtd.).

Typical aminoacids are: alanine, arginine, arginine, hydrochloride, aspartic acid, sodium aspartate, sodium glutamate, glycine, histidine, histidine hydrochloride, i-leucine, leucine, lysine, lysine hydrochloride, lysine-aspartate, lysine-glutamate, methionine, phenylalanine, proline, threonine, tryptophane, valine, arginine-glutamate. Typical additives are- sodium chloride, potassium dihydrogen phosphate, sodium succinate, succinic acid, citric acid, lactic acid. 25.5.78. as 062483 (7pp5)

TAKA-★ D13 04483C/03 ★J5 4154-600
Meat seasoning and preserving agent - by enzymic fermentation of malted rice and soybean - using vitamin(s), protease, sorbic acid and water

TAKADA SHOTEN KK 20.05.78-JA-060327
(05.12.79) A231-01/20
Miso (I), used as seasoning and meat preserving agent is obtd. by mixing a certain amt. of malted rice and a small amt. of salt into boiled soy bean, adding 1.2-1.5 wt. % of neutral protease, a small amt. of basic protease, 0.15 wt. % of sorbic acid, trace of vitamin B₂ and a suitable amt. of water and fermenting the mixt. Meat preserved in (I) can be easily produced at home and meat does not harden during storage in (I).

Typically 36 Kg of soy bean was boiled and mixed with 40 Kg of malted rice, 4 Kg of salt, 960 g of neutral protease, 30 g of basic protease, 120 g of sorbic acid, 4 g of vitamin B₂ and 43 Kg of water. The mixt. was warmed at 55°C for 7 hrs., and then fermented at room temp. for 15 days. Meat preserved in thus prepared (I) held soft texture and fresh colour during long preservation-period. 20.5.78. as 060327 (2pp42)

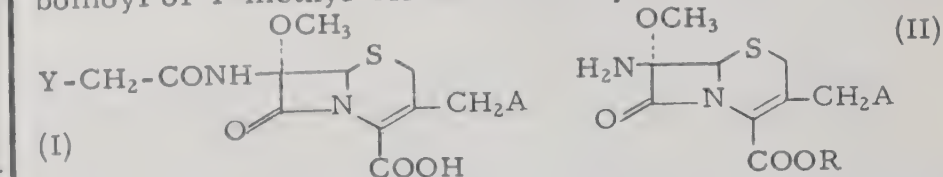
NISH-★ D13 04505C/03 ★J7 9042-357
Mfg. dry powder from viscous liq. - by adding viscous liq. to solid powder while stirring with wire stirrer, and drying

NIPPON SHOJI KK 21.06.74-JA-071499
B07 J04 (13.12.79) A61k-09/14 B01f-03/14 B01j-02/10
Method comprises adding 100 pbw. of viscous liq. substance (I) gradually to 30-50 pbw. of solid powder (II) while continuously stirring the mixt. by use of wire stirrer consisting of wires of spherical cross-section of 0.3-1cm in dia. and wires of spherical cross-section of 0.1-0.15cm in dia. and drying the granulated substance.

(I) is e.g. Mg salt, Ca salt, starch, etc. (II) is e.g. thick extract of animals and vegetables, mucoproteins, royal jelly, etc. 21.6.74 as 071499 B01j-2/10, A61k-9/14 B01f-3/14 (13.12.79) NIPPON SHOJI KK (4pp83)
(J5 1002056)

SANY D13 38027W/23 = J7 9042-999
7-Beta-Acylamino-7 alpha-methoxy-cephalosporins - prepd e.g. by N-acylation of N-deacyl cpds.

SANKYO KK 18.12.73-JA-142097
B02 C02 (17.12.79) *DT2455-884 C07d-501/36 + A61k-31/54
Cephalosporins of formula (I) (where A is acetoxy, carbomoyl or 1-methyl-1H-tetrazol-5-ylthio, and Y is cyano-



methylthio, 1-cyanoethylthio, proparylthio, azidomethylthio, 2-hydroxyethylthio, 3-isoxazolyloxy, 3-isoxazolythio methylsulphonyl, ethylsulphonyl, 2-cyanoethylsulphonyl or sydnnon-3-yl), e.g. 7β-cyanomethylthioacetamido-7α-methoxy-3-(1-methyl-1H-tetrazol-5-ylthiomethyl)-3-cephem-4-carboxylic acid, and their non-toxic, pharmaceutically acceptable salts are new cpds. which may be prepd. by reacting a cpd. of formula (II) (where R is a carboxy-protecting gp.) with an acid of the formula Y-CH₂COOH (III) or a reactive deriv. thereof (pref. an acid halide of (III) and eliminating the carboxyl-protecting gp. R from the product. (I; A is 1-methyl-1H-tetrazol-5-ylthio) may also be obtd. by reacting (I; A is acetoxy or carbamoyloxy) with 5-mercapto-1-methyl-1H-tetrazole (IV). (I) are antibacterials which may be used as animal feed additives or as medicaments for animals, birds or

humans for treating Gram-positive and Gram-neg. bacterial infections. 18.12.73 as 142097 C07d-501/36; A61k-31/545 (17.12.79) SANKYO KK (8pp) (J5 0089392)

RYOA/ ★ D13 04529C/03 ★ J7 9043-050
Treating starting material for plant fibre products - by drying or salting, and treating with hot soln. contg. aluminium ions opt with a neutral salt

RYOAR 04.03.74-JA-025576

P63 (18.12.79) A23b-07/14 B27k-09

Fresh green coloured fibrous plant is dried or salted, and treated with hot soln. contg. Al, ion opt. with or without neutral salt for a short period of time, washed with water and dried. Green colour can be retained for a long period of time. 4.3.74 as 025576 B27k-9/00, A23b-7/14 (18.12.79) RYOA, R (4pp22) (J5 0117956)

KONN D13 05872X/04 = J7 9043-057
Fungicidal compsn contg a polyene antibiotic - dissolved in an alkanol-carboxylic acid mixt esp for preservation of citrus fruit
GIST-BROCADES NV 14.02.75-GB-006450 (03.07.74-GB-029503)
B05 C02 (18.12.79) *DT2529-532 A01n-09 A01n-17/08

Fungicidal compsn. consists of a polyene (I) dissolved in a mixt. of a lower aliphatic alcohol (II) and a lower aliphatic carboxylic acid (III) together with usual auxiliaries. (I) is esp. natomycin, aureofungin or lucensomycin or their salts or esters.

Esp. for protecting citrus fruit during long-term transport or storage. (I) penetrates into the skin of the fruit and completely suppresses fungal growth. In the case of fruits which are already infected spore-formation is inhibited so the fungus is localised. Compsns. can also be used to preserve other fruits, vegetables, bulbs, seeds or animal fodder. 2.7.75 as 081740 (clg. 3.7.74, 14.2.75-GB-029503 006450) A01n-9/00, 17/08 (18.12.79) GIST BROCADES NV (8pp) (J5 1026240)

DYNN D13 02098T/02 = J7 9043-063
Pharm coating compns - contng triglycerides and cellulose propionate

DYNAMIT NOBEL AG 30.12.70-DT-064373 (20.06.70-DT-030429)

A96 B07 (A11) (18.12.79) *NL7108-312 A23l-03 A61k-09/56

Coating materials suitable for pharmaceuticals or foodstuffs, are prepd. by dissolving (a) cellulose propionate, (0.05-12% and pref. 0.2-9%) of MeCO content <6%, OH content <3% and (> 3C) alkanoyl content <10%, and of viscosity <50 esp. at 25° measured as a 20% soln. in Me₂CO; in (b) a triglyceride of iodine-number <12 and of formula: -CH₂OR₁.CHOR₂.CH₂OR₃ where one substituent is MeCO or EtCO, at least one of the others is (16-24C) alkanoyl, and the third may be H. The coatings are easily melted, are of low viscosity, stable odour, and not easily deformed. 21.6.71 as 044754 (clg. 20.6.70, 30.12.70-DT-030429, 064373) A23l-3/00, A61k-9/56 (18.12.79) DYNAMIT NOBEL AG (4pp) (J4 7001318)

SUGE/ ★ D13 04532C/03 ★ J7 9043-065
Pickling chayote to preserve flavour and taste - in jelly-like crude pectin diluted with alcohol and mixed with sake lees

SUGETA M 19.04.77-JA-045012

(18.12.79) A23b-07/10 A23l-01/21

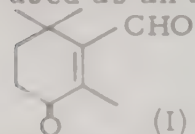
Pectin fibre is heat treated to give a jelly like crude pectin and diluted with alcohol. The prod. is mixed with sake lees, and chayote is pickled in the resultant mixt. Natural flavour and taste can thus be retained. 19.4.77 as 045012 A23b-7/10, A23l-1/218 (18.12.79) SUGETA, M (2pp22) (J5 3130456)

FIRM D13 90478Y/51 = J7 9043-066
(2,6,6)-Trimethyl (3)-oxo cyclohex-(1)-ene carbaldehyde - as aromatising agent in foods, drinks, tobacco, etc.

FIRMENICH SA 31.05.76-CH-006764

B05 E15 P15 (18.12.79) *DT2724-180 A23l-01/22

2,6,6-Trimethyl-3-oxo-cyclohex-1-ene carbaldehyde (I) is used as an aromatising agent in foodstuffs, drinks, pharmaceutical prods. and tobacco.



(I)

Pref. 1-100 ppm (I) is added to black tea or tobacco to give an enhanced straw-like flavour.

31.5.77 as 063932 (clg. 31.5.76-CH-006764) A23l-1/226 (18.12.79) FIRMENICH SA (4pp) (J5 2148664)

NEST D13 50941W/31 = SU -660-567
Treatment of foodstuff poor in lysine by addn. of L-lysine - deriv giving free acid by metabolism e.g. for cereals esp. bread

SOC PROD NESTLE SA 05.03.74-CH-003123

E16 (E14) (30.04.79) *BE-824-485 A23j-03

Foodstuff poor in lysine are treated by addn. of a suitable amt. of a metabolic substd. L-lysine. The foodstuff may be cereal based e.g. bread or milk flour. The lysine deriv may be an alpha-acyl L-lysine, an aminoacyl- or an alpha, beta-diaminoacyl-L-lysine or a Schiffs base. The process is used for fortifying cereals and equilibrating the diet of populations living on vegetable foodstuffs which one deficient of essential amino acids. Lysine itself combines with reducing sugars present in the food and consequently a large excess of free acid would have to be added.

Moron, J., Motteau, F., Fino, A. Bul. 16/30.4.79.

4.3.75 as 110861 (2pp)

GREB/ ★ D13 04726C/03 ★ SU -660-644
Butter granule former - has container inside which is drum with hollow cutters and frame with strings to break down butter chips formed by cutters

GREBENNIKOV N I 25.05.77-SU-488259

P13 (15.05.79) A01j-23

Device for butter comminution consists of a container, inside which is a drum with hollow cutters, a charging hopper, and a receiver for the broken-up butter. The granulometric state of the comminuted material is increased, and productivity is raised by providing a frame with strings across it. This is fastened inside the cavity of the drum. A scraper is disposed in the frame, with part of the drum made smooth and the cutters distributed stage-wise. The loading hopper is shifted over relative to the centre of the drum.

Grebennikov, N.I. Bul. 17/5.5.79. 25.5.77 as 488259 (3pp29)

DAIR= ★ D13 04729C/03 ★ SU -660-651
Butter type product mfr. - by adding vegetable oil to fresh milk and souring before beating

DAIRY FND RES INST 31.06.77-SU-493964

(11.05.79) A23c-15/02

Butter type product is obtained by adding vegetable oil to fresh milk, separating at 60-75°C, pasteurising the cream fraction, cooling to 8-10°C, then warming to 20-25°C, adding a culture of lactic acid bacilli, homogenising in a single stage at a pressure of 15-17 MPa with cooling to 6-8°C, and finally maturing for 3-5 hr.

The method permits production of a range of products with a fat content of 30-60% in equipment used for normal butter without using expensive stabilisers and thickeners. Process time is reduced 6- to 7-fold, and the products have the flavour of butter with a homogeneous texture and good spreadability.

Aristova, V.P., Fursova, S.A., Korobkina, G.S. et al Bul. 17/5.5.79. 31.5.77 as 493964 (3pp1358)

HETO ★ D13 04730C/03 ★ SU -660-652
Fruit jelly, marmalade etc. prodn. - includes addn. of suspension of a calcium salt in water-alcohol mixt. for storage and shape stability

HETEROORG CPDS AS USSR 19.05.77-SU-490812

(11.05.79) A23l-01/06

Jelly-type food prods. are prepd. by dissolving an acid polysaccharide and sugar in water; adding a previously prepd. suspension of a calcium salt in water; introducing the fruit juice or other components; homogenising the mixt. and pouring it into moulds or containers.

This method is improved by dissolving the calcium salt in a water-alcohol mixt.; and pouring the mixt. into containers or moulds at 15-25°C. By this method, the process is simplified, the homogeneity of the gel is improved; the mechanical strength of the gel is increased, and the storage of the product can be extended.

Kuibyshev, V.B., Braudo, E.E., Chimirov, Yu.I. et al Bul. 17/5.5.79. 19.5.77 as 490812 (3pp70)

AMLM= ★ D13 04882C/03 ★ SU -660-993
Food grade red dye prodn. - by hydrochloric acid extrn. of red grapes pretreated with pectolytic enzyme

AS MOLD MICROBIOL (BARD=) 16.12.70-SU-499884

E24 (D16) (10.05.79) C09b-61

A food dye is obtd. in high yield by hydrochloric acid extraction of a mixt. of grapes after pretreatment with 0.05-0.07 wt. % of pectolytic enzymes at 15-25°C. for 2-3 hrs. before extraction.

The dye obtd. is used in confectionary and in mfr. of wines, spirits, etc.

In an example, grapes treated with 0.05 wt. % pectolytic enzymes (3000 units/g.) are extd. with 1% HCl at pH 3.0 for 10 hrs. and the extract is purified using ion exchangers and concentrated to give prod. contg. 50 g/l dye. The dye extract was storage stable for 6 months.

Tikhonova, N.P., Trofimenko, N.M., Vysochanskii, D.M. Bul. 17/5.5.79. 16.12.70 as 499884 (2pp1047)

FOOD= ★ D13 04956C/03 ★SU-661-209

Egg white drying in inert bodies fluidised bed - using drying chamber with gas distribution grid fitted in band

FOOD MECH ENG RES 22.08.74-SU-053930

Q76 (15.05.79) F26b-03/12 F26b-17/10

The method can be used in food ind. for egg white drying in a fluidised layer of inert bodies. The dryer contains a drying chamber with a gas distribution grid, connected to the vibro-drive, and atomisers attached to the chamber side walls.

In order to increase output and reliability, the grid is attached in a band situated in the chamber with a gap and provided with pins. The pins pass through the chamber walls and contact the band to the vibrodrive. The atomisers are hinged on the chamber walls and their rotation angle in the horizontal plane can be regulated. The products obtd. in the dryer have good free flowing properties, greater solubility and high nutritional value.

Risin, A.P., Chorbachidi, P.G., Beilin, M.A. Bul. 17/5.5.79. 22.8.74 as 053930 (3pp110)

IACO/ ★ D13 04964C/03 ★US T990-005

Electrodialysis of liq. whey - sterilising under heat and cooling prior to electrodialysis to reduce ash content

IACONELLI W B 22.11.78-US-963079

(01.01.80) A21d-06

The raw whey is first subjected to an ultra high temp. environment of 130-150°C for ~2 secs. to sterilise the whey. The sterilised whey is then subjected to cooling and then to electrodialysis to effect a substantial reduction in ash content. 22.11.78 as 963079 (8pp) (Defensive).

CORP ★ D13 05041C/03 ★US 4181-534

Clean pentosan enriched pericarp prodn. - from corn mixed fibre, by abrasion at controlled moisture content, useful in human or animal nutrition

CPC INTERNATIONAL INC 12.09.77-US-832319

C03 (01.01.80) C131-01/02

Prodn. of clean, pentosan-enriched pericarp (A) from mixed fibre obtd. by hydroprocessing corn, comprises first drying the fibre to 42-60 (esp. 50-60) wt. % moisture, then abrading to separate an (A)-fraction, which is recovered, and a fines fraction (B).

Pref. (A) is recovered by screening or classifying to produce a fraction of particle size >2000 microns, which may then be ground to particle size 100-200 microns. Pref. abrading is done with a beater or impact mill.

(A), contg. ≥35 wt. % dry basis pentosans, is used as fibre food for humans and animals, or as a potential raw material for xylose, furfural, etc. The (B) fraction can be blended with other corn-processing waste prods. to give animal feeds contg. ≥35 wt. % starch. Since (B) provides much of the proteins needed, these feeds require less steepliquor than normal so are less hygroscopic, and have higher carbohydrate content and bulk density. The steepwater saved can be used for fermentation or pharmaceutical purposes. 12.9.77 as 832319 (6pp1251).

HOFF D13 10289A/06 =US 4181-573

Antibiotic obtd. by culturing Streptomyces strain - for use as antibacterial, antihypertensive and feed additive

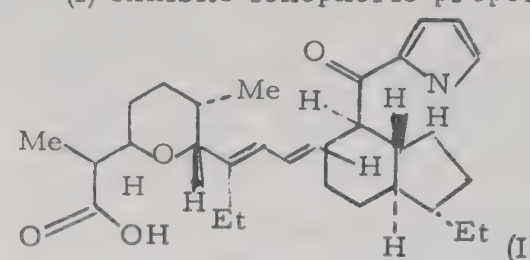
HOFFMANN-LA ROCHE INC 06.08.76-US-712286 (20.04.78-US-898052)

B03 C02 (D22) (01.01.80) *BE-857-513 C12d-09

The new antibiotic X-14647 is of formula (I) and is produced by cultivating a strain of Streptomyces sp. X-14547,

NRRL 8167 in an aq. carbohydrate soln. contg. a nitrogenous nutrient under submerged aerobic conditions, and isolating (I) from the soln.

(I) exhibits ionophoric properties, is classified as a



polyether gp. antibiotic, is effective against Gram-positive bacteria, and is useful as an antihypertensive agent and for improving ruminant feed utilisation.

20.4.78 as 898052 Div. ex 4100171 (10pp997).

ELLE/ D13 87876A/49 =US 4181-651

Hydrolysing casein with aq. acid avoiding darkening - using phosphorous acid or salts and montmorillonite

ELLENBERGER W 05.08.77-DT-735297

C03 (01.01.80) *BE-869-476 A23j-01/20 A23j-03/02 C07g-07

Casein is hydrolysed by contacting it with 1-4 gramequivs. of non-oxidising mineral acid per gram atom of amino N in the casein at 60-100°C in the presence of (i) acid-activated montmorillonite and (ii) orthophosphorous acid and/or a salt of orthophosphorous acid. Pref. mineral acid comprises aq. HCl and/or aq. H₂SO₄.

Pref. (i) is used in amt. of 0.1-10 (esp. 1-3) wt. % and (ii) in an amt. of 0.1-10 (esp. 0.2-2) wt. %, each based on amt. of mineral acid. Method gives high yields of protein hydrolysate without formation of undesirable by-prods., esp. dark substances which would discolour the end prod. Prod. is useful e.g. in foodstuffs and fodder. 2.8.78 as 930215 (3pp927).

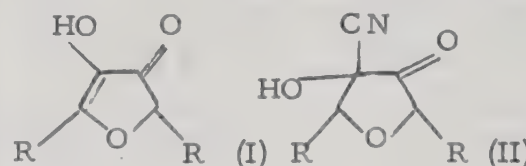
GIVA D13 14604B/08 =US 4181-666

4-Cyano-tetra:hydro-furan-3-one(s) and 4-hydroxy derivs. - intermediates for 4-hydroxy-3(2H)-furanone(s) useful as flavouring agents

GIVAUDAN CORP 14.12.77-LU-078691 (11.08.77-LU-077955)

E13 R29 (01.01.80) *GB2002-380 C07d-307/60

Prepn. of furanone cpds. of formula (I) (where R is H, methyl or ethyl) comprises subjecting a cpd. of formula (II) to cyanohydrin cleavage by thermal treatment at 50-400°C or by treatment with a base at 50-200°C, in the gas or liq. phase.



Cpd. (II) may be prepd. by oxidising a cpd. (III) of formula (II); where OH is replaced by H in a polar solvent at

pH 3-11 and -10 to 60°C. Pref. a caroate, e.g. KHSO₅, is used as oxidising agent. Cpds. (I) are known flavouring agents. Cpds. (II) and (III) are stated to be new. 26.7.78 as 928136 (5pp927).

BRUN/ ★ D13 05137C/03 ★US 4181-743

Food flavouring, esp. salt substitute - prepd. by heating condensed plant juice, has low sodium content

BRUMBLICK G C 15.09.76-US-723512

(01.01.80) A231-01/22

A low sodium food flavouring is produced by extracting juices from plants, condensing the juice, and toasting the condensate with radiation of sufficient intensity and for long enough to alter the flavour of the condensate. The juice may be obtd. from yeasts, mushrooms, fruit, vegetables, grasses, nuts, cereals or fermented vegetable matter.

The compsn. has a pronounced salty taste and so is useful for those on low sodium diets. It may be in liquid, paste or solid form. 15.9.76 as 723512 (10pp955).

GROW/ ★ D13 05138C/03 ★US 4181-745

Decorating shells of eggs - using medium contg. salt and dye(s)

GROWE G H 03.01.78-US-866356

(01.01.80) A231-01/27

Shells of eggs are dyed by (a) prepg. a dyeing medium contg. (rock) salt and dye; (b) wetting at least portions of the shell with water or vinegar; (c) applying the dyeing medium to the wetted areas of the shell. Pref. the dyeing medium is in a transparent flexible bag.

The method is simple, and does not require a liq. dyeing soln. 3.1.78 as 866356 (4pp955).

STAL ★ D13 05140C/03 ★US 4181-747
 Pasteurised vegetable seed fibre for use in foods - having light colour, bland taste and low calorie content
 STALEY A E MFG CO 04.12.78-US-966246 (07.11.77-US-849289)
 (01.01.80) A231-01/27

Crude fibre-contg. seed hulls esp. of soybean or corn are (a) mixed with water; (b) the slurry obtd. is kept at pH 2.5-5.0; (c) heated to 155-180°F for 15-60 mins. The solids are then (d) dewatered; (e) washed with water; (f) dewatered and (g) dried.

The prod. is useful for increasing the fibre content of foods. It has a low microbial count, and a low calorie content. It has a bland flavour, and light colour even when seed hulls with dark coloured hilums are used, if the conditions of temp. and pH are chosen correctly. 4.12.78 as 966246 (8pp955).

CORP ★ D13 05141C/03 ★US 4181-748
 Wet and dry milling of corn kernels - to give starch and animal feed from protein and corn fibre residues
 CPC INTERNATIONAL INC 11.05.78-US-904838
 C03 (01.01.80) A23k-01

Continuous, corn refining process comprises dry milling whole grain corn to give an endosperm fraction, germ fraction, fibre (hull) fraction and a cleanings fraction. The endosperm fraction is steeped, the larger wet endosperm particles are sepd. from the smaller ones and milled to smaller size and combined with the original smaller fragments. These are then again steeped to give a mill starch slurry. This is sepd. into fine fibre tailings, a starch rich fraction and a protein rich fraction. This protein rich fraction is concentrated and combined with the fibre (hull) fraction, cleanings fraction and fine fibre tailings and then dried to give an animal feed. The product shows no loss of corn oil or germ fraction.

The product is an animal feed. The corn starch may be used to produce sugars. 11.5.78 as 904838 (11pp916).

VARI ★ D13 05175C/03 ★US 4181-853
 Liq. chromatography system for detecting aflatoxin - has packed flow cell for improving fluorescence detection
 VARIAN ASSOCIATES 31.08.78-US-938738 (10.12.76-US-748867)
 J04 R16 (01.01.80) G01n-21/34

Aflatoxin in a sample is detected by passing the sample through a liq. chromatography column and passing the out-flow from the column through a flow cell packed with aflatoxin-adsorbing particles to establish a dynamic equilibrium of the aflatoxin between the mobile phase and the particles. The flow cell is irradiated with electromagnetic radiation of a frequency to cause the aflatoxin to fluoresce and the emitted fluorescence detected.

Used for detecting aflatoxins, e.g. aflatoxins B1, B2, G1, G2 which are toxic metabolites of fungus that under certain conditions can grow on peanut and cereal plants. The fluorescing species which are in equilibrium between the stationary phase and the mobile phase in the flow cell can be detected at lower concn. thresholds than when they are in equilibrium only with the mobile phase. 31.8.78 as 938738 (7pp67).

VAND/ ★ D13 05222C/03 ★US 4182-229
 Automatic popcorn popping machine - with popcorn and oil introduction, popping, and discharge under cam control
 VANDEWALKER JR 12.09.77-US-832626
 (08.01.80) A231-01/18

The machine includes a vessel with a separable bottom cover which can be moved from a first position in which it forms the bottom of the vessel, and a second position to permit the contents of the vessel to be discharged. An electric heater is thermally connected to the cover. A rotary stirrer extends into the vessel. A corn dispensing and measuring device introduces unpopped corn into the chamber. A measured amount of oil is separately introduced.

The power supply to the machine includes a rotating cam to control the sequence of operations. The cover operating device includes a lever having a portion bearing on the cam surface. The cover is normally biased to one of its positions and the cam acts on the lever to move the cover to its other position against the biasing.

The machine may be coin operated. 12.9.77 as 832626 (9pp295)

TOMA/ ★ D13 05223C/03 ★US 4182-232
 Curd mixer for making cottage cheese - with horizontal mixing combs which do not twist paste of curds and water
 TOMATIS S 31.07.78-US-929788
 P13 (08.01.80) A01j-25

The mixer includes an elongate basin having an upwardly concave bottom wall and a pair of end walls. There is an inlet through one of the end walls near the bottom of the basin, and an overflow opening in the opposite wall near the top.

A mixer has plunger arms provided with elongate mixer combs extending perpendicularly from the arms parallel to the bottom wall. There is a drive for the plunger arms. Curds and water are fed to the basin using a conveyor screw.

The appts. permits continuous prodn. of paste for making cottage cheese. 31.7.78 as 929788 (5pp295)

GONZ/ ★ D13 05224C/03 ★US 4182-233
 Appts. for stuffing olive with pimento strip - stored in magazine of individual strips indexed past stuffing head
 DEL SER GONZALEZ C 07.03.77-US-774886 (28.10.74-US-431436)
 (08.01.80) A23n-04/08 A23p-01

An olive stuffing appts. holds a pitted olive while a strip of folded pimiento is inserted into the pit cavity. Pimiento strips are stored in a magazine which is indexed through the stuffing head to present a fresh pimiento strip for each olive. The magazine is loaded by pressing it into a bed of pimiento and simplifies subsequent handling of the pimiento.

The stuffing head includes a forked rod which engages the pimiento strip and folds it round a rigid wire which is then withdrawn. A plunger then advances the folded pimiento into the olive cavity which is expanded by a dilator. 7.3.77 as 774886 C.i.p. 4096794 (+15.4.75-US-567811) (12pp295)

CRGI ★ D13 05357C/03 ★US 4182-755
 Feed for self feeding animals and poultry - contg. polyvalent metal chloride to control feed intake
 CARGILL INC 03.03.76-US-663437 (04.01.74-US-430676)
 C03 (08.01.80) A61k-33/26

Complete feed formulation for domestic animals and poultry comprises feed nutrient materials and a feed intake control agent (I). The (I) provides chloride ion at 1-12% in excess of the total level of monovalent cations, other than NH₄ and H, present in the formulation.

When the formulation is offered on a self-feeding basis to animals and poultry, feed intake is limited to the desired amt. for wt. gain or maintenance. It is esp. suitable for pregnant female swine. 3.3.76 as 663437 (+15.12.74-US-532741) (7pp1248)

STAD ★ D13 05362C/03 ★US 4182-777
 Co-dried yeast cream and whey prod. - useful as food additive for e.g. cakes, margarine and luncheon meats
 STANDARD OIL CO (IND) 01.03.77-US-773205
 (08.01.80) A23b-04/04

A food prod. is prepd. by forming an aq. suspension of whey and yeast contg. 20-50 wt.% whey solids (based on total solids) by mixing a yeast cream contg. 10-20 wt.% solids and a whey contg. 3-70 wt.% solids and spray-drying the mixt. Pref. the yeast and whey are pasteurised before drying, either before or after mixing.

The prod. is free from the objectionable tastes of both whey and yeast, and is a non-hygroscopic free-flowing powder. It may be added to a variety of foods, e.g. cakes, puddings, margarine, luncheon meats, chiffon pie fillings etc. 1.3.77 as 773205 (6pp955)

GENO ★ D13 05363C/03 ★US 4182-778
 Microencapsulated malleable nutrient prods - coated with ethyl-cellulose, propylene glycol mono-ester, acetylated mono:glyceride matrix
 GENERAL FOODS CORP 17.05.78-US-906541
 A97(A11) (08.01.80) A231-01.30

Micro-encapsulated malleable nutrient prod. consists of a finely divided vitamin or mineral nutrient (I) coated with

4-60 wt.% (of prod.) of a matrix (II) consisting mainly of methyl cellulose together with some propylene glycol mono-ester and acetylated monoglyceride.

Malleable coating does not degrade when blended with other dry mix ingredients, and is esp. useful for thiamine when it lacks the characteristic thiamine taste and odour over prolonged time periods at high temps. or in aq. solns. of pH <4.5. The prod. is esp. useful (as thiamine) in fortifying breakfast juices (partic. orange juice). 18.5.78 as 906541 (8pp478)

STAU ★ D13 05364C/03 ★US 4182-779
Soya-based egg yolk extender - contg. defatted soya flour, oil, grain flour, lecithin, humectant, surfactant and colour
STAUFFER CHEMICAL CO 05.12.77-US-857053
A97 (08.01.80) A21d-13/08 A23l-01/32

Extender comprises defatted soy flour of protein dispersibility index <60, and an edible oil in wt. ratio 18:100 to 40:100, with a grain flour in ratio 1:10 to 1:1, and lecithin in wt. ratio 1:100 to 20:100, both w.r.t. the combined wt. of soy flour and oil, and with 0.5-3.0 pts. per 100 pts. combined wt. of soy flour and oil, of alginates, carrageenan, guar and/or xanthan gum. The total lipid content provided by the oil and lecithin is 14-24 (18-20) wt.%.

The compsn. can replace egg yolk in a 1:1 wt. basis without the need for modification of a recipe. It does not require full soy flour. 5.12.77 as 857053 (8pp955)

BOLI D13 63339Y/36 =US 4182-780
Alkali treatment of lignocellulosic materials - followed by gradual neutralisation to render them (more) suitable as feedstuffs (NL 8.8.77)

BOLIDEN AB 25.05.76-SW-005943

C03 (08.01.80) *DT2707-785 A23k-01/12

The feed value of lignocellulosic material, e.g. straw, is increased by sprinkling concentrated alkali onto the material, then sprinkling on water for dilution-absorption at a rate corresponding to absorption of alkali, and subsequently neutralising with concentrated acid in a closed circulation system to minimise the quantity of residual solution.

Liquid draining is pref. collected below the level of the material and is kept constant by controlled supply of liquid.

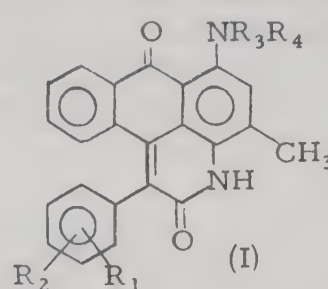
The process is e.g. for treating baled straw. 10.5.77 as 795511 (6pp1358)

DYNL D13 30266A/17 =US 4182-885
Red anthraquinone dyes - for food, drinks, pharmaceuticals and cosmetics

DYNAPOL 17.12.76-US-751857

A97 B07 E22 (A96 D21) (08.01.80) *BE-861-945 C07d-215/02
C07d-221/18

Novel monomeric colourants are of formula (I). R_1 and R_2



are each H, F, Cl, Br, I, 1-3C alkyl, 1-3C alkoxy, NO₂ or sulphonate. R_3 and R_4 are each H, 1-4C alkyl or 1-4C alkylsulphonate.

Pref. R_1 , R_2 and R_3 are H and R_4 is H or propylsulphonate. (I) are useful as non-absorbable colourants for edibles.

17.12.76 as 751857 (14pp974)

PHIP ★ D13 05433C/03 ★US 4182-954
Measuring properties of materials by irradiation - esp. density and thickness of webs by measuring transmitted radiation of two types
PHILLIPS PETROLEUM CO 21.04.78-US-898554
A35 F07 K08 R16 (08.01.80) G01n-23

Properties of a material are measured by passing radiation through the material from at least one source. The radiation is of two different types. A first detector responding only to transmitted radiation of the first type. A second detector responds to both types of radiation transmitted by the material. Signals from the detectors are combined to give a measure of the intensity of the second type of radiation transmitted by the material.

The method may be used to measure the density or thickness of a web, e.g. of polypropylene fibres, heavy gauge plastics film, paper, films of food, and metal foil. A high energy beta-plus-gamma emitter can be used to measure denser materials over a larger period than a pure beta emitter. 21.4.78 as 898554 (7pp1312)

See Also

D16 FR 2421039
D16 US 4182860
D22 J7 9043060

D16 SU 659618
D16 WP 8000001
D23 EP --6616

D16 SU 660653
D21 J5 4154535

D14: FOODSTUFF MACHINERY

AXHO- ★ D14 04005C/03 ★GB 1559-475
Vegetable topping machine - with parallel supporting belts and height positioning bolts

AXHOLME ENT TD 28.07.75-GB-031462
(16.01.80) A23n-15/04

Machine includes a knife for slicing off the top of the vegetable. It also includes two side by side endless belts for supporting the vegetable between them, and a further belt engaging the top of the vegetable to ensure that its top is at a predetermined vertical position on presentation of the vegetable to the knife. Pref. supporting endless belts include spring-urged fingers to contact and support the vegetables.

The appts. is used to slice the tops off vegetables partic. carrots. Pref. the vegetables are size graded prior to slicing. 27.7.76 as (6pp295)

AXHO- ★ D14 04006C/03 ★GB 1559-476
Vegetable topping machine - with endless chain inverting vegetables for presentation to rotating knife
AXHOLME ENT TD 28.07.75-GB-031463
(16.01.80) A23n-15/04

Machine comprises an endless chain arranged in a vertical plane and provided with grips for a vegetable. The chain carries the vegetable to a position where it is inverted and is travelling downwards and then drops the vegetable so that it falls onto a support.

The machine also includes a rotating knife whose cutting edge passes through the path of movement of the vegetable. The knife movement is synchronised with the chain movement so that a slice of predetermined thickness is cut

from the top of the vegetable as it moves downwardly on the support.

The machine is used to cut the top off a vegetable partic. a carrot. 27.7.76 (5pp295)

SIMO- ★ D14 04032C/03 ★GB 2024-695
Roller and ring pelletising press for animal feed - includes single press roll mounted eccentrically within annular die
SIMON-HEESEN BV 09.04.79-GB-012380 (14.06.78-GB-026947)
P71 (16.01.80) B30b-11/20

Pelleting press comprises an annular die having a plurality of radial bores carried by a hollow rotor which is rotatable around a stationary main shaft. A single press roll is mounted on an axle which extends between stationary supports which are mounted by bearings within the rotor on either side of the annular die. The dia. of the press roll is greater than half the internal dia. of the annular die.

Used for prepn. of pellets of animal feed. For a given extrusion capacity the single roll of large dia. has a power consumption less than that of a larger no. of rolls. 9.4.79 as 012380 (4pp1044)

TOPP ★ D14 04472C/03 ★J5 4154-542
Preservation of perishables e.g. meat, fruit, vegetables - in a vessel at low temp. and low oxygen concn. in presence of an antioxidant
TOPPAN PRINTING KK 25.05.78-JA-062621
E13 (E37) (05.12.79) A23b-04 A23b-07 A23l-03
The method comprises putting perishables such as vegetables, fruits, animal meat, fish, etc. in a vessel with antioxidant, closing it and preserving it at 0-10°C while keeping the pressure inside the vessel at 600-760 mmHg

and the oxygen concentration inside the vessel at 0-5% respectively.

The pressure and the oxygen concentration inside the vessel can be reduced with the antioxidant and the respiration of perishables and the vaporisation of water from them can be suppressed without using physical means. As antioxidant hydrosulphite, reducing iron, ferrous oxide, ferrous sulphate, ascorbic acid, etc. can be used and they can remove oxygen from air while releasing water. Thus overdrying of perishables in the vessel can be also prevented. 25.5.78. as 062621 (4pp5)

HEAT= ★ D14 04675C/03 ★SU-659-861
Free-flowing material dryer - is divided into chambers by gas distribution grids, with vibrating upper grid

HEAT MASS TRANSF 06.12.77-SU-550967

J08 Q76 (D17) (30.04.79) F26b-17/10

The free-flowing material dryer can be used for chemical products, grain, sugar and cooked grain drying in a fluidised bed. The dryer contains a body divided by distribution grids into staggered chambers connected by overflow chutes, provided with turnstile made as rotating shafts. In order to intensify the drying process, at least one upper grid vibrates and has a variable live cross-section along the material flow.

The turnstiles of at least two upper chutes have semi-cylindrical bases with transverse slots. The turnstile shafts are placed eccentrically and are provided with radial pins which enter the slots.

Lyuboshits, A.I., Sirotkin, G.L., Petrovskii, A.K. et al
Bul. 16/30.4.79. 16.12.77 as 550967 (3pp110)

MOGI= ★ D14 04692C/03 ★SU-659-879
Centrifugal film evaporator - has vertical shaft with semi-toroidal shaped discs which form chambers, used for heat-sensitive liq. product evaporation

MOGILEV TECH 12.12.77-SU-554285

J01 Q78 (30.04.79) F28d-05/02 F28d-11/02

The centrifugal film evaporator can be used for heat sensitive liq. product evaporation and for food prodn. sterilisation. The evaporator has a body with a vertical shaft. The discs mounted on the shaft form successively connected chambers connected to the evaporation media supply and outlet pipes.

In order to increase the evaporation degree, the discs are semi-toroidal shaped. The semi-toroids are connected along the end surfaces perimeter. Annular chutes curved in the opposite direction to the semitoroids are placed at the semitoroids connection points. The chutes are connected to the discs by means of spokes.

Fedorov, G.S. Bul. 16/30.4.79. 12.12.77 as 554285 (2pp110)

PIGF= ★ D14 04724C/03 ★SU-660-632
Animal feedstuffs mixing and spreading equipment - has hopper to which the ingredients are fed, mixing screw, and gate valves to control final discharge

PIG FARMING MECH (ANIM=) 02.03.77-SU-459605

P14 (15.05.79) A01k-05 B01f-07/08

Device for mixing and spreading animal feedstuff, comprises hopper with discharging openings and regulating gate valves, feeding screw and spreading attachment positioned vertically inside the hopper and arranged above the openings. The mixing of the fodder is intensified, by providing the top end of the screw with an attachment which has openings to connect it with the spaces inside the casing of the screw and the hopper.

Power consumption is reduced by placing the discharging openings in the middle part of the hopper and fastening a circular channel on the inside of the hopper wall underneath the openings. Scrapers are fitted into the channel to withdraw the feedstuff.

Shamov, N.G., Goncharenko, P.V., Ostashevskii, I.S. et al. Bul. 17/5.5.79. 2.3.77 as 459605 (2pp29)

TEKH= ★ D14 04734C/03 ★SU-660-656

Canned foodstuffs sterilisation autoclave - with steam supply via central perforated tube and radial partitions in rotatable basket

TEKHEBROM PRODN 06.06.77-SU-496017

(11.05.79) A23i-07/10

The autoclave comprises a cylindrical housing with a rotat

able internal shell divided into sections by radial partitions, a vertical axial perforated steam supply tube, and a false bottom.

In order to prevent cans jamming in the discharge region, the shell is frustoconical with the walls converging upwardly and the baffles are hollow perforated and wedge-shaped with their walls diverging upwardly, and are connected to the steam supply.

Korzhkov, V.N., Kravtsov, A.D., Svoyanovskii, V.I. et al
Bul. 17/5.5.79. 6.6.77 as 496017 (3pp1358)

TAMB= ★ D14 04735C/03 ★SU-660-657

Feed root vegetables washing appts. - with vanes adjacent rotary drum perforations oppositely inclined in successive sections, for water intake and discharge

TAMBOVKOLKHOZPROEKT 17.06.77-SU-498035

(11.05.79) A23n-13

Washing appts. for e.g. potatoes or beet, for use as animal feed, comprises a tank holding a perforated rotatable drum divided into alternating water intake and discharge sections. A vane is mounted along one edge of each aperture and inclined to the drum surface. Intake section vanes are inclined oppositely to, and discharge section vanes in the same direction as, the drum direction of rotation to direct the water flow inwardly and outwardly respectively.

Intake section vanes are pref. adjustably inclined to the drum surface to vary the water inflow. There is pref. an internal scraper at the drum top so that roots carried up the drum wall are detached. Such arrangement reduces washing time and water consumption.

Ovchinnikov, A.A., Kononov, B.V., Silagin, V.A. et al.
Bul. 17/5.5.79. 17.6.77 as 498035 (3pp1358)

POME= ★ D14 04739C/03 ★SU-660-685

Steriliser for milk churns - has one side which turns through 180 degrees and to which churn is fastened so that it can be inverted over water and steam nozzles

POLT MEAT EQUIP WKS 28.06.77-SU-502335

P34 Q31 (08.06.79) A611-03 B65b-55/02

Device for sterilising objects, e.g. in the dairy ind., e.g. milk cans, comprises a body inside which are attachments for supplying water and steam, and holders. Productivity and working conditions are improved by making one of the sides of the body so that it can revolve about the horizontal axis, with the holders fastened to both sides of this revolvable wall. The holders are automatically fixed as the side rotates, by providing each holder with a guide, a lever with a weight, and a catch in the form of a pin, which works in conjunction with the lever. The pin is arranged so that it is possible to move it along the guide of the holder.

Lozovskii, E.B., Sambur, Ya.L., Suchkov, V.I. et al.
Bul. 17/5.5.79. 28.6.77 as 502335 (3pp29)

GPOL/ ★ D14 04895C/03 ★SU-661-007

Fruit e.g. grape juice extractor - has endless chain conveyor with articulated partitions and sprockets in polygon corners

GEOR POLY 27.05.74-SU-032148

P71 (25.05.79) B30b-09/02 C12g-01/02

The yield of extd. grape juice (or other fruit juices) is increased by repeated pressing and by the continuous loosening of the fruit pulp.

The conveyor is made as a endless track wrapping three pairs of sprockets which are set in the corners of a polygon. The partitions are interlocked and articulated on the chain.

The crushed grapes are fed continuously to the draining sections which are moved along the rectilinear parts of the conveyor branches between the sprockets. The straight section is followed by a triangular section, and the passage around the sprockets results in forming quadrangles. The changes of sections enhance the rate of juice extraction by forming new draining channels.

Zaldastanishvili, N.K., Meladze, R.D., Boyadzhyan, N.M. Bul. 17/5.5.79. 27.5.74 as 032148 (5pp39)

FMCC ★ D14 04987C/03 ★US 4181-072

Continuous pressure cooking unit for particulate foods - has sauce externally heated to sterilising temp. and injected into mixture for canning

FMC CORP 06.06.77-US-804115

P28 (01.01.80) A47j-27/04

The sauce is externally heated in a heat exchanger to the sterilising temp. and the food and sauce are cooled under pressure by injecting cooled sterile sauce into the hot mixt. of cooked product and sauce before the mixt. is released to atmosphere. By cooking the product directly in the sauce, product flavour is enhanced and upon cooling, the absorbed sauce is cooled below the flash temp. preventing damage to the cellular portions of the food particles on pressure release.

During canning only a relatively short reheat of the sealed containers and possibly the product is necessary to re-sterilise the outer portions of the food particles, the cooking sauce and the interior of the containers. Part of the cooking sauce which is discharged to atmosphere with the cooked product, is drained off, cooled and injected into the product at a rotary discharge valve, to bring the sauce temp. slightly below its flash temp. 6.6.77 as 804115 (7pp978).

LEIF- D14 10347A/06 =US 4181-163
Domestic mincing machine with flat cover for projecting outlet - the cover serving also as dish to collect minced prod.

LEIFHEIT INT G GMBH 07.10.76-DT-645247

P28 + P41 Q31 (01.01.80) *BE-859-437 + B65b-03/06

A meat grinder, vegetable slicer, etc. has a housing with a protrusion on the front through which food emerges, and a protective cover. The housing has base extending underneath the projection and into a cutout in the cover. The cover receives processed food and may assume an extended position to rest on the base support.

The device is simple, cheap and reliable. When in storage it has an uncomplicated outer contour allowing it to be packaged in boxes, etc. 7.10.77 as 840173 (7pp976)

KING/ D14 72456A/40 =US 4181-591
Suspended solids removal from e.g. dairy fluid - by passing between oppositely electrically charged corrugated surfaces

KING A S 04.04.77-US-784559 (10.08.76-US-713251)

J01 P41 (01.01.80) *US4116-789 B03c-03/04 B03c-05/02 + B03d-03/06 C25b-11/02

Appts. for removing suspended solids from fluids comprises a pair of oppositely charged corrugated surfaces between which the fluid flows transversely of the longitudinal axes of the corrugations to cause fluid undulation and make the particles impinge against one another to form larger masses. The inwardly extending peaks of the surfaces are aligned with one another to present alternating zones of constriction and expansion.

An additional pair of corrugated surfaces is similarly placed downstream of the first with opposite charge. At least one surface of the first pair is electrically insulated from the fluid while neither of the second pair of surfaces is insulated from the fluid.

The frequency of collision or impingement is increased. 22.8.77 as 826812 Div. ex 4045326; 4116789 (+ 4.4.77 - US - 784559) (8pp976).

CHEMET ★ D14 05218C/03 ★US 4182-207
Loading packages with food slice stack - by swinging placer with spring loaded doors and ejection ram

CHEMETRON CORP 30.01.78-US-873177

P62 (08.01.80) B26d-04/44 B26d-07/06

A stack of sliced food is removed from a slicer by a conveyor. The stack is eventually transferred to a discharge conveyor which delivers the stack to a placer. A pair of spring-loaded doors within the placer grip the stack of food while the placer swings from the conveyor to lie above a packager. When in this position, a ram extends through the placer to load the stack into a cavity within a

package.

The discharge conveyor can be rotated about a horizontal axis to clear the placer while it is swinging. This conveyor includes a retractable stop at its lower end. An escapement intercepts food stacks and delivers them to the discharge conveyor in a controlled fashion.

The appts. transfers stacks of sliced food into cavities of packages. 30.1.78 as 873177 (23pp295)

SIGA/ ★ D14 05221C/03 ★US 4182-226
Domestic multiple nut-cracker - lever mutually closing normally spatially biased nut holding plates with movement limiters

SIGASCA 01.02.78-US-874574

P28 (08.01.80) A23n-05 A47j-43/26

A nutcracker for cracking several nuts simultaneously comprises a base with spaced plates slidable in a longitudinal opening to receive nuts, resilient biasing urging the plates apart, guides formed in base and plates, and a lever pivoted at one end to the base upper end to impart cracking force to the subadjacent plate and sequentially to remaining plates.

Limiters carried by the plates restrict closing movement between them and also transfer the force. The limiters are pref. U-shaped, detachably mounted on the plates and optionally of different vertical size to regulate closing movement. Each plate is pref. recessed to receive a nut. 1.2.78 as 874574 (4pp1358)

REED/ ★ D14 05225C/03 ★US 4182-234
Tool for removing egg from shell - with minimal shell damage, air used to force egg through single hole in shell

REED W H 03.01.78-US-866625

(08.01.80) A23b-05

The device comprises an egg-receiving cup having an egg contents discharge tube at its lower end. An air tube protrudes into an egg placed in the cup and air is blown into the egg.

The device is mounted on a hand-held base which has a handle and a control for an air forcing device operable by the user's hand. In use air is forced into the egg whose contents are discharged through the tube. There is minimal damage to the egg shell, pref. only one hole being made in the shell, so it can be used for decoration etc. 3.1.78 as 866625 (18pp295)

KEIT- ★ D14 05281C/03 ★US 4182-604
Appts. for forming loose hay into blocks - with two inclined rotating toothed wheels interengaging to form pockets

KEITH MFG 13.02.78-US-877518

(08.01.80) B29c-15

Loose hay is formed into compact blocks using a mechanism which includes a first presser wheel having a ring of projecting teeth and an annular wall located radially outwards of the teeth and projecting axially beyond them. There is a second wheel also including projecting teeth and an annular second wall located radially inwardly of the teeth.

The first wheel is rotated about a first axis and the second wheel about an inclined axis so as to form pockets between the two sets of teeth and two annular walls. Loose hay is fed to the appts. ahead of where the teeth meet to form the pockets.

Loose hay or other vegetable material e.g. straw or grass, is formed into blocks suitable for animal feed or fuel. Long hay can be compacted without chopping. The machine can accommodate a high feed rate e.g. 20 tons/hr. 13.2.78 as 877518 (7pp295)

D15: WATER TREATMENT

HANU/ ★ D15 C/03 ★CS 7703-916
Oil products mechanical separator
HANULIK L 14.06.77-CS-003916
J01 (31.08.79) C02c-01/18

JANO/ ★ D15 C/03 ★CS 7800-936
Aq. effluent purificn. appts.
JANOTA J 14.02.78-CS-000936
(31.08.79) C02c-01/06

REGU/ ★ D15 C/03 ★ CS 7802-101
Chemical precleaning of waste water - formed during N-cyclohexyl-2-benzo-thiazyl sulphenamide vulcanisation accelerator prepn.
REGULA S 01.04.78-CS-002101
(31.08.79) C02c-05/02

MATE/ ★ D15 C/03 ★ CS 7804-068
Nitrates elimination from potable water
MATEJKA Z 20.06.78-CS-004068
(31.08.79) C02b-01/56

METG D15 69949T/44 = DS 2117-234
Sulphur removal - from spent liquor from petrochemical industries
METALLGESELLSCHAFT AG 08.04.71-DT-117234
H04 (10.01.80) *DT2117-234 C01b-17/16 C02c-05
Waste liqs. (I) contg. as impurities, S and predominantly olefins, is treated with acids (II) and stripped of liberated S cpds. with gases.

The novelty is that (I) are treated with (II) in the presence of added liq. hydrocarbons (III), pref. kerosene and/or gas oil. Pref. (I) are brought to a pH value of 5-7. Pref. (III), after sepn, are partly as additive for fresh (I).

A device for effecting the process comprises a neutralisation container (IV) fitted with inlet devices for (I), (II) and (III) and, adjacent to (IV), one stripping chamber (V) having a gas inlet pipe. (V) forms a structural unit with (IV) and is partitioned by vertical longitudinal plates. 8.4.71 as 117234 (4pp481)

BIPR- D15 39989X/22 = DS 2552-899
Purifying waste liquor - from e.g. sodium carbonate prodn., ammonia regeneration, brine purifcn etc.
BIPROKWA PRZEM NIE 23.12.74-PO-176803
E34 (10.01.80) *BE-837-019 C01d-07/18 C04b-01/02 C05d-03/02

Solid and fluid waste from the Solvay process (e.g. aq. suspensions from the regeneration of NH_3), comprises concentration of these materials and conversion of soda-chalk fertilisers.

In partic, the filtrate from the last stage of the Solvay process is mixed with these aq. suspensions and solid waste, to about 8-12% solids content, and filtered in two or more stages at 70-90°. Crystals which separate between these filtration stages are dissolved in water free from chloride and recycled. The filtrate is mixed with a flocculating agent (pref. of the polyacrylamide type, 1.5-3 g/m³) and cooled. The recovered solids are collected and dried. 25.11.75 as 552899 (4pp047)

FARM- D15 75467X/40 = DS 2703-143
Gluten washing and dewatering - using cylinder of increased diameter rotatable within screen stator inclined to horizontal
FAR-MAR-CO INC (USDA) 18.02.76-US-659160
+P71 (10.01.80) *US3981-738 +A23j-01/12

A device to separate wheat gluten from starch, bran and germ substances is an ascending screw conveyor which is surrounded by a funnel-shaped container. The cylindrical core of the screw is increased in diameter gradually or in steps and has on its periphery raised ribs in the shape of a boomerang. The spirals of the screw have the same pitch and outer dia. by decreasing height. The screw is surrounded by a perforated tube. Spray nozzles inject water over the top part of the screw, this accumulates at the bottom part and is recirculated by a pump.

This results in an efficient mixing, little losses of gluten and a low wash water consumption. 26.1.77 as 703143 (7pp39)

DERO- D15 20194B/11 = DS 2739-335
High purity sterile water production - in reverse osmosis cells with overflow and surplus permeate recycled to desalination section
DEUT ROTEN KREUZES 01.09.77-DT-739335
(10.01.80) *DT2739-335 C02b-01/82

Prodn. of water free from spores and suspended particles comprises reverse osmosis of completely desalted water. The overflow from the osmosis unit is passed to a levelling container.

Residual permeate is recycled with the feed, which is purified and chilled before passing to the reverse osmosis

unit. The prod. is used to prepare medicinal injections and for technical applications. 1.9.77 as 739335 (9pp047)

MANN/ ★ D15 03652C/03 ★ DT 2826-922
Municipal sewage treatment - with loading of aerobic and anaerobic stages depending on specified conditions
MANNCHEN W 20.06.78-DT-826922
(10.01.80) C02c-01/06

A biological treatment system of effluents with a surplus of nitrogen, esp. municipal sewage, applies aerobic and anaerobic methods in alternating successive basins. The distribution of the inflow to the individual basins is controlled as a function of the type and content of the biologically digestible components, the inflow rate, and the trends of the pollutants and of the inflow rate.

This ensures that before the start of a peak load with nitrogenous cpds., enough nitrite and/or nitrate is present to reduce at once the matter, which is harmful to a nitrification, by means of biosludge and of the fixed oxygen in nitrite and nitrate.

In a municipal sewage plant contg. a preclarification, a first aeration basin, a first denitrification basin, a second aeration basin, a second denitrification basin and a reclarification basin, the recycled sludge from the reclarification basin goes to the first aeration stage.

At night, most of the small amt. of sewage is directed into the second denitrification basin; the first aeration stage receives little, except the clear water from the sludge digestion plant. This produces much nitrite and nitrate which passes to the second denitrification basin for reaction. During the daytime the proportion of sewage going to the first stage is gradually increased.

In the case of heavy rainfall, the principle of oxidation and elimination of nitrogen in the first stages is maintained. 20.6.78 as 826922 (9pp39)

KRIE/ ★ D15 03659C/03 ★ DT 2827-116
Granulation of sewage sludge - by thickening and moving through dry self hardening coating material
KRIEGER H 21.06.78-DT-827116
(10.01.80) C02c-03

Sewage sludge is processed to granules for ready dumping by dewatering the sludge from a digestion tower and by thickening it through the admixture of fillers before shaping it to granules. The continuous motion through a recirculated self-hardening dry bonding medium surrounds the granules with a stable protective sheath which is impermeable to water.

Such granules can be deposited on dumps without risk that toxic components or infectious germs are washed out and contaminate the water supply. 21.6.78 as 827116 (5pp39)

ROHG ★ D15 03736C/03 ★ DT 2829-018
Stable aq. water-hardness stabiliser soln. - contains vinyl copolymer contg. anionic and cationic gps. and cationic surfactant or polyvalent cationic cpd.
ROHM GMBH 01.07.78-DT-829018
A97 M14 (A14) (10.01.80) C02b-05/06 C23f-07/08

Soln. contains, by wt. (1) 20-99% water, (2) 0.5-79 water-soluble, vinyl copolymer (I), consisting of (A) 10-90 (50-80) mol% α, β -unsatd. carboxylic acid, (B) 10-90 (20-50) mol% ammonium gp-contg. vinyl monomers and opt. (C) 0-80 mol% of ≥ 1 further comonomer which is copolymerisable with (A) and (B) and (3) 0.5-79% of ≥ 1 water-sol. ionic or ionisable cpd. (II), having precipitating activity towards an aq. polyacrylic acid soln.

The solns. have anticorrosive or biocidal activity, esp. for cooling water or feed water for steam generation. Aq. solns. contg. H_3PO_4 can be used as min. scale-forming phosphatising baths for metals. The incorporation of the cationic unit (B) in (I) prevents the ppn. of (I) in the presence of (II). 1.7.78 as 829018 (21pp200)

BOEF ★ D15 03746C/03 ★ DT 2829-142
Increasing biological breakdown of toxic waste water - by gradually adapting bacteria to increasing concn. of toxin
BOEHRINGER MANNHEIM GMBH 03.07.78-DT-829142
(10.01.80) C02c-01
Process for improving the degradation capacity of a clarifying plant with ≥ 1 aerobic, and opt. anaerobic stages,

for treating water contg. toxic substances (A), comprises batchwise addn. of the contaminated water (or (A) themselves). The concn. of (A) in each batch is gradually increased so that the biological processes are almost broken down after each batch, and the next batch is added only after these processes have recovered from the effects of the preceding batch.

Pref. the concn. of (A) in each batch is such that in the activated sludge pond the COD-decomposition rate falls to 5-15 (20-15)% while the biomass in this pond never falls below 10 (20)% of its initial value.

Used for treating domestic or industrial wastes. By gradually acclimatising the bacteria to high concns. of (A) the tolerable limits of (A) in the waste can be much increased. 3.7.78 as 829142 (35pp1251)

OCN ★ D15 03750C/03 ★DT 2829-903
Sea water desalination - where warm surface-water is desalinated by producing vacuum through water column and condensation by deep sea water

LICENTIA PATENT GMBH 07.07.78-DT-829903
(10.01.80) C02b-01/06

In a desalination process for seawater by distillation, the surface water which has been heated by solar irradiation is evaporated at a temp. to suit the surface temp. The low pressure, required for this evaporation, is maintained by a corresponding water column. Colder water from greater depths is used for the condensation of the steam produced from the surface water.

This system requires no maintenance and is free from the problem of scale deposits. No extraneous energy is required and the desalination proceeds even at night time. 7.7.78 as 829903 (10pp39)

HADJ/ ★ D15 03751C/03 ★DT 2830-705
Sea water desalination - by solar radiation in distribution ducts from coast to inland consumers

HADJERIL 24.06.78-DT-830705
(10.01.80) C02b-01/06

In a seawater desalination system, the seawater is channeled from the coast to inland consumers in V-shaped channels. Woven tissue absorbs the water and this is turned into vapour under a semicircular transparent dome cover. The fresh water condenses and is collected along the sides.

This system supplies drinking water for users away from the coast line. It causes a minimum of disturbance to the environment. 24.6.78 as 830705 (7pp39)

BOV ★ D15 03752C/03 ★DT 2830-755
Sewage sludge sanitising process - by electron or gamma irradiation preceded by mechanical dewatering

BBC AG BROWN BOVERI CIE 29.06.78-CH-007082
(10.01.80) C02c-03

Fluids such as sewage sludge are sanitised by irradiation with electron beams or gamma rays. A dewatering section, pref. based on the pressurised endless belt screen principle, precedes the irradiation section.

The volume is reduced by the mechanical dewatering so that 35% less costs arise for the irradiation. The irradiation being the last stage, the risk of re-infection is reduced. 13.7.78 as 830755 (10pp39)

AVROL ★ D15 03766C/03 ★DT 2923-760
Sewage sludge pasteurising cylinder - with vertical revolving worm creating several helical descending passages (NL 28.12.79)

VON ROLL AG 26.06.78-CH-006950
A88 + P34 (10.01.80) A611-03 C02c-03

A vessel for the pasteurisation of sewage sludge is a slender vertical cylinder with an inlet on top and an outlet at the bottom. A worm, driven by a motor, has several helical ribs which divide the annulus between worm shaft and cylinder wall into several individual spiral passages.

This eliminates both the risk of infection of the container and of any re-infection of already pasteurised sludge by sucked-in contaminated air. 12.6.79 as 923760 (19pp39)

KRUG- ★ D15 03782C/03 ★DT 2925-055
Heat recovery system on effluent discharge - having recycle around evaporator of heat pump to balance out variations in flow

KRUGER I A/S 22.06.78-DK-002820
Q74 (10.01.80) F24i-03/04

Heat content of an effluent water stream is upgraded by a heat pump. The effluent passes through a settling tank, a biological sludge treatment tank and a further settling tank. The flow to the system is intermittent.

A stream off the outlet water is pumped round the evaporator of the heat pump. This flow is gauged to match the total max. flow through the system. At times of low flow, the flow is maintained by recycling liquid back to the final settling tank.

Used for recovering and upgrading heat in effluent streams. The flow shows large diurnal variations and the system allows these to be smoothed out and ensure that the heat pump always operates at optimum efficiency. 21.6.79 as 925055 (10pp1053)

MARG/ ★ D15 03785C/03 ★DT 2925-084
Oxygen treatment of contaminated surface water - by self-filling floating tank and internal oxygen injection with compressed air expulsion

MARGERIN R 27.06.78-FR-020090
(10.01.80) C02b-09

A system for the oxygen treatment of contaminated water in lakes, ponds and other surface waters consists of a closed tank, suspended from a pontoon with floats. The tank is filled at one point to a certain level and the space above the level is filled with pressurised oxygen. After removal to the desired area, the water with the dissolved oxygen is released, assisted by compressed air.

The pressurized oxygen speeds up its solution in the water. The process is easy to control and the water can be drawn in and released at the desired levels. The system can be speedily applied to critical areas. 21.6.79 as 925084 (13pp39)

CIBA ★ D15 03805C/03 ★DT 2925-689
Removing cationic substances from waste water - with anionically modified cellulose, contg. amino:methoxy bridging gps. (BE 28.12.79)

CIBA GEIGY AG 29.06.78-CH-007098
A91 (A11) (10.01.80) B01d-15 C02c-05/08

Removal of cationic substances from aq. soln. comprises treatment with an anionically-modified cellulosic material (A) in which the anionic gps. are bonded to cellulose via -OCH₂-N< gps. (The N atom forms part of an amide gp. of the anionic portion; the O atom is attached to cellulose).

Pref. bridging gps. are -O-CH₂-N(Y)-Z- (X=CO, COO, CS, CONY', >C=NH, -P(O)m-₁(OR)(O)m'-₁-, SO₂ or a C atom of a N heterocycle adjacent to ring N, Y, Y' and R = H or organic gp., m and m' = 1 or 2).

Used esp. for treating waste waters contg. cationic dyes, brighteners, textile or dyeing auxiliaries, surfactants and/or tanning agents. Compared with known cellulose-based cation exchangers (A) are easier to make and have higher absorption capacity and speed. Spent (A) can be disposed of by burning or used to make packaging or building materials. 26.6.79 as 925689 (32pp1251)

RHEI- ★ D15 03830C/03 ★EP ---6-597
Water aeration system - with converging cavities on periphery of revolving parallel semi-immersed discs

RHEINTECH WEILAND 01.07.78-DT-829006
(09.01.80) B01f-03/04 C02f-03/08

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW)

The aeration of water is improved and combined with a purification by a mat of biogenic material by a group of parallel discs, made of metal or plastics, which are revolved in a clarification tank by a horizontal shaft. Each disc has along the periphery a rectangular cavity which narrows from a wide leading end to a small lagging end.

The air, trapped in the cavities, is compressed by and mixed intimately with water as the mix is ejected below and above water level. This improves the rate of oxygen dissolution and assists the formation of a mat of biomass on the surface of the discs.

23.6.79 as 102079 (17pp39)

(G) ISR: DT2340584; DT2331343; DT1944502; US3886074; FR2240190; DT2254804.

HENK ★ D15 03845C/03 ★EP---6-618
 Aluminosilicate granulate water softener prepn. - by mixing aluminosilicate powder with source of silicon dioxide and alumina, granulating and drying
 HENKEL KG AUF AKTIEN 03.07.78-DT-829165
 E33 (09.01.80) C01b-33/28 C02f-01/42 C11d-03/08
 D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, SW).

Prepn. of cation-exchanging aluminosilicate granulate with aluminosilicate as binder comprises (a) adding, simultaneously or consecutively, (i) m mol SiO_2 and (ii) n mol Al_2O_3 , to a finely divided, hydrated crystalline aluminosilicate powder having molar compsn.

0.7-1.5 Cat₂/n 0. Al_2O_3 . 0.8-6 SiO_2

(where Cat is a cation having valency n), particle size < 30 μ and Ca bonding capacity 50-200 mg CaO/g anhydrous aluminosilicate, to a granulator; (b) mixing for 1-120 (pref. 5-60) min. until moisture is evenly absorbed by the solids to form a granulate having particle size 0.05-1 (pref. 0.1-0.5) mm, and (c) drying for 0.5-30 (pref. 10-30) hrs. at 80-150 (pref. 100-130)°C.

In (a), SiO_2 is added as an aq. alkali silicate soln. (1 Na_2O : 1-3.5 SiO_2) or silicic acid sol contg. 10-40 wt. % SiO_2 , and Al_2O_3 is added as acid-hydrolysable salts, esp. $\text{Al}_2(\text{SO}_4)_3$, and/or alkali aluminate, as powder and/or as aq. soln. The total quantity of added SiO_2 is 5-30 wt. % w.r.t. solids mixt. of aluminosilicate powder and added SiO_2 . Ratio m : n is 1 : 1 to 5 : 1.

The granulates are used as water-softening cation exchangers for washing textiles and dishes, where the washing liquor is recycled over the cation exchanger situated in a container outside the washing vessel.

28.6.79 as 102150 (19pp200).

(G) ISR: DT2524484; DT2016838; DS1203238; DT2707313; DS1567557; DS1567566; DS1195730; DT2413837; DT1667547; DT1567543.

ESSO ★ D15 03906C/03 ★EP---6-746
 Detecting pollution in aq. effluent - by comparing reading from differential refractive index detector and UV detector for effluent and clean water sample

ESSO FRANCAISE SA 22.06.78-GB-027601

R16 (09.01.80) G01n-21/17 G01n-33/18

D/S: E(DT, FR, GB, IT, NL).

Appts. for detecting pollution by soluble organic or inorganic cpds. comprises an effluent reservoir, a clean water reservoir, a thermostatically controlled bath, a coalescer, a charcoal filter, a differential refractive index detector and a UV detector. Effluent is intermittently sent through the appts. from its reservoir and at other times clean water of known purity is sent from its reservoir through the appts. The presence of soluble organic and inorganic cpds. in the effluent is determined qualitatively by comparing the readings from the detectors.

Appts. is used for continuously taking aqs. samples of sewage to determine the extent of pollution.

22.6 79 as 301214 (19pp67)

(E) ISR: DT2104969; DT2132166; FR2400200; US4057721; US3807860; 1 Journal reference.

TILL/ ★ D15 03913C/03 ★EP---6-776
 Pollution control using binders - for treating oil pollution, residual sludges or waste waters (BR 11.12.79)

TILLIE 18.05.79-FR-012702 (30.05.78-FR-016009)

H03 + Q41 (09.01.80) C02b-09 C02c-01 C02f-01/40 C09k-03/32 E01h-12

D/S: E(OE, BE, CH, DT, GB, IT, LU, NL, SW).

Pollution control process, e.g. for (a) removing oil spills from beaches, (b) removing oil slicks from the sea or (c) treating residual sludges or waste waters, comprises applying hydraulic binders and/or natural or synthetic organic binders (esp. α - or β - $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$) which have setting, hardening, sequestering and retention properties such that a product which is easy to handle and recover is formed.

28.6.79 as 400337 (36pp367)

(F) ISR: FR2168060; FR1570245; FR-846310; BE-710964.

RHON ★ D15 03914C/03 ★EP---6-777
 Organic, partic. acrylic polymer prepn. - by UV irradiation of thin film of monomer aq. soln.

RHON-POULENC INDUSTRIES 09.06.78-FR-017857

A14 (09.01.80) B01f-01 C08f-02/46

D/S: E(BE, DT, FR, GB, IT, LU, NL, SW)

Organic polymers useful partic. as flocculants are prepd. by subjecting to UV irradiation an aq. soln. of an olefinically unsatd. monomer in the form of a thin film deposited on a mobile support under the UV source. The atmos. above the photopolymerisation medium is kept humid throughout the process until the aq. soln. becomes solid.

The polymers are soluble in water and are free from water-insoluble fractions. The process also avoids formation of "onion peel" type insoluble fractions.

30.5.79 as 400341 (11pp950)

(F) ISR: FR2327258; DT2546279.

EMBU- ★ D15 03962C/03 ★FR 2421-145
 Drinking water etc. disinfected with corona discharge negative ions - by bombarding thin film of water from high potential electrodes

EMBUDEC 31.03.78-FR-009563

(30.11.79) C02b-03/02

The water surface is increased by forming the water into a thin film, which can be moving or stationary, or into an emulsion. The water surface is bombarded with negative ions produced by corona discharge from a set of pointed electrodes. The electrodes are held at an electric potential w.r.t. the surfaces in contact with the water. Part of these surfaces is pref. an electrically conductive material with an earthed connection.

The thin film of water can be produced by running the water through a shallow channel beneath the electrodes. Alternatively, the film can be formed by water overflowing to run down surfaces faces by a set of electrodes.

The system combines efficiency of disinfection with simplicity and very economical usage of energy. The treated water does not possess an offensive flavour which can result from chlorination. 31.3.78 as 009563 (9pp448)

HOBA- D15 48616Y/27 =GB 1559-253
 Waste material handling system - in which food waste disposal units supply slurry to single press for water removal

HOBART CORP 05.05.76-US-683475

P41 (16.01.80) *US4032-446 + B02c-18/40 B02c-21

A waste material handling system includes waste food disposer units for forming a slurry, conduits for connecting the units to a press for removing water, check valves in each of the conduits for blocking the flow of slurry from towards a unit while allowing flow slurry away from a unit, and devices to enhance the flow from the units to the press.

Pref. a pump is associated with each conduit to move slurry toward the press by directing a liq. flow through a nozzle in the conduit. 15.4.77 as 015824 (9pp1376)

SALA- D15 40319Y/23 =GB 1559-384
 Lifting and lowering mechanism for sludge scrapers - which responds to signals from torque meter and works without damaging, frictional overloads

SALA INT AB 28.11.75-SW-013429

(16.01.80) *DT2653-791 B01d-21/06 B01f-07/18

A circular settling, thickening, sludge or mixing tank has arm which extends across the tank bottom mounted on a vertical pillar such that the arm can be raised and lowered, and a elongate rigid element connected at the sidewall of the tank and to the pillar to transmit torque derived from rotation of the arm to the sidewall while allowing vertical movement of the arm.

Pref. the element is pivotably mounted on the sidewall. A sensor is pref. provided to monitor the transmitted torque. A simple pillar construction is possible when the torque is counterbalanced by the sidewall. 23.11.76 as 048769 (10pp1376)

FARB D15 23336A/13 =GB 1559-449
 Semipermeable membranes comprising aromatic polyamide - with di:sulphimide gps., for ultrafiltration and reverse osmosis

BAYER AG 24.09.76-DT-642979

A88 J01 (A23) (16.01.80) *BE-858-937 B01d-13 C08g-69/32 C08j-05/18 + B01d-31

semi-permeable membrane comprises an aromatic polyamide contg. disulphimide gps., and having a relative viscosity, Z_{rel} , at 20°C., as a 0.5 g/dl soln. in N-methyl pyrrolidone of >1.4 . Pref. 20-80 mol.% of the aromatic polyamide w.r.t. the total amt. of the structural segments derived from the diamines or dicarboxylic acids consist of structural elements contg. a disulphimide gp., ≤ 80 mol.% of the structural segments consisting of other aromatic polyamide.

The semi-permeable membrane is esp. used for ultrafiltration and inverse osmosis. The membranes have a high permeability to water, esp. 1,000-5,000 l/m²d. under pressure of 20 bars, and a high retention capacity for dissolved substances. The membranes are selective, having no retention capacity for inorganic salts, being used for removing certain organic substances from aq. solns. 2.9.77 as 039529 (13pp931)

TECH-★ D15 04046C/03 ★GB 2024-795
Treatment of liq. effluents - by aerobic biological treatment at high load by a fixed biomass followed by physical and/or chemical purification

SOC GEN TECHN NOUV 05.07.78-FR-019981
(16.01.80) C02f-01/52 C02f-03/04 C02f-09

liq. effluent is purified by aerobic biological treatment at high load by a fixed biomass followed by physical and/or chemical purification treatment. Pref. the amt. of fixed biomass used is sufficient that the biological system operating at high load causes a 15-40% reduction in original BOD.

The process gives high purification yields and allows direct discharge of the prod. into the natural surroundings. The process is adapted to tolerate rapid variations in input of effluent. Investment costs are reduced since the need for intermediate decantation is avoided. The process can be used for urban or industrial effluent treatment. 4.7.79 as 023221 (5pp513)

LEI/★ D15 04079C/03 ★GB 2024-886
Absorption and filtration mat for waste liquids - comprises wet laid matrix contg. cellulose fibres and polymeric micro-bits

KLEIN M 07.07.78-US-922656
A97 F09 J01 (A13 A17 A25 A88) (16.01.80) D21h-03/40

The mat comprises a wet-laid, non-woven matrix composed of randomly arranged, irregularly intersection and overlapping particles, which include cellulose fibres to provide the wet strength of the matrix during the flat wet stages of mat prodn. and to retain the integrity of the mat under the tensile stress to be encountered in use.

Also present are micro-bits of non-brittle expanded polymer which is (a) polystyrene, (b) poly(2-6C)olefin, (c) melt alloy of polyethylene with 10 wt % polystyrene, (d) propylene-(20-30 wt %) ethylene copolymer (e) melt alloy contg. >50 wt % polypropylene and EVA copolymer (contg. 30% PVAc) or (f) expanded flexible polyurethane. The micro-bits provide the mat with the porosity and flow-rate level required. The matrix can also include PET fibres, finely divided activated carbon, diatomaceous earth and/or colloidal alumina monohydrate.

The mat is used to remove particulate and colloiddally dispersed and/or dissolved substances from liquids, partic waste industrial effluent. 4.7.79 as 023251 (11pp1319)

MECS-★ D15 C/03 ★HU T017-448
Countercurrent contact of granules and liquids - partic. for continuous ion exchange, e.g. in water purification

MECSEKI ERCBANYASZA 04.02.77-HU-ME2043
J01 (28.12.79) B01j-01

VIZG-★ D15 C/03 ★HU T017-465
Small prefabricated effluent purifying device - operates by complete oxidation

VIZGAZDALKODASI TUD 12.08.76-HU-VI1089
(28.12.79) C02c-01/06

BUDA★ D15 C/03 ★HU T017-552
Determining the hydrocarbon content of aq. solns. - partic. in analysis of industrial effluents and boiler feedwater

BUDAPESTI MUSZAKI EGYETE 08.08.77-HU-BU0857
R16 (28.12.79) G01n-21/28 G01n-33/18

OIKA/★ D15 04122C/03 ★J5 4152-348
Liq. sewage treatment using a small amount of hypochlorite - in a low cost installation which does not require petroleum fuels

OIKAWA S 30.03.78-JA-037001

E34 (30.11.79) C02c-01/40 C02c-05/04

Polluted water is subjected to deodorisation, sterilisation and purification by (i) adding hypochlorite soln. and (ii) stirring and allowing to stand, so that the water is made milky and sepd. into a transparent aq. layer and sediment. The water is completely deodorised in this state.

The odour source in the polluted water (e.g. H₂S, NH₃, ammonium acetate, methylmercaptan or acetoamide) is reacted with the hypochlorite and converted to give an odourless stable substance. N₂ is also obtained and discharged. Bacteria existing in the water are completely exterminated so that the pollution problem is completely solved. 30.3.78. as 037001 (2pp34)

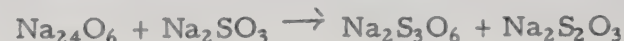
SHOW★ D15 04123C/03 ★J5 4152-350
Treatment of waste liquor contg. sodium thiosulphate - by oxidn. in an alkaline state using oxygen contg. gas

SHOWA DENKO KK 22.05.78-JA-060062

E34 (30.11.79) C02c-05/04

Sodium thiosulphate contained in waste liquor discharged from a chemical plant is converted by oxidation to Na₂SO₄ without any generation of SO₂ and deposition of sulphur by oxidising it with O₂ or O₂-contg. gas under alkaline conditions (with NaOH) in the presence of an excess amt. of Na₂SO₃. The reaction mechanism is as follows:

Na₂S₂O₃ is oxidised to Na₂S₄O₆ which is then converted to Na₂S₃O₆ and Na₂S₂O₃ in the presence of Na₂SO₃. Then, Na₂S₃O₆ is converted to Na₂S₂O₃ and Na₂SO₃ in the presence of NaOH and Na₂SO₃ thus produced is oxidised with oxygen to harmless Na₂SO₄.



Up to 98% of the thiosulphate is removed in the presence of an excess amt. of Na₂SO₃, and further the remaining excess amt. of Na₂SO₃ is almost completely removed in this process. In conventional processes where H₂SO₄ is used, sulphur is deposited and SO₂ is generated as follows: H₂SO₄ + Na₂S₂O₃ → Na₂SO₄ + H₂O + SO₂↑ + S. 22.5.78. as 060062 (3ppW34)

YAWA★ D15 04124C/03 ★J5 4152-351
Nitrification suppression in aerophilic activated sludge treatment - by controlling the rate of aeration automatically as a function of the redox potential

NIPPON STEEL CORP 20.05.78-JA-060444

(30.11.79) C02c-01/02

Organic pollutants are removed from effluent contg. organic pollutants and ammonium cpds. e.g. sewage, or industrial effluents by aerobic activated sludge treatment. The improvement comprises controlling the redox potential of the aeration vessel within +50 to +150 mV. The nitrification reaction is largely suppressed and simultaneously the degradation of organic pollutants is carried out smoothly.

Process takes place without the flotation or outflow of sludge from the settling vessel which are due to rapid formation of nitrogen oxides and without inhibition of the function of BOD bacteria.

The redox potential of the aeration vessel can be controlled by varying the aeration rate, amt. of pollutants admitted, concn. and activity of sludge, temp. and by pH etc., but the aeration rate and the amt. of pollutants admitted are most easily controlled by automation. The latter is not desirable as the loading of pollutants w.r.t. activated sludge varies and so the aeration rate is pref. automatically adjusted by feedback from the redox potential. 20.5.78. as 060444 (4pp34)

NIDE ★ D15 04148C/03 ★ J5 4152-613
Metals recovery from waste water - using ferrous salt to allow heavy metals and molybdenum, tungsten and/or tellurium to be obtained
NIPPON ELECTRIC KK 22.05.78-JA-061486
E31 M25 (E36) (01.12.79) C01b-19 C22b-34/30
In the recovery of metals from a waste water contg. ≥ 1 of Mo, W and Te in addition to heavy metals, (i) a ferrous salt is added to the waste water at a pH of 8-12 and either an O_2 -contg. gas is passed in or an oxidising agent is added so that a part of the ferrous ion is oxidised to produce a heavy metal-contg. spinel type ferric ppte., and (ii) the ppte. is sepd. into solid and liquid fractions and the pH of the liquid fraction is lowered so that a ppte contg. ≥ 1 of the Mo, W and Te is formed.
The ferrous salt is pref. sulphate and added in an amount of 2-5 equivs. w.r.t. the heavy metals.
22.5.78. as 061486 (3pp53)

HITG ★ D15 04173C/03 ★ J5 4152-664
Multistage evaporator for producing fresh water from sea water - where steam produced in one stage is used as heat source in the following stage
BABCOCK-HITACHI KK 23.05.78-JA-062049
(01.12.79) B01d-01/26 B01d-03/06 C02b-01/04
A flash evaporator and a can are connected through a partition having a flash box in the approximately horizontal direction to form an evaporating unit. Plural evaporating units are vertically overlapped and connected so as to utilise the steam in each evaporating unit as the heating steam of the following stage can and to use non-evaporating brine in the flash evaporator as a spraying brine of the following stage can.
This appts. has compact and efficient construction.
23.5.78. as 062049 (5pp35)

HITG ★ D15 04174C/03 ★ J5 4152-665
Multistage evaporator for producing fresh water from sea water - has flash evaporator and evaporating can connected through partition
BABCOCK-HITACHI KK 23.05.78-JA-062050
(01.12.79) B01d-01/26 B01d-03/06 C02b-01/04
A flash evaporator and an evaporating can are approximately horizontally connected through a partition wall having a flash box to compose an evaporating unit. Evaporating units are vertically overlapped and connected to use the steam in the evaporating unit as the heating steam for the following stage can and to use a non-evaporating brine in the flash evaporator as the spraying brine for the following stage can. Each can of the following stage evaporating unit is disposed below the flash evaporator of the upper stage evaporating unit, so that the flow-down channel may be shortened considerably.
Appts. permits effective utilisation of thermal energy and has a compact and high efficient construction. It may be used not only to produce fresh water, but also used to evaporate other liquids.
23.5.78. as 062050 (5pp35)

HITG ★ D15 04175C/03 ★ J5 4152-666
Multistage evaporator for fresh water prodn. - from sea water, comprising several flash evaporator units stacked to form lines, at least two lines being disposed in parallel
BABCOCK-HITACHI KK 23.05.78-JA-062051
(01.12.79) B01d-01/26 B01d-03/06 C02b-01/04
Each evaporating unit comprises a can and a flash evaporator. Several evaporating units are vertically stacked to compose an evaporating line, ≥ 2 evaporating lines are disposed in parallel to form an evaporator. The evaporator steam in the cans of the desired evaporating line is supplied as the heating steam into the cans of the other evaporating line.
Preheaters are set in each evaporating line to preheat the brine, and the brine passes through the most upper preheater in one evaporating line is introduced into the other evaporating line.
This apparatus may be not only adapted in the fresh water producer, but also as a general evaporator. Efficiency can be maximised.
23.5.78. as 062051 (5pp35)

SANO/ ★ D15 04180C/03 ★ J5 4152-671
Water treatment appts. - for producing alkaline water for beverage mfr. and acidic water, partic for bathing and toilet purpose
SANO Y 23.05.78-JA-060561
J03 (01.12.79) C02b-01/82 C25b-09
A water treatment device for producing alkaline water partic. suitable for beverage and acidic water partic. suitable for bathing or toilet purposes by electrolytic treatment, is claimed. Appts. comprises a sealed casing a stacked plate assembly placed in the casing, the assembly comprising a pair of spaced anode plates, a cathode plate disposed between the anode plates, defining a pair of narrow channels on the opposite sides and a U-shaped semi-membrane sheet structure comprising a lattice frame formed with spacer studs and carrying a membrane film extending across the width of the lattice openings.
As the water flows through the channels, acidic ions produced by the electrolytic reaction in the cathode chamber passes to the other side of the membrane film, i.e., the anode chamber whereas alkaline ions are collected to the cathode chamber.
23.5.78. as 060561 (4pp47)

ASAH ★ D15 04184C/03 ★ J5 4152-680
Selective treatment of waste liq. contg. oil - by passing through membrane of resin having specified min. critical surface tension
ASAHI CHEMICAL IND KK 23.05.78-JA-060585
A88 J01 (01.12.79) B01d-13 B01d-17
Method comprises shaping a resin (mixt.) having critical surface tension > 35 dyne/cm. to obtain a porous membrane, and passing a waste liq. contg. oil, surface active agents, etc. through the membrane to obtain an oil-free liq.
Treating temp. is $35-90^\circ\text{C}$ and the compsn. of the waste liq. is defined by (a) $0.02 \leq a \leq 0.5$ ($Z > 0$) and (b) $0.5 \leq a \leq 0.8$, $Z > 1.78 \times 10^{-3} \{ a - (0.5 a T/T_b) \}$ and $Z > 0$. a is defined as $X/[X+Y]$. X is vol. fraction of oil contained in the waste liq.; Y is vol. fraction of other components; Z is amt. (mol/l) of the surface active agent; T_b is b.pt. ($^\circ\text{C}$) of the waste liq. under 1 atmospheric pressure; and T is temp. of waste liq. ($90^\circ\text{C} \leq T \leq 35^\circ\text{C}$). Resin is PVA, PVC, nylon 6, nylon 66, acetyl cellulose, polyacrylonitrile, polyether sulphone, polysulphone, polyamide, polyimide, or polyamidoimide.
23.5.78. as 060585 (8pp51)

SAOK ★ D15 04188C/03 ★ J5 4152-685
Dye adsorbing compsn. for treating waste water contg. dye - consists of cellulose-based powder contg. water insol. deacetylated chitin
SANYO KOKUSAKU PULP 23.05.78-JA-060642
A97 (A11) (01.12.79) B01d-15
The compsn. consists of a cellulose system powder contg. a water-insol. deacetylated chitin. The compsn. is obtd. by sufficiently immersing the cellulose system powder in an acidic soln. of deacetylated chitin, treating the immersed powder with an alkaline cpd. or an aq. soln. of the alkaline cpd., and so making the chitin of the powder water-soluble. The deacetylated chitin is obtd. by treating shell of crustacea, insect, or marine plant to obtain a polysaccharide consisting of N-acetyl-D-glucosamine.
In an example, the powder of deacetylated chitin was dispersed in water, and conc. HCl was added so as to obtain a soln. A sulphate pulp was hydrolysed with H_2SO_4 at 95°C for 60 minutes, washed, and filtered to obtain a cellulose powder. The cellulose powder was added to the soln. of chitin, and neutralised with NaOH to obtain a slurry. The slurry was dehydrated and dried to obtain a dye absorbing agent.
23.5.78. as 060642 (8pp51)

EBAI ★ D15 04279C/03 ★ J5 4153-777
Sepn. of liq. from foams using permeable membrane - involves addn. of alcohol to foams before sepn., with liq. permeating through membrane being used as antifoaming agent
EBARA INFILCO KK 25.05.78-JA-062626
A97 E17 J01 (04.12.79) B01d-13
The method comprises separating foaming liquid using permeable membrane, after addn. of alcohols to the foam and reusing liquid permeated through the membrane as antifoaming liquid.
The amount of antifoaming liquid used may be reduced and lowering of permeability of membrane may be pre-

ated. Alcohols used are e.g. methyl alcohol, ethyl alcohol, propyl alcohol, glycerin, and polypropylene glycol. 25.5.78. as 062626 (3pp96)

EAI ★ D15 04280C/03 ★J5 4153-778
protein-contg. liq. treatment - where bubbles on surface of liq. are removed and liq. passed through permeable membrane under pressure

EBARA INFILCO KK 25.05.78-JA-062627

J01 (04.12.79) B01d-13 C02b-01/82 C02c-05/02

q. contg. protein is treated by permeable membrane under pressure, after it was once stored in storage tank, which bubbles formed near the surface of liq. in the storage tank are recovered as droplet by suction, and the lower liq. in the storage tank is passed through the permeable membrane under pressure to separate into permeate liq. and conc. liq.

The process prevents bubbles from being mixed into permeate liq. and avoids troubles of high pressure pump. The sepn. efficiency of membrane is enhanced.

In an example, protein-contg. water, whose total solid concn. is 3.5-4.5% was continuously fed into storage tank, and bubbles formed near the surface of the liq. are sucked to form droplet by Nash vacuum pump. Alternatively, liq. was carried to tubular reverse osmosis membrane through cartridge filter of 30 mesh with pressure to 45 kgf/cm² by high pressure pump, and thus was sepd. into membrane permeate liq. and conc. liq. 25.5.78. as 062627 (4pp96)

SGI- ★ D15 04367C/03 ★J5 4154-152
purifying waste warm water for reuse in power plants, etc. - by removing scaling components with a mixt. of hydrous ferric oxide and synthetic zeolite

ASIA GIJUTSU CONSUL 24.05.78-JA-060914
(05.12.79) C02b-05

In the recycling of waste water at 90-100°C, resulting from subterranean power plants or waste heat-utilising power plants, to a well after utilisation of heat, the improvement comprising contacting it with a mixt. of Fe₂O₃·H₂O and synthetic zeolite produced from kaolin-type waste alumino-silicate (SiO₂·Al₂O₃·2H₂O) and waste silica to remove scaling components, e.g. SiO₂, SO₄²⁻, PO₄³⁻, Na⁺, Cl⁻, Mg²⁺, Ca²⁺ etc. by ion-exchange prior to recirculation, so that blinding of the well is prevented even without cooling the waste water.

The ion exchanged synthetic zeolite sepd. from the waste water in a cooling or filtration vessel is used as a road material, etc. 24.5.78. as 060914 (3pp34)

HITK ★ D15 04368C/03 ★J5 4154-155
incineration of chromium-contg. sludge from aq. waste - is carried out in presence of calcium cpd., to prevent dissolution of hexavalent chromium from incinerated ash

HITACHI METAL KK 25.05.78-JA-062463
E31 (05.12.79) C02c-03

The incineration of Cr-contg. sludge, e.g. resulting from treatment of municipal sewage and aq. industrial waste etc., is carried out in the presence of a Ca cpd., e.g. Ca(OH)₂, CaO and CaCO₃ etc., so that dissolution of hexavalent Cr ion from incinerated ash is prevented. Hence it is not necessary to provide any special means for creating a reducing atmosphere in the incinerating furnace.

In an example, Ca(OH)₂ is added to a sludge contg. 5,000 ppm Cr component (obtd. from treatment of aq. plating waste) in amts. > 40 wt. % (21.6 wt. % calculated in terms of Ca). The mixt. is incinerated at 800°C for 1 hr. in an electric furnace, and dissolution of Cr⁶⁺ is hardly observed.

Generally, formation of Cr⁶⁺ in the incinerated ash increases in accordance with increase of the Ca component in the sludge but Cr⁶⁺ formation reaches a max. when the amt. of Ca(OH)₂ approaches 25 wt. %. Then Cr⁶⁺ formation is gradually decreased, even when increasing the amt. of Ca(OH)₂ to be added, and it is hardly observed when the amt. of Ca(OH)₂ to be added is > 40%. 25.5.78. as 062463 (2pp34)

KAWI ★ D15 04369C/03 ★J5 4154-157
Treatment of effluent contg. thiosulphate, etc. - includes addn. of acid to adjust pH before retention of effluent and addn. of oxidising agent

KAWASAKI STEEL KK 24.05.78-JA-061021

E36 M24 (05.12.79) C02c-05/04

Effluent contg. S₂O₃²⁻, S²⁻, SO₃²⁻ etc., esp. aq. material from blast furnace slag in steel plant is subjected to chemical oxidn. treatment to reduce its COD value. The improvement comprises addn. of org. and/or inorg. acid to adjust its pH to a predetermined value, pref. < 2, and subjecting the effluent to retention treatment for 2-3 hrs. to decompose by oxidn. S₂O₃²⁻ etc., followed by addn. of oxidising agent, e.g. NaClO, and Cl₂ etc., so that the amt. of the oxidising agent is reduced.

In an example, water having COD of 200 ppm is transferred to a pH-adjusting vessel to which 1,450 ppm H₂SO₄ is added to adjust pH to 1.5, followed by retention for 3 hrs. under conditions to decompose by oxidn. the COD component. Thereafter, 926 ppm of Cl₂ is added, followed by retention and adding 1,410 ppm NaOH for neutralisation. The COD content was < 15 ppm, and remaining Cl₂ content was < 10 ppm. 24.5.78. as 061021

KATS/ ★ D15 04370C/03 ★J5 4154-158
Treatment of heavy metals-contg. effluent - by contacting with shaped prod. obtd. by mixing aluminium hydroxide and/or oxide with insoluble calcium salt and heating

KATSUKAWA H 26.05.78-JA-062002

A81 J01 M12 (05.12.79) B01d-15 C02d-05/02

Heavy metal component(s), e.g. Fe etc. are effectively removed from effluent, e.g. pickling effluent etc. by contacting it with a shaped prod. obtd. by mixing Al(OH)₃ and/or Al₂O₃ with insoluble Ca salt in wt. ratio of 3/1-1/3 and heating it at 100-450°C to adsorb the heavy metal component(s) (oxidn. of the heavy metal component(s) occurs simultaneously), and subsequently sepg. the heavy metal component(s) by mechanical means.

The adsorber used in this process is produced easily and more economically than ion exchange resin, and is easily regenerated mechanically without any use of regenerating chemicals as in the case of the ion exchange resin.

In an example, paste-like Al(OH)₃ and CaSO₄ are mixed together in molar ratio of 1:1, after which 30 gms of PVA (binder) is added to 900 grams of the mixt. followed by mixing together and shaping into pellets having a dia. of 5 mm and drying at 200°C for 2 hrs. to give an adsorber. 26.5.78. as 062002 (3pp34)

EBAI ★ D15 04371C/03 ★J5 4154-159
Treating domestic waste water - by passing through permeable membrane under pressure and oxidising permeated liq.

EBARA INFILCO KK 26.05.78-JA-063106

A88 (05.12.79) B01d-13 C02c-05/02

Domestic waste water composed mainly of sewage etc. is purified very simply and rapidly for regeneration by passing it through a permeable membrane having fractional mol. wt. < 15,000 (< 10,000) e.g. made of cellulose acetate, aromatic polyamide-, polysulphone-, polybenzimidazole- or nitrile-type resin, under pressure to give permeated water, and subsequently contacting the permeated water with oxidising agent, e.g. O₂, Cl₂, O₃, air, HClO, NaClO etc.

Oxidising catalyst, e.g. MnO₂, Cu oxide, NiO etc. may be used to accelerate the oxidn. reaction. By passing the waste water through the membrane, organic materials are easily decomposed with the oxidising agent. COD value is easily lowered without any generation of white turbidity. 26.5.78. as 063106 (4pp34)

NIDE ★ D15 04372C/03 ★J5 4154-160
Treatment of heavy metals-contg. waste water - involves forming ferromagnetic oxide granular ppte. contg. the heavy metals having improved filterability etc.

NIPPON ELECTRIC KK 26.05.78-JA-063113

(05.12.79) C02c-05/02

In removal of harmful heavy metals from waste water, the improvement comprises adding ≥ 0.002 mol. of ferrous salt, e.g. FeSO₄ etc., further adding alkali, e.g. NaOH etc. to adjust its pH to 8-12 and blowing in

oxidising gas, air etc. while applying vibration, e. g. by ultrasonic waves to oxidise ferrous ion and to finally form ferromagnetic oxide having large granular size including the heavy metals contained in the water, so that the granular size of the ferromagnetic oxide ppte is increased.

Settlability and filterability of ppte are improved, and further magnetic separability of ferrite granules is improved even in magnetic separation of ppte. Heavy metals are hardly dissolved out of the ferromagnetic precipitate, and the prod. is suitable for use as electric wave-absorbing material or as material for magnetic fluid. 26.5.78. as 063113 (3pp34)

NIDE ★ D15 04373C/03 ★ J5 4154-161
Removing heavy metal ions from waste water - by adding ferrous salt, adding alkali to ppte. heavy metal hydroxide and oxidising to give ferromagnetic granules

NIPPON ELECTRIC KK 26.05.78-JA-063114
(05.12.79) C02c-05/02

Method comprises adding to the waste water, ferrous salt in amts. of 2-100 molar times as that of the total heavy metal ions, adding alkali to adjust pH to 8-12 and to precipitate the heavy metal ions in the form of hydroxides, and oxidising the hydroxides contained in the slurry sepd. from supernatant liquor to precipitate it as the ferromagnetic granules including the heavy metals.

Amt. of liquor to be subjected to the oxidation is decreased as only the slurry sepd. from the supernatant liquor is subjected to the oxidation treatment. 26.5.78. as 063114 (3pp34)

YAMA/ ★ D15 04374C/03 ★ J5 4154-163
Aerobic and anaerobic treatment of waste water - in presence of activated sludge, with higher dissolved oxygen concn. in second step than in first step

YAMADA T 25.05.78-JA-062701
(05.12.79) C02c-01/06

A waste water is subjected to aerobic anaerobic treatment by treating it with recirculating activated sludge using alum and $\text{Ca}(\text{OH})_2$ so that the water becomes gradually anaerobic and a large amt. of Fe sulphide granules are formed in proportion to increase in the amt. of the sludge, pH value and amts. of nitrogen, phosphor and air etc. being kept at desired levels during the procedure to maintain excellent sludge settlability without any outflow of visible granules, aerobic and anaerobic fermentation being practically always carried-out without any troubles in operation; and then treating it with the activated sludge always under aerobic state in the presence of dissolved oxygen, the amt. of which is larger than that in the initial step, aerobic and anaerobic fermentation being practically carried-out even in this secondary treatment due to consumption of the sludge. 25.5.78. as 062701(7pp)

SANN ★ D15 04409C/03 ★ J5 4154-437
Water-soluble vinyl polymer-contg. liq. compsn. - used in waste water treatment, crude oil recovery, fibre treatment, paper mfr., and as thickener and antistatic agent

SANYO CHEM IND LTD 26.05.78-JA-063658
A97 F06 H01 (A18 A87 F09) (05.12.79) C08k-05/06 C08l-101

The compsn. is made by emulsion polymerising (A) a water soluble vinyl monomer or a monomer mixt. with it as the main body, (B) water, (C) aliphatic hydrocarbon liq. and (D) a surfactant consisting of polyoxyethylene ether of higher aliphatic alcohol and/or polyoxyethylene ester of higher fatty acid, with HLB 7-10 or a surfactant mixt. with ≥ 50 wt. % of them, so that the content of (A), (B), (C) and (D) in the compsn. is 25-40 wt. %, 25-40 wt. %, 25-40 wt. % and 5-15 wt. % respectively and the sum of (A) and (B) is 50-60 wt. %; to obtain a liq. compsn. which shows transmission of visible rays at 750 mμ of $\geq 70\%$ (against distilled water) and Brookfield viscosity at 30°C of ≤ 500 cps.

The compsn. is useful as waste water treating agent, thickener, antistatic agent, fibre treating agent, paper mfg. chemical, crude oil recovering agent, etc. has excellent stability with time and is easy to handle due to low viscosity. 26.5.78. as 063658 (8pp57)

MITK D15 69456X/37 = J7 9042-675
Purifn of oil contg waste water - using fibrous material obtd from peat

MITSUMI TOATSU CHEM INC 27.01.75-JA-010533
J01 (15.12.79) *J51086-256 C02c-05/02 + B01d-17/04

Peat is washed with water so as to be purified and struck to give a fibrous material which is then heated with steam in an autoclave to give a thin peat fibrous material which may be treated with acid or alkali.

The oil-contg. waste water to be treated is passed through a column packed with the fibrous treating agent in various form or density so that the oil component in the waste water in suspended or emulsified form is adsorbed cohered and granulated, the oil content of the waste water becoming 0-2ppm. No dispersion of any residual oil in the treated waste water occurs during the process so that an almost colourless, transparent liq. is obtd. 27.1.75 as 010533 B01d-17/04, C02c-5/02 (15.12.79) MITSUMI TOATSU CHEM INC (3pp) (J5 1086256)

HASH/ ★ D15 04513C/03 ★ J7 9042-748
Control of activated sludge process for waste water treatment - where average dwell time of sludge in aeration tank is controlled to satisfy specified equation

SHO HASHIMOTO 17.05.76-JA-056928
(15.12.79) C02c-01/06

The method comprises controlling average dwell time (t_s , days) of activated sludge in aeration tank so as to satisfy the equation:

$$\frac{1}{t_s} = Y \cdot \frac{k \left(\frac{l_e}{s} \right)^n}{k_m + \left(\frac{l_e}{s} \right)^n} - b$$

In the equation l_e is BOD or COD of treated water, ppm. Y is yield coefft. b is self-decomposition rate of activated sludge, 1/day. k_m is satn. constant, ppm. k is rate const. of removal of COD or BOD. s is bacterial concn. of activated sludge. n is affinity index. 17.5.76 as 056928 C02c-1/06 (15.12.79)

HASHIMOTO, S (13pp83) (J5 2139269)

MITU D15 02745B/02 = J7 9042-749
Waste water treatment using acclimatised activated sludge - esp. useful where COD and BOD of the water varies

MITSUBISHI CHEM IND KK 30.04.77-JA-049674
(15.12.79) *J53135-171 C02c-01/06

Waste water treatment by activated sludge subjected to acclimation uses an aeration tank contg. mixed waste water contg. ≥ 3500 mg/l. sludge. Process comprises starting acclimation of the activated sludge under the COD-loading of max. 0.3kg/kg. -sludge/day, increasing the amt. of the activated sludge by 20-100% after the rate of COD-removal from the waste water becomes mainly constant; and continuing treatment with thus acclimated sludge.

Used for treatment of factory effluents and city sewage esp. for waste water whose BOD and COD varies with time.

For the activated sludge treatment aeration of O_2 or air may be by mechanical means or with an air diffuser. The amt. of sludge is pref. $\geq 4,000$ mg/l. Sludge generated in excess at a city sewage or an industrial waste water treating plant can be used. Mixts. of sludge from various sources can also be used. The COD-loading of ≤ 0.3 kg/kg. sludge/day is maintained for 6-100 hrs. pref. 24-48 hrs. 28.4.77 as 049674 C02c-1/06 (15.12.79) MITSUBISHI CHEM IND KK (4pp) (J5 3135171)

KUMA/ D15 47720B/26 = J7 9042-750
Water improving agent for aeration type purifying vessel outflow - comprises powdered soil bacteria, ferrous sulphate and sodium bicarbonate

KUMAK 22.10.77-JA-127070
(15.12.79) *J54060-762 C02c-01/06

The improving agent comprises powdered soil bacteria (dried in air), ferrous sulphate and NaHCO_3 . By adding ferrous sulphate and NaHCO_3 to the water, $\text{Fe}(\text{OH})_2$ is formed and converted by oxidn. to $\text{Fe}(\text{OH})_3$, thereby floating sludge or scum which is rapidly adsorbed on the surface of the gel-like $\text{Fe}(\text{OH})_3$ ppte. and settled, and quality of the outflow water is rapidly improved.

Further the improving agent serves in seeding of activated sludge and becomes nutrient source for the growth of activated sludge, the BOD value of the outflow water being

decreased to a large extent, and maintained under that state over a long period. The improving agent is easy to pack, transport and charge etc., due to its dried powdered form, and can be stored over long periods. It is suitably employed even in domestic use. 22.10.77 as 127070 C02c-1/06 (15.12.79) KUMA, K (3pp) (J5 4060762)

RIKA D15 35413Y/20 = J7 9042-802
Dissolved metal recovery from soln. - by adding magnetic metal powder, such as ferromagnetic ferrite or magnetite

INST PHYS CHEM RES 06.10.75-JA-120412

J01 M25 (17.12.79) *J52044-702 C02b-01/23 C22b-03 + C21b-15 C22b-17/04 C22b-47

Metal ions, such as Fe^{2+} , Mn^{2+} , Ni^{2+} , Zn^{2+} , Cd^{2+} , Cu^{2+} , Hg^{2+} , Pb^{2+} , etc., are removed from a soln. by adding magnetic metal powder of grain size $\leq 3\mu$ into the soln. to be treated

The process comprises evenly dispersing ferromagnetic particles in a soln. e.g. spring water contg. Fe^{2+} and Mn^{2+} ; and subjecting it to pptn. treatment by blowing in oxygen or hydrogen peroxide after adjusting the pH to 8-10 or by adding H_2S to ppte. metals sulphides, deposited metal cpds. are pptd. with the ferromagnetic particles.

The process is used for natural water or water from metal mining or metal refining. Useful metals, such as Ni, Cu, Cd, etc. can be recovered. 6.10.75 as 120412 C22b-3/00, C02b-1/23, C21b-15/00, C22b-17/04, 47/00 (17.12.79) INST PHYS CHEM RES (3pp) (J5 2044702)

SHAF ★ D15 04515C/03 ★ J7 9042-833
Distilling water with solar energy - using two Fresnel lenses, arranged one above the other, to focus sunshine onto the water

SHARP KK 12.08.75-JA-098253

Q74 (17.12.79) B01d-03 C02b-01/06 F24j-03/02

The device uses two Fresnel lenses for focussing the sunshine onto water. They are arranged one above another, so that two kinds of regions are formed one permitting the sun-shine to pass through to the focus and the other which does not. An inclination is formed at first region toward the second so that the water drops are collected at the latter region. 12.8.75 as 098253 C02b-1/06, B01d-3/00, F24j-3/02 (17.12.79) SHARP KK (3pp26) (J5 2021270)

NIRA ★ D15 04525C/03 ★ J7 9042-992
Concn. of waste water obtd. from purificn. of caprolactam - by pre-concn. in two or more evaporators in parallel then further concn. in further evaporators

UNITIKA KK 11.06.74-JA-066241

A41 E13 (17.12.79) C07d-201/16

The waste water is pre-concentrated in ≥ 2 evaporators in parallel, and then the resultant prod. is further concentrated by using further evaporators. By this method, low concns. of caprolactams can be recovered at high efficiency. 11.6.74 as 066241 C07d-201/16 (17.12.79)

UNITIKA KK (4pp22) (J5 0157386)

DNIN D15 77625A/43 = J7 9043-223
Separation of oil from water by filtration - using filter with perfluoro organic cpd. deposited on surface

DAINIPPON INK CHEM KK 07.03.77-JA-023871

A88 J01 (A14) (19.12.79) *J53109-266 B01d-17/02

Perfluoro organic cpd. is deposited on filter material. The filter material is previously wetted with water. A mixed soln. of oil and water is filtered by the filter material thus obtd. Water is obtd. as a filtrate. The perfluoro organic cpd. has a mol. wt. of 300-200,000.

Pref. the perfluoro organic cpd. has 4-12C perfluoro-alkyl gps. The perfluoro organic cpd. is a polymer of $\text{C}_8\text{F}_{17}\text{CH}_2\text{CH}_2\text{OCOCH}=\text{CH}_2$, a copolymer of $\text{C}_8\text{F}_{17}\text{SO}_2\text{N}(\text{C}_3\text{H}_7)(\text{CH}_2)_2\text{OCOCH}=\text{CH}_2$ and $\text{CH}_2=\text{CClCH}=\text{CH}_2$ or a surface active cpd. $\text{C}_8\text{F}_{17}\text{SO}_2\text{N}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{OP}(\text{ONH}_4)_2$.

In an example, phosphate ester of $\text{C}_8\text{F}_{17}\text{SO}_2\text{NCH}_2\text{CH}_2\text{OP}(\text{OH})_2$ is dissolved in a soln. contg. 1 pt. vol. of water and 1 pt. vol. of isopropyl alcohol. Cotton filter material is immersed in the mixed soln. The cotton filter material is pressed by rollers and dried at 110°C for 20 mins. The pressed filter material of cotton is immersed in ether, in ethanol and then in water. 7.3.77 as 023871 B01d-17/02 (19.12.79) DAINIPPON INK CHEM KK (2pp86) (J5 3109266)

YOTS/ ★ D15 04537C/03 ★ J7 9043-302
Agent for treating night soil and sewage - is prepd. by adding chaff or sawdust to powdered calcium oxide, adding water and carbonising the chaff or sawdust

YOTSUYA J 13.11.72-JA-113640

(19.12.79) B01d-15 C01b-31/08 C02c-01/40 C02c-05/02

A night soil-treating agent suitable for use in purification of night soil and sewage etc., is prepared by adding chaff or saw dust to pulverised CaO almost in the same volume ratio, adding a suitable amt. of water to convert CaO into $\text{Ca}(\text{OH})_2$ and carbonising chaff or saw dust by the action of heat generated in the digestion. 13.11.72 as 113640 C02c-1/40, 5/02, B01d-15/00, C01b-31/08 (19.12.78) YOTSUYA, J (2pp34) (J4 9071754)

MITO ★ D15 04538C/03 ★ J7 9043-303
Biological nitrogen removal from polluted water - by treating biologically, aerating surplus sludge, oxidising ammoniated nitrogen and reducing

MITSUBISHI HEAVY IND KK 30.03.74-JA-036321

(19.12.79) C02c-01/02

Nitrogen components are removed in high efficiency from polluted water without any use of organic carbon source by treating it biologically to give sec. treated water; aerating surplus sludge adsorbing organic matters, obtd., in the above step, with O_2 -contg. gas so as to be activated; oxidising biologically $\text{NH}_4\text{-N}$ contained in the sec. treated water into $\text{NO}_3\text{-N}$ with nitrification bacteria; and reducing $\text{NO}_3\text{-N}$ into N_2 by the action of denitrification bacteria, the activated surplus sludge and internal respiration of the sludge. 30.3.74 as 036321 C02c-1/02 (19.12.79)

MITSUBISHI HEAVY IND KK (4pp34) (J5 0129479)

MITO ★ D15 04539C/03 ★ J7 9043-304
Nitrification by activated sludge process - by recycling (part of) the surplus nitrified sludge to the aeration vessel in the BOD and COD removal appts.

MITSUBISHI HEAVY IND KK 04.04.74-JA-038206

(19.12.79) C02c-01/02

In the treatment of organic matter-contg. water, the improvement comprises connecting the nitrification and denitrification appts., in which the N components are biologically converted to N_2 , to a BOD- and COD-removal biological treatment appts. (sec. treatment appts.) and recirculating (part of) the surplus nitrified sludge produced in the nitrification appts. to the aeration vessel of the sec. treatment appts., so that load is decreased and the vol. of the appts. is decreased. 4.4.74 as 038206 C02c-1/02, (19.12.79) MITSUBISHI HEAVY IND KK (3pp34) (J5 0131353)

NICA D15 69330W/42 = J7 9043-305
Removing acid dyes from waste liquids - by adding a dicyandiamide-formaldehyde resin and aluminium sulphate

NIPPON CARBIDE KOGY KK 08.04.74-JA-038775

A91 (19.12.79) *DT2515-175 C02c-05/02

Aq. waste liqs. contg. dissolved acid dyes are treated by adding consecutively (i) the predetermined optimum amt. of dicyandiamide- HCHO resin (I) and (ii) $\geq 300\text{ppm}$ $\text{Al}(\text{SO}_4)_3$ (II), based on a dye concn. of 100 ppm. Pref. a 50 wt. % aq. soln. of (I) has room temp. viscosity of 30-500 cP.

When used alone (I) effectively pptes. and flocculates the dyes only within a rather narrow concn. range and, since the concn. of dye in the effluent will vary, the precise amt. of (I) required is difficult to contro. When (II) is added the acceptable concn. range of (I) is broadened without affecting pptn. efficiency at high dye concns. 8.4.74 as 038775 C02c-5/02 (19.12.79) NIPPON CARBIDE KOGY KK (7pp) (J5 0132756)

AUZYC= ★ D15 04594C/03 ★ SU -659-575

Cellulosic flocculant for surface water clarification - comprises sodium sulpho-carboxy-methylcellulose prepd. by treating cellulose lye with sodium mono:chloroacetate and sulpho-salicylic acid

AS UZB CHEM INST (TSVO=) 25.04.77-SU-479277

A91 (A11) (30.04.79) C08b-11/12 C08b-13

Prepn. of cellulosic flocculant (e.g. for clarification of surface water in water supply stations) from cellulosic lye and Na-monochloroacetate gives improved flocculating properties by incorporation of sulphosalicylic acid. The proposed method uses ratio cellulose lye: Na monochloroacetate:sulphosalicylic acid = 1:1.8-1.82:0.04-0.08 at 20-

90°C for 2-2.5 hrs. to give Na-sulphocarboxymethylcellulose (I). The optimum ratio is 1:1.82:0.08.

Using 0.1-1.5 mg/l (I) in water of turbidity 200-300 mg/l lowers turbidity to 20 (max.).

Talibdzhanov, Kh., Zinina G.N., Abidkhanov, A. Bul.16/30.4.79. 25.4.77 as 479277 (2pp14)

GOWA= ★ D15 04662C/03 ★SU -659-841
Gas dryer for ozonisation units - has additional receiver and pressure relay, to increase efficiency

GORKI WATER TRANSP (GOCI=) 24.02.78-SU-584871

E36 Q74 Q75 (21.06.79) F24f-03/14 F25b-09/02

The gas dryer can be used in ozonisation units and specifically in marine stations for drinking water preparation by ozonisation. The dryer contains a heat exchanger placed on the compressed gas pipeline, regulating valve and Vortex pipe. The Vortex pipe cold stream pipe is connected to the heat exchanger low pressure cavity.

In order to increase thermodynamic efficiency, when drying small quantities of gas, the dryer is additionally provided with a receiver and a pressure relay.

Baranov, A.L., Diskin, L.M., Sevastyanov, A.G. Bul. 16/30.4.79. 24.2.78 as 584871 (2pp110)

EXPE= ★ D15 04701C/03 ★SU -659-928
Impurity sampler for monitoring deep sea pollution - has autonomous power supply connected to depth sensor and to command unit with output from starter to motor for pump on pipe

EXP METEOROLOGY INS 20.12.76-SU-430238

J04 R16 (30.04.79) G01n-01/10

The earlier sampler for determining impurities in water contains the immersible unit, depth sensor and electromagnetic valves. An autonomous power supply is connected to the depth sensor and a hydroacoustic radiator along with multivibrators, flowrate meter and command unit in order make sampling more accurate by extending the depth range and finding the distance from the bottom to the lower ed unit. The specified sampler is useful in oceanographical research, esp. monitoring deep water pollution.

Use of the autonomous supply dispenses with special cabling so that the depth range can be extended using conventional ship hydrometric winches. The flowmeter along with the sensor and command unit enables the pumping to be automated in order to obtain more accurate data on depth of the unit and performance, as required in the absence of the cable for control purposes.

Aksamentov, B.I., Davydov, E.N. Bul. 16/30.4.79. 20.12.76 as 430238 (4pp840)

MORO/ ★ D15 04702C/03 ★SU -659-929
Reservoir water quality control appts. - has exposure chambers with two sections connected to measuring cell

MOROZOV V V 29.12.76-SU-435222

R16 (30.04.79) G01n-01/10 G01n-33/18

Test installation for control of water purity in reservoirs has water sampling pipeline connected through distributor to twin exposure chambers with two sections. These sections are connected to measuring cell through a distributor. Transparent sections are provided with sliding curtains.

Measuring process is based on consecutive release of water from the two sections of the exposure chamber through measuring cell with oxygen sensor and thermometer. Measured data is transferred to signal converter. The test installation is mounted on a boat in selected location of reservoir.

Morozov, V.V., Zyuganov, V.I., Filatov, I.L. Bul.16/30.4.79. 29.12.76 as 435222 (3pp23)

SMEL= ★ D15 04742C/03 ★SU -660-693
Thin-layer settling tank - for clarifying waters by flocculation, as they flow over aluminium sheets to pick up aluminium ions

S MELIOR WATER SUPP (WATE=) 21.11.77-SU-545878

(10.05.79) B01d-21/16

Thin-layer settling tank, for removing suspended particles from waters by flocculation, for use in communal, industrial, and agricultural water-supply installations, includes a container inside which assemblies of conical plates are installed underneath one another, plus inlet and outlet pipes. The construction is simplified, and uniform flow distribution is created by providing the settling tank with a

cylinder having openings and small plates, fitted so that they can be displaced along the openings.

Egorov, A.I., Seredenko, V.P., Posnov, Yu.V. et al. Bul. 17/5.5.79. 21.11.77 as 545878 (2pp29)

SIMO/ ★ D15 04747C/03 ★SU -660-698
Water-treatment plant for clarifying and dewatering - in which falling jets of water impinge on an arrester screen, to quench kinetic energy

SIMONOV V F 20.03.72-SU-761433

(08.05.79) B01d-21/24 C02c-01/26

The proposed water treatment equipment is used in installations where circulating water and effluents are clarified, as well as in thickeners and dewatering equipment, based on settling and precipitation processes. It consists of a body with a flow distributor and arrester. The effectiveness of the liquid cleaning is increased, as a result of quenching the kinetic energy of the liquid being fed in, by providing vertical guides. The arrester for the flow is made as a screen mounted horizontally and capable of being moved along the guides.

Simonov, V.F., Osintsev, P.M., Korkunov, V.I. Bul. 17/5.5.79. 20.3.72 as 761433 (2pp29)

UUKR= ★ D15 04829C/03 ★SU -660-938
Automatically-filling hydraulic trap for protecting deaerators - has bubbling liq. and horizontal perforated plate, to cater for pressure variations in steam supply

UKR UKRGIPROMEZ 04.04.77-SU-469285

(15.05.79) C02b-01/10

Automatic-filling hydraulic trap on an atmospheric deaerator, for protecting it from increased pressures, comprises a pipe connected to steam-supply and overflow pipes, and fitted with bubbling holes at the lower end. This is placed in the centre of the body with the steam-withdrawal pipe at the top end. Reliability and safety are increased by making the bubbling holes in the side walls of the pipe in rows arranged vertically. An additional steam exit pipe is connected to the pipe above the holes. Also, in the body, underneath the point where the steam-withdrawal pipe is connected, a plate containing conical holes is installed.

Lorinov, M.M., Abramovich, Yu.K., Ustenko, V.A. et al Bul. 17/5.5.79. 4.4.77 as 469285 (2pp29)

YARO= ★ D15 04830C/03 ★SU -660-939
Through-flow water deaerator - has water-sprayers and steam distributor to bring two media together, with partition and centre pipe to remove evaporated air

YAROSLAVL POLY 25.05.77-SU-489824

(15.05.79) C02b-01/10

Through-flow deaerator, for use in power-generation, particularly for the thermal deaeration of water, comprises a cylindrical body inside which water sprayers are installed, plus a steam distributor and a pipe to remove the evaporate. Deaeration quality is improved by making the steam-distributor as a circular chamber disposed inside the container around its circumference and having tangential feed pipe. The upper end of the chamber is located above the sprayers and in it are holes with increasing cross-section in the direction the steam travels. In the centre of the body there is a pipe which is open at the bottom and communicates at the upper end with the pipe for taking away the evaporate.

Belorossof, E.L., Galustov, V.S., Goryachev, G.I. et al Bul. 17/5.5.79. 25.5.77 as 489824 (2pp29)

AVRU/ ★ D15 04831C/03 ★SU -660-940
Biological filter for effluents - has drum with rigid ends and partitions between, forming chambers filled with charge in which liquid meets air flow

AVRUTSKII P I 12.03.75-SU-112019

(15.05.79) C02c-01/04

Biological filter, for purification of effluents, is made as a drum disposed on a horizontal shaft connected to a rotary drive, and having rigid end walls between which are longitudinal radial partitions, forming chambers filled with a suitable charge. The oxidative capabilities of the biological filter are increased, as a result of including continuous forced aeration, by fitting an air switching device on to the horizontal shaft, plus pipes connected in pairs to the chambers and then further connected to the switching device.

brutskii, P.I., Boberman, A.M., Fonbershtein, V.E.
Jul. 17/5.5.79. 12.3.75 as 112019 (2pp29)

BOEH/ ★ D15 05020C/03 ★US 4181-451
Animal excrement microbiological disposal system - comprises
small bucket on shaft end within large bucket in pit for excess liquid
overflow

BOEHLING DE 10.08.78-US-932726

(01.01.80) C02c-01/02

system, e.g. for kennels, comprises a tubular shaft
with a top closure and a lower end gripper to engage the
inside of a large bucket with circular top, a spacer on
the shaft below a flange to keep the flange spaced from the
bucket top rim, and a retainer on the shaft to engage the
bucket adjacent the rim for coaxial alignment of the shaft.

A small bucket fits in the shaft and rests mouth-
upwards on the large bucket bottom. A tether connects the
small bucket and shaft upper part, and a sediment meas-
uring element for the small bucket is operable from the
shaft upper part. The buckets hold microbiologically act-
ive liquid and are positioned in a pit so that excess liquid
overflows the large bucket and is dissipated in the soil.

10.8.78 as 932726 (6pp1358).

AUSC- D15 11334Y/07 #US 4181-577
Water distillation esp. desalination with constant brine extraction -
with vacuum in evaporator to maintain stable conditions

AUSCOTENG PTY LTD 24.07.75-DT-533150 (21.07.75-US-597448)

(01.01.80) *DT2533-150 B01d-03/06

Desalination appts. for saline water comprises an evapor-
ator and condenser, with a refrigerant system having its
condensing coils in the evaporator and its evaporative
coils in the condenser. A distn. extn. pump circulates dis-
tillate through an entrainment chamber into which distill-
ate from the lower end of the condenser is drawn. This
entrainment causes a vacuum to draw vapour from the
evaporator to the condenser.

The pump is connected to a distillate supply at a higher
level than the condenser coils, via a valve so that the
coils can be flooded during start up to provide a heat
sink and prevent icing. A brine extn. pump circulates
extracted brine through another entrainment chamber.
The pumps maintain a high vacuum to cause boiling at
slightly above ambient temp. 25.3.77 as 781125 (6pp976).

MITR D15 78617A/44 =US 4181-604
Biological waste water purification - by contact with hollow porous
fibres coated with microorganisms supplied with oxygen through
fibre centre

mitsubishi RAYON KK 07.11.77-JA-133324 (13.04.77-JA-
042349)

A88 (A17) (01.01.80) *DT2815-866 C02c-01/04

Water polluted with organic substances is treated by pass-
ing the water over porous hollow fibres which support
aerobic microorganisms on the exterior and have O₂ fed
to the interior. The pores of the fibre all O₂ transfer but
not microorganisms.

The fibres pref. have an outer dia. of 0.01-3mm., a
pore size of 0.5µ or less, a gas permeability of 1 x 10⁻⁹
to 1 x 10⁻⁴ ml. cm/cm². sec. cmHg, and are of polypropyl-
ene or polyethylene. The clogging of pores with the mic-
roorganisms is prevented. 4.4.78 as 893360 (7pp1376).

BRAS/ ★ D15 05074C/03 ★US 4181-605
Water softener with regeneration controlled by plunger valve - also
giving pulsating action during brining controlling brine dilution

BRASWELL JW 12.06.78-US-914512 (24.06.76-US-699215)

(01.01.80) B01d-23/24

A water treatment system includes an ion-exchange min-
eral bed in a tank. A plunger valve regulates the function
of the bed to provide "service", "brining", "flushing"
and "brine refill" operations. The valve also provides a
pulsating action during a brining and rinse cycle to alter-
nately introduce brine and diluted brine into the bed.

The plunger valve includes an aspirator which draws
brine from a brine tank and also draws liquid from the
treatment tank during the regeneration operations.

The single plunger valve controls the regeneration of
the mineral bed. 12.6.78 as 914512 C.i.p. 4104165
(10pp295).

USSI ★ D15 05075C/03 ★US 4181-607
Removal of asbestos fibres from water - by filtering through bed of
magnesium oxide

US SEC OF INTERIOR 15.09.78-US-942846

J01 (01.01.80) B01d-15 B01d-37

Asbestos fibres present in water in a concn. 1-10ppm.
are removed by filtration through a bed of MgO, pref. of
particle size 60-400 mesh.

Used in treatment of drinking water, process effluents,
etc. In a typical arrangement, a flow of 100-200mls./hr./
sq.cm. of bed is achieved with a 0.5-1cm. deep bed
contg. 100-200 mesh size MgO. 15.9.78 as 942846
(2pp314).

LUWA D15 74665A/42 =US 4181-608
Condensing vapours from dryer - using integral mechanical solids-
liquid separator to condense vapour into outlet liquid stream

LUWA AG 30.03.77-CH-003969

J01 (J08) (01.01.80) *DT2811-507 +B01d-37

Liq. is removed from suspensions and/or sludges by pass-
ing the material through >1 mechanical separator and >1
thermal separator, where the material is dried. The obtd.
vapours are fed to the mechanical separator(s) where they
are cooled by the material and condensed.

The process is simple, economical, reliable and effec-
ient. The material in the mechanical separator is pref.
distributed over a large surface area, heated to 40-150°C
and contacted countercurrently with the vapours. 22.3.78
as 889095 (7pp976).

BRPE D15 90070Y/51 =US 4181-614
Gas flotation to raise and remove sludge from treatment tanks -
partic. oily sludge from oil refinery separators

BRITISH PETROLEUM LTD 17.06.76-GB-025110

+P41 Q56 (01.01.80) *BE-855-826 +B01d-43 B03d-01/14

Appts. for removing sludge from the bottom of an install-
ation contg. a liq. comprises (a) sparge pipe(s) having gas
distribution holes and being connected to a pressurised
gas supply and (b) an inverted channel above each sparge
pipe and having a sloping upper surface leading to a riser
pipe which feeds a gutter. The channel extends over the
holes so that the gas rises up into the channel and does not
pass up through the rest of the liq. in the installation.

The equipment can be added to existing installations,
partic. for use with oily sludges. The bubbles also en-
train part of the oil associated with the sludge and detach
it so that it can be separately recovered. 24.7.78 as
927025 (6pp976).

BAHR/ D15 86658Y/49 =US 4181-616
Continuous dewatering filter plant for waste water sludge - uses
pressure band filters between predrying and filter drum

BAHR A 05.08.76-DT-635196

(01.01.80) *BE-857-464 B01d-33

A sludge dewatering device has a preliminary pressure-
less pocket dewatering stage (I); horizontal dewatering
zone(s) formed by horizontal fibre belts below (I), these
zones being located serially one below the other; a med-
ium pressure drum filter stage; and a high pressure de-
watering unit.

The available dewatering zone is lengthened so that a
high content of dry prod. is obtd., even during prelimin-
ary dewatering. The substances for dewatering are con-
veyed only downwards until they reach the required degree
of solidity. 28.7.77 as 820015 (+ 17.11.75 - US - 632689)
(18pp976).

FMCC ★ D15 05116C/03 ★US 4181-702
Appts. for chlorination of water - using alkali di:chloro-
isocyanurate, esp. for swimming pools

FMC CORP 11.09.78-US-941436

A88 E12 (01.01.80) B01d-11/02

Appts. for dispensing alkali metal dichloroisocyanurate to
chlorinate water consists of (a) a housing holding the alk-
ali dichloroisocyanurate; (b) a vertical standpipe inside the
housing attached to the housing bottom having >1 soln.
metering aperture located near the bottom and >1 water
inlet aperture higher up, access to the interior of the
standpipe from outside the device being via an orifice in
the bottom; (c) a filter medium (pref. of felted polyester
or polyethylene) covering the exterior of the standpipe,

including the apertures, and (d) means for supporting the device immersed in water to a depth sufficient to ensure that the level of water in the standpipe covers all the apertures. The size and number of apertures is chosen so that the active chlorine content of the treated water is 0.5-5ppm.

The device is simple, has no moving parts, can operate reliably over long periods, and can be used by persons with no technical skill. 11.9.78 as 941436 (11pp955).

BOEK/ D15 89369B/49 = US 4181-951
Acidity and ion concn. control process streams - using ionic sensors to produce a binary control word for regulating release of reagent

BOEKE J 28.04.78-US-900908

J04 R27 (01.01.80) *WP7900-998 C02c-05/12 G06f-15/46

pH and pIon characteristics in a flow line are controlled using a pattern of sensors distributed over the cross-section, converting each signal to its antilogarithm, averaging these, converting the average to a binary control signal and using this to control release reagent from individual dispensers in a downstream pattern across the cross-section, then homogenising the flow.

This system is pref. followed by a downstream similar system to cascade the control function. The second sensor set signals may be fed back to the first set to optimise control. There is pref. static mixing of the flow before the sensors and after the dispensers. 28.4.78 as 900908 (6pp1358).

ASAH D15 20467A/11 = US 4182-267
Preservation and transport of live fish and shell fish - in small amt. of water which is processed to remove waste prods. then recycled

ASAHI KASEI KOGYO 20.07.76-JA-086361

P14 (08.01.80) *J53011-800 A01k-63

Apparatus for keeping aquatic creatures alive over a prolonged period comprises a water tank with an external circulation loop including a unit holding the water temperature at the minimum permissible level, an aerator, a unit for eliminating ammonia compounds, and a further unit to eliminate water-soluble organic compounds from the water, a pump recycling water through the loop.

The tank is suitable for e.g. various marine and freshwater fish, crustaceans, molluscs, echinoderms, onomats, frogs, and snails, which can be kept alive for periods from several days to weeks. Discharged water and incoming make-up water are pref. heat-exchanged outside the tank. 3.6.77 as 803339 (12pp1358)

ECOL-★ D15 05315C/03 ★ US 4182-675
Waste water treatment process to remove bod - using fluidised bed of microorganisms attached to solid particles

ECOLOTROL INC 20.06.78-US-917162 (12.07.74-US-487974)

(08.01.80) C02c-01/04

Process uses a fluidised bed of acid-forming (including methane-forming) micro-organisms attached to a solid particulate carrier. The waste water is passed continuously through the bed where it is retained for a time at a sufficient temp. and with the bed under anaerobic conditions, to remove the BOD and to produce methane gas, CO₂ and cellular material. The gases are continuously removed, and excess cellular material is removed from the particulate carrier to leave merely a thin layer of the microorganisms.

The process is used to treat waste water with about 50 mg./l. BOD. It may also be adapted to treat water with a BOD of >200 mg./l. The process will also remove nitrates, nitrites or other oxidised contaminants. The process requires lower retention times than traditional methods. 20.6.78 as 917162 (+18.11.75; 4.11.76-633153; 738867) (8pp295)

ALMA- D15 81012X/43 = US 4182-676
Mineral contaminated water purification - by passage through different ion exchange resins with efficient acidity adjustment

ALMAG CHEM CORP 27.06.74-US-483801 (03.08.76-US-711363)

J01 (08.01.80) *US3985-648 C02b-01/42

Water contaminated with minerals of Cu, Cd, Cr⁶⁺, cyanide and phosphate, is purified by (a) dividing the water into first and second streams, (b) transporting the first stream through ion exchange resins connected in series

including a strong acid cation exchange resin in the H form, to provide an efflux of pH 1-5, and a weak base anion exchange resin in OH form to provide an efflux of pH 7-10, (c) simultaneously passing the second stream through ion exchange resins including a strong base anion in OH form to provide and efflux of pH 7-10, and a weak acid cation exchange resin in H form to provide an efflux of pH 3-7, and (d) combining the liq. efflux and returning mixt. to storage tank. The parent patent described the purificn. process in which treatment is effected without division of the original stream. 3.8.76 as 711363 Div. ex 3985648 (8pp924)

TEIJ D15 36934A/21 = US 4182-69
Emulsion breaker with organic hydrophobic hydrophilic cpd. - of substrate, pref. of synthetic fibres, suitable for waste liquid treatment

TEIJIN KK 19.08.77-JA-098717 (16.11.76-JA-136939)

A97 (08.01.80) *DT2750-838 +B01d-17/04

Novel emulsion breaking materials consist of a substrate and >1 water-insol. organic cpd(s). physically but not chemically bonded to it. The organic cpds. are composed of (a) a hydrophobic part consisting of hydrocarbons totaling 6-60C and (b) a hydrophilic part consisting of >1 amine, imino, sulphonamido, hydrazide, thiourea residue thiol residue, OH, COOH or urethane.

Pref. the substrate is polyamide, polyester, polyolefin or polyvinyl fibres, esp. polyolefin. Pref. the organic cpd. is solid at 25°C. 11.11.77 as 850517 (+16.6.79-JA-070441) (12pp974)

MONS ★ D15 05414C/03 ★ US 4182-900
Poly:ether-di:carboxylic acid salts - useful as chelating agents, sequestrants, and detergent builders

MONSANTO CO 26.09.78-US-945973

E19 (D25) (08.01.80) C07c-59/22

Ether carboxylates (I) are new: R₁-O-CH(CO₂M₁)CH-(CO₂M₂)-OR₂ (I) (where R₁, R₂ = >20C alkyl; M₁, M₂ = H alkali metal, NH₄ or >4C alkanolamine or alkyl).

Total R₁+R₂ is pref. <10C esp. <6C for chelant, sequestrant, and detergent builders; for 10-24C esp. 13-18 C for surfactants and emulsifiers (partic. R₁ = 12-16C, R₂ = Me or Et). Detergent compns. contain <1% pref. 5-75% by wt. of (I), e.g. 20-60% (I) for general laundry powders, and 11-12% (I) for liq. dishwashing compns. Compns. may also contain conventional surfactants (5-50% pref. 15-25% for laundry compns.; 20-45% for liq. dishwashing compns.).

(I; M₁, M₂ = alkyl) are inters. for other (I) which are useful as chelating agents, sequestrants, and detergent builders. 26.9.78 as 945973 (5pp478)

GARC/★ D15 05441C/03 ★ WP 8000-009
Ozone production in chemo-nuclear generator - esp. for waste or water treatment, using radioactive material in oxygen flow tubes

GARCIA R I 08.06.78-US-913699

E36 K08 (10.01.80) B01j-01/10 C01b-13/10 G21g-01/12 G21h-05 D/S: N(BR, JA, SU) + E(CH, DT, FR, GB, LU, SW).

Ozone is produced in a chemonuclear generator having a number of parallel spaced tubes. Nuclear fuel emitting particles of energy greater than SeV is placed in the tubes, which are made partly of fluorescent material.

Oxygen-containing material flows through some of the tubes and ozone formation takes place. A coolant liquid is passed over the generator tubes.

The method may be used in processes for treating waste streams or drinking water.

Ozone is produced cheaply, since spent fuel or other material from nuclear power plants or reprocessing plants can be used.

25.5.79 as US0377.(20pp1312).

ISR: US4124467, US3554887, US3067115, DT2500947, US US3948774, US3993911, US3453196.

See Also

D25 SU 4182718

D16: FERMENTATION INDUSTRY

DUNN/ ★ D16 03636C/03 ★CA 1068-627
Enzymatic conversion of hydroxy-substd. steroid material - esp. of cholesterol in water-immiscible solvent with cholesterol oxidase
DUNNILL P 07.06.76-CA-254241
B01 (25.12.79) C07j-01 C12d-13

Steroidal material (I), having a OH gp. on the steroid nucleus, is converted to a steroidal prod. in which the OH is replaced by oxo, alkoxy or acyloxy. The (I) in a water-immiscible solvent forming > 50% of the reaction medium is contacted with a supported enzyme material. Method provides a new route to steroids which include intermediates in the prepn. of various gps. of other steroids such as fertility control hormones. Esp. useful when (I) is cholesterol. 7.6.76 as 254241 (13pp1248)

JILE/ ★ D16 C/03 ★CS 7700-828
Radium recovery from carbonate rock - by using autotrophic thione bacteria
JILEK R 08.02.77-CS-000828
M25 (31.08.79) C22b-60/02

BELI/ ★ D16 C/03 ★CS 7704-695
Glycine antibiotic isolation
BELIK E 14.07.77-CS-004695
B05 (31.08.79) C12d-09/14

SUBI/ ★ D16 C/03 ★CS 7800-981
New mucidine resistant mutants
SUBIK J 15.02.78-CS-000981
(31.08.79) C12k-01/02

KARE/ ★ D16 C/03 ★CS 7801-327
Beer prodn. using tannin in mashing stage
KAREL V 02.03.78-CS-001327
(31.08.79) C12c-07/04

SCHI/ ★ D16 C/03 ★CS 7803-090
Diagnostic identification of bacteria
SCHINDLER J 13.05.78-CS-003090
B04 (31.08.79) C12k-01/04

FENC/ ★ D16 C/03 ★CS 7803-378
Fixing of beer stream changer to tank
FENCL P 24.05.78-CS-003378
(31.08.79) C12l-11

SAVE/ ★ D16 C/03 ★CS 7803-864
Semi-solid medium for beer contaminating microorganisms cultivation
SAVEL J 14.06.78-CS-003864
(31.08.79) C12b-03

DOUC/ ★ D16 C/03 ★CS 7803-886
Cultivation of algae for intense synthesis of radioactive saccharides - labelled with carbon-14 and having high specific activity
DOUCHA J 14.06.78-CS-003886
K08 (31.08.79) C12d-13

PRMH D16 76045X/41 =DS 2513-884
Hops cones deep freezing - in a cold air cooling chamber between perforated endless belts for controlled layer height
PERMAHOP HOPFENPULV GMBH 27.03.75-DT-513884
+ Q12 Q75 (10.01.80) *DT2513-884 C12c-03/04
In a continuous deep freezing process for whole hop cones as a preliminary state for the prodn. of lupulin the hop cones are charged via a spiked shaft to an endless belt conveyor with a mesh size to suit the lupulin glands. A vibrating through takes the cold cones to a discharge pipe. Both the charging and the discharging devices are designed as lock chambers, in each case provided with cooling aprons. An endless belt on top of the moving material is fitted at the far end with a scraper.

This ensures that the cool air can penetrate to the lupulin glands and the cones are not moved about excessively which would cause obstructions by loose parts.
27.3.75 as 513884 (7pp39)

KABI D16 31921X/18 =DS 2552-570
Polypeptide chromogenic substrates for serine proteases - used to determine blood coagulation factor XA
KABI AB (BOFO) 05.12.74-SW-015229
B04 R16 +P31 (10.01.80) *BE-836-085 C07c-103/52 G01n-31/14 G01n-33/16

Tripeptides and tetrapeptides of formula $R_1(A_1)_nA_2GlyArgNHR_2$ and their salts are new. In this formula, R_1 is H, 1-12C alkanoyl or PhCO, A_1 is Gly, Val, Leu, Ile, Pro, Phe or Tyr, n is 0 or 1; A_2 is Asp, Asn, Glu or Gln, and R_2 is a nitrophenyl, naphthyl, nitroaphthyl or methoxynaphthyl suitable for spectrophotometric analysis, such that the aminoacid fragments have an L-configuration.

These peptides are prepd. from lower peptide and aminoacid derivs, followed by removal of protective groups and opt. salt formation. The prods. are used for the determ. of serineprotease. 24.11.75 as 552570 (6pp)

KYOT- D16 90941X/49 =DS 2621-015
Double mixing flask for enzyme activity observation - has serum tube within reagent flask with blending chamber
KYOTO DAIICHI KAGAK 17.05.75-JA-058847
R16 (10.01.80) *DT2621-015 G01n-21/02

Appts. for measuring enzyme activity comprises an optical cell device for observing the variation of optical properties with time. The optical properties of the reactants are observed separately, the components are mixed and the optical properties of the mixture and studied over a period of time.

In partic. the reactants are placed in two vessels, comprising a smaller container mounted within a larger container, a sealing device is mounted in the mouth of the larger vessel, to which is attached an optical cell, the assembly is inverted and the optical cell is placed in the cell holder of a spectrophotometer the separator is then adjusted to allow the components to mix and fall into the optical cell. 12.5.76 as 621015 (9pp047)

LKBP ★ D16 03721C/03 ★DT 2828-658
Creatine kinase sub-unit M determ. by emission photometry - after reaction with luciferase and D-luciferine in the presence of L-luciferine and creatine kinase M antibody
LKB PRODUKTER AB 29.06.78-DT-828658
B04 R16 (10.01.80) G01n-21/52 G01n-31/14 G01n-33/16

In the photometric determin. of creatine kinase subunit B (CK-B) in buffered aq. soln. by reaction with creatine phosphate, ADP and the system luciferase/D-luciferine in the presence of a specific antibody against creatine kinase sub-unit M, the determ. is also carried out in the presence of L-luciferine.

New reagent for carrying out the procedure contains creatine phosphate, ADP, luciferase, D-luciferine, antibodies against CK-M, diadenosine pentaphosphate, SH reagent, salt and buffer, as well as opt. stabilisers and/or complexing agents.

Creatine kinase subunits B and M give rise to 3 different isoenzymes, e.g. CK-MM, CK-BB and CK-MB. The procedure can be used in the determin. of isoenzyme CK-MB, which is useful in the differential diagnosis of cardiac infarct. The photochemical response is not subject to a lag phase, and the response to CK-B is linear and more sensitive than with known procedures. 29.6.78 as 828658 (15pp280)

CHUS ★ D16 03824C/03 ★DT 2926-406
Product with anticancer activity - derived from cells of haemolytic Streptococcus bacterium
CHUGAI SEIYAKU KK 29.06.78-JA-078039
B04 (10.01.80) A61k-35/74 A61k-37 C07g-07 C12d-13/06

Anticancer prod. is produced by disintegrating the cells of a haemolytic Streptococcus bacterium, isolating a water-insoluble substance, and digesting this substance with > 1 protease, opt. in combination with a deoxyribonuclease and a ribonuclease.

The prod. is a water-insol. white to greyish-white powder with specified UV and IR spectra. Its elementary anal-

ysis is C 42.97, H 5.64, N 7.31%. Its chemical composition is 33.3% rhamnose, 12.7% hexosamine, 16.7% protein and 0.2% total lipids (no RNA or DNA).

The product has comparable activity to conventional anti-biotic-treated cell preps. without causing pain or inflammation when injected (c.f. US 3810819) and has good thermal stability (c.f. US 3786141). 29.6.79 as 926406 (18pp367)

NOVO ★ D16 03854C/03 ★EP---6-638
Protease concentrate for use in washing compsns. - contg. only subtilisin and non-proteolytic culture broth derived peptide(s), has reduced allergenic activity

NOVO INDUSTRIAS 04.07.78-GB-028773

(D25) (09.01.80) C11d-03 C12n-09/56

D/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

Protease concentrate for use in washing compsns. is derived from *Bacillus licheniformis* and is stabilised by non-proteolytic culture broth derived peptides. The prod. is essentially free of non-serine protease. Pref. $\geq 99\%$ of the proteolytic activity of the protease concentrate is derived from the subtilisin isoenzyme system. Pref. the protease concentrate contains ≥ 0.5 (esp. 2-15) wt.% non-proteolytic culture broth derived peptides, and has a proteolytic activity of 2-20 (esp. 5-15) Anson units/g.

The protease compsn. has a much reduced allergenic activity than prior art protease compsns.

03.07.79 as 102237 (24pp513)

(E)ISR: FR2021538; DT2063988; FR2061067; GB1263765;

FR2075637; FR2039274; FR2147470;

3 Journal References.

MULL/ ★ D16 03868C/03 ★EP---6-671
Living microorganism preservation - by drying and granulating culture suspension with swellable water-soluble carrier e.g. gelatin

MULLER H 03.07.78-CH-007218

(09.01.80) C12n-01/04

D/S: E(CH, DT, FR, GB, IT, OE).

Large cultures of living microorganisms are kept alive and preserved by drying a homogeneous suspension of the living microorganisms together with a high mol. wt., swellable, water-soluble carrier, to form a granulate.

A conc. pure culture can be prepd. The prods. require little room for transport and storage and can be regenerated easily.

26.6.79 as 200338 (9pp200)

(G) ISR: CH-339326; US3075887; US2710810; GB-408362; US1386359; US2213283; DT1642604; GB--27711(1911); DS-481614; GB-484818; FR2346445; BE-665076.

2 Journal references.

BIBB/ D16 01732C/01 =EP---6-692
Streptomyces plasmid useful as DNA vector - derived from *Streptomyces lividans* strains

BIBB M J 25.05.79-GB-018420 (01.06.78-GB-026219)

B04 (09.01.80) *WP7901-169 + C12n-15 C12r-01/46

Intermediate Priority: 26.4.79 -GB-14519.

D/S: E(DT, FR, GB, IT, NL).

New *Streptomyces* plasmids (I) are characterised in that when present in non-integrated form in a *Streptomyces lividans* strain, (I) impart the properties of (a) forming pocks when grown on a lawn of *S. lividans* NC1B 11416 and (b) not forming pocks when grown on a lawn of *S. lividans* NC1B 11417.

Streptomyces lividans strains having properties (a) and (b) and plasmids derivable from (I) by removal or addn. of DNA, are also new.

The new plasmids are useful as vectors for introducing additional DNA into *Streptomyces* microorganisms.

30 µg of plasmid (e.g. SLP 1.1). (31pp367).

(E)ISR: 6 Journal References.

HARV- D16 05454C/03 =EP---6-694
Protein prodn. from bacterium contg. recombined gene - derived from gene for extracellular or periplasmic protein

HARVARD COLLEGE 08.06.78-US-913533

B04 (09.01.80) *WP8000-030 C12n-15 + C12p-21/02

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Prod. of a selected protein is carried out by (a) cleaving the bacterial gene for an extracellular or periplasmic carrier protein; (b) inserting a non-bacterial DNA fragment, which codes for the selected protein, into the cleavage site by a recombinant step; (c) transforming a bacterial host with the recombined gene; and (d) culturing the bacteria to excrete the selected protein.

The process may be used to produce eukaryotic cell proteins (e.g. insulin, human growth hormone or interferon), viral antigens (for vaccine prodn.), and industrial enzymes.

The use of extracellular or periplasmic carrier proteins avoids contamination of the product with other proteins within the bacterium and avoids degradation of the product by intracellular enzymes.

4.6.79 as 301054 (19pp367).

(E)ISR: EP---1930; 6 Journal References.

SNOE/ ★ D16 03880C/03 ★EP---6-695
Compsn. for protecting poultry against *Salmonella* - comprising avian intestinal flora

SNOEYENBOS G H 05.06.78-US-912829

B04 C03 (09.01.80) A61k-35/74 C12n-01/20

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Compsn. for blocking colonisation of the intestinal tract of poultry by paratyphoid *Salmonella* (including arizona gps.) comprises a pathogen-free mixt. of avian intestinal flora treated to prevent inactivation.

The compsn. protects chicks and turkey poults from *Salmonella* infection, producing a healthy flock suitable for safe human consumption.

4.6.79 as 301055 (16pp367).

(E)ISR: 1 Journal Reference.

KUCZ/ ★ D16 03957C/03 ★FR 2421-039
Conditioning fragmented cellulosic materials esp. wood - in solid medium using microorganisms with air circulation

KUCZEWSKI DE PORAY 30.03.78-FR-009339

A81 C05 F09 P63 (D13) (30.11.79) B27k-05 B27k-09 B27l-03 B29j-05 C12b-01/16

The pecto-ligno-cellulosic materials of vegetable origin are treated in solid medium with the aid of exothermic biochemical reactions using aerobic or anaerobic microorganisms. The materials are seeded with $\gg 1$ inoculum of a specific strain of microorganisms and introduced into a fermenter. The fermentation is controlled by circulating air through the materials at a rate such that the temp. in the middle of the material is maintained at the optimum growth rate temp. of the specific strain. The process is carried out in an appts. comprising a fermentation chamber fed with air by a distribution appts. which feeds the air at different levels.

The process is applied to leaves, plants, forest prods. esp. wood. The agglomerated prod. can be used to make panels, moulded elements, papers, cargons, agro-food prods., and combustible briquettes. The process enables the fermentation time to be reduced to a min. 30.3.78 as 009339 (22pp597)

AJIN ★ D16 03977C/03 ★FR 2421-380
L-amino acid and carbon source determ. in fermentation broths - using a microbial electrode sensitive to carbon dioxide released by decarboxylation or oxygen consumed

AJINOMOTO KK 31.05.78-JA-065380 (28.03.78-JA-035906)

A89 B05 J04 R16 (30.11.79) C12b-01 G01n-27/26 G01n-33/16

Process for determination of the concentration of a carbon source or of an L-amino acid in a soln. such as a culture medium or a cultivated broth.

The process comprises (a) contacting the soln. under aerobic conditions in the case of C source or anaerobic conditions in the case of an L-amino acid, with a microbial electrode comprising fixed microbial cells or immobilised microorganisms and an electrode sensitive to O_2 in the case of a carbon source or an electrode sensitive to CO_2 dioxide in the case of an L-amino acid; these immobilised microorganisms or microbial cells being capable under aerobic conditions of metabolising the C source and consuming the O_2 oxygen in the soln. or under anaerobic conditions of decarboxylating the L-amino acid and liberating

O₂ in the soln., (b) electrochemically measuring the speed of redn. of the current or of the redn. of the current at a stationary state by following the O₂ consumption by the microorganisms or microbial cells, in correspondence with the C source concn. or measuring the EMF produced by release of CO₂ due to decarboxylation by the microorganisms or microbial cells in correspondence with the concn. of L-amino-acid and (c) determining or recording the concn. of the carbon source or of the L-amino-acid in the soln.

Rapid simple quantitative determ. is obtd. allowing easy control of C source concn. so as to give optimum growth of the prod., e.g. L-glutamic acid, concn. Typical C sources include glucose, fructose, saccharose, acetic acid, methanol, etc., and typical L-amino-acids are glutamic acid, lysine, phenylalanine, arginine, etc. 23.3.79 as 007818 (41pp395)

WEIS- D16 48923Y/28 = GB 1559-414
Filtering exhaust gases contg. organic cpds. - using a rapidly changeable container contg. a composted material

WEISS GEBR KG 23.12.75-DT-558256
J01 + P34 (16.01.80) *DT2558-256 B01d-53/34 + A611-09

Gaseous organic impurities are absorbed from waste gas in a container supported on a stand and having a quick-release coupling for connecting a waste gas source in a gas-tight manner. The absorbent is a biologically active compost with medium ripeness, obtd. by aerobic rotting of organic waste and/or sewage sludge and contg. 30-35 vol.% water and 55-70 vol.% organic substances comprising ≥ 1 of *Actinomyces globisporus*, *flavus* and *farinus* microorganisms and *coprinus*, *aspergillus* and *mucor* fungi.

The system is easy to use, gives improved sepn. without using a rotting reactor and allows the absorbent to be easily replaced. 22.12.76 as 053470 (5pp976)

TAVO- ★ D16 C/03 ★ J5 4154-518
Production of fish-type vibriosis vaccine

TAVOLEK INC 23.05.78-US-908496
B04 C03 (05.12.79) A61k
22.5.79. as 062291

KIKU- ★ D16 04473C/03 ★ J5 4154-549
Dissolving alpha-lysed rice used in brewing sake - using a combination of neutral protease and amylase obtd. from *Bacillus subtilis*

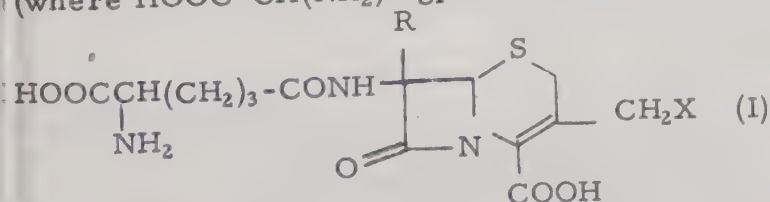
KIKUMASAMUNE SHUZO 25.05.78-JA-062447
(05.12.79) A231-01/10 C12g-03/02
Method comprises using amylase and neutral protease together in dissolving α -lysed rice for sake-brewing enzymatically. Pref. amylase is derived from *Bacillus subtilis*.

The availability of rice is improved and the amt. of sake lees is decreased. Amino acids are formed by the decomposition of proteins in rice which improve the taste of sake. 25.5.78. as 062447 (3pp5)

YAMA ★ D16 04479C/03 ★ J5 4154-592
Fixing D-amino acid oxidase in yeast body - by activating *Trigonopsis variabilis*, treating with glutaraldehyde and fixing the endo-enzyme

YAMANOUCHI PHARM KK 23.05.78-JA-061447
B02 (05.12.79) C07g-07/02 C12k-01
Method comprises activating *Trigonopsis variabilis*, contacting the activated yeast body with 0.01-0.5% glutaraldehyde and fixing the endoenzyme of D-amino acid-oxidase in the yeast body.

D-amino acid-oxidase is the important enzyme which can oxidation-deaminate the compound (I) to the cpd. (I) (where HOOC-CH(NH₂)-gp. is replaced by HOOC-) where



R is H or lower alkoxy; X is acetoxy, OH, nucleophyl residual gp. or H.

The endoenzyme can be fixed in the yeast body without reducing the enzymic activity. 23.5.78. as 061447 (5pp5)

NIRA ★ D16 04480C/03 ★ J5 4154-595
Carrier for fixing physiologically active substance - comprising polyester or polyamide fibres with non-circular cross-section
UNITIKA KK 22.05.78-JA-061260
A96 B04 (05.12.79) A61k-09/70 C07g-07/02 C12d-13/10 D01f-06/60

A carrier for fixing physiological-active substances comprises a mass of polyamide or polyester fibres having noncircular cross-section e.g. triangle, tetragonal, pentagonal, hexagonal, heptagonal, octagonal form or star form cross-section and opt. macaroni-like hollow parts.

Physiologically active substance such as enzyme, co-enzyme, enzyme-inhibitor, hormone, antigen or antibody are fixed e.g. for use as catalysts for chemical reaction in food or pharmaceutical industry or adsorbing substance for sepn. and purificn. of physiologically active substances.

The fibre-mass may be e.g. collected mass of short fibre and long fibre such as woven yarn, cotton, non-woven clothes, paper, woven stuff or knit product. Cotton is partic. pref. The noncircular cross-section enables a high amt. of physiologically active substance to be fixed per unit wt. to give a prod. with long lasting and high levels of activity and adsorption capacity. 22.5.78. as 061260 (3pp69)

MITO ★ D16 04481C/03 ★ J5 4154-597
Methane-producing fermentation of organic waste - by adding low mol. fatty acid or alcohol to waste contg. suitable microorganisms, then adding obtd. culture to large amt. of waste
MITSUBISHI HEAVY IND KK 22.05.78-JA-059961
E17 H09 (05.12.79) C02c-01/14 C12d-03/10

Fermentation of the waste (I) comprises (1) addn. of low molecular fatty acid (II) or low molecular alcohol (III) to (I) contg. methane-producing microorganism (IV) to promote (IV)-growth and then (2) addn. of (IV)-bred (I) to a large quantity of (I).

Fermentation of (I) for prodn. of methane can be carried out in a short period of time. The present method can be applied effectively to treatment of industrial waste, garbage and other wastes.

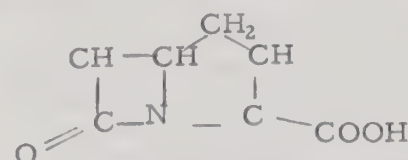
As (IV), those belonging to *Methanosarcina*, *Methanococcus* and *Methanobacterium* are used. (II) is e.g. acetic acid, butyric acid, etc. (III) is e.g. methyl alcohol, ethyl alcohol, etc.

In an example, about 600 ml (I) contg. 10,000 ppm of (IV) was filled in a fermenter and fermented at 35°C for 7 days, with feeding (II) or (III). After 7 days, sewage-sludge was red into the fermenter, resulting in stable fermentation of the sludge. 22.5.78. as 059961 (4pp42)

SAOC ★ D16 04482C/03 ★ J5 4154-598
Antibiotics having heptemic acid skeleton - prepd. by culturing *Streptomyces* fungi in medium contg. vitamin/B12
SANRAKU OCEAN 27.05.78-JA-062846
B02 C02 (05.12.79) C12d-09/14

Prepn. of heptemic acid skelton-contg. antibiotics in high yield comprises culturing *Streptomyces* genus fungi in nutrient culture medium contg. ≥ 0.1 μg vitamin B₁₂ or its homologues. Pref. the initial concn. of vitamin B₁₂ or its homologue is 0.8-700 $\mu\text{g}/\text{ml}$.

The antibiotics are those having a skeleton structure of formula (I). Examples are thienamycin produced by



Streptomyces catoreya (NRRL 8057) and antibiotic PS-7 produced by *Streptomyces* sp A 271 (ATCC 31358)

27.5.78. as 062846 (10pp69)

AJIN D16 15591Y/09 = J7 9042-834
Neutral dried pellet prodn. from acidic soln. or slurry - by introducing alkaline agent during pellet formation to achieve neutralisation

AJINOMOTO KK 10.07.75-JA-084662

C04 J04 (17.12.79) *J52007-872 B01j-02 C05f-05 + C05g-03

Method comprises introducing an alkaline agent to a pellet-ing drier, coating the pellets being shaped with the agent, and thus neutralising and drying the pellets at the same

time.

As the neutralising and drying processes are carried out at the same time, the appts. can be simplified. The method can be used for producing an organic solid fertilizer from a waste fermentation liquor. 10.7.75 as 084662 B01j-2/00, C05f-5/00, C05g-3/00 (17.12.79) AJINOMOTO KK (4pp) (J5 2007872)

KIMI- D16 60436V/34 = J7 9042-909
Fucoidin and alginate compsn - as lubricant for mucosa or epidermis, esp. useful in aiding parturition in animals

KIMITSU KAGAKU KENK (SHOY) 21.12.70-JA-114920

B04 C03 (17.12.79) *GB1364-130 + A61k-09 C08b-37

Prodn. comprises (a) dissolving brown algae in alkaline aq. soln. contg. ≥ 1 of hydroxides, carbonate or phosphate of monovalent metal of Mg; (b) adding trivalent metal salt to the filtrate; (c) immersing so formed ppte. in hydrophilic organic solvent; (d) adding ≥ 1 of NaOH, KOH and NH_3 thereto to remove the trivalent metal in the form of water soluble complex salt; and drying the obtd. ppte.

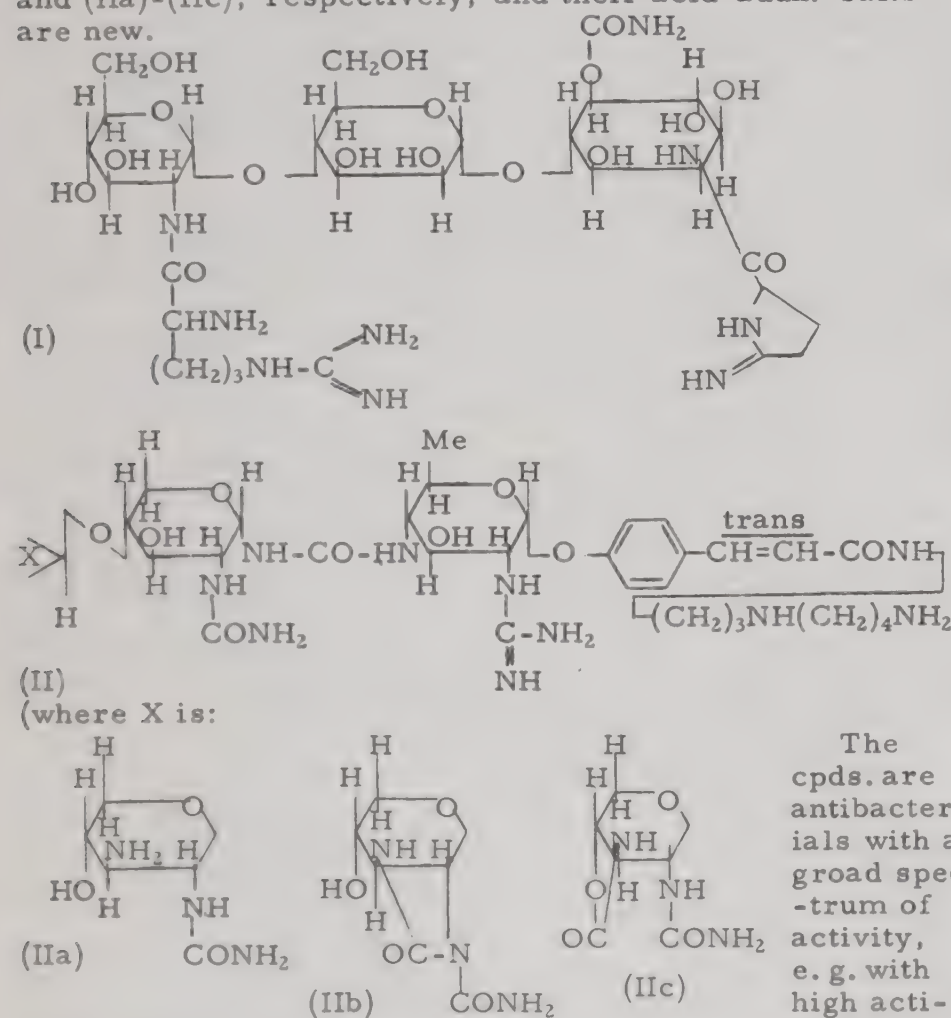
The lubricant compsn. is used in the passage of offspring birth of domestic animals. 21.12.70 as 114920 A61k-9/00; C08b-37/00 (17.12.79) KIMITSU KAGAKU KENKYUSHO, KK & SHOWA YAKUHI KAKO KK (4pp68)

AMCY D16 12591Y/07 = J7 9042-981
Broad-spectrum antibacterials from nocardia sp. NRRL 5646 - sepd. into five BM 123 alpha-gamma cpds.

AMERICAN CYANAMID CO 21.08.75-US-606634

B03 (17.12.79) *US4007-167 A61k-31/41 C07h-07/06 C12d-09/04 C12d-13

Antibiotics BM 123 α , 123 β , 123 γ_1 and 123 γ_2 of formulae (I) and (IIa)-(IIc), respectively, and their acid-addn. salts are new.



mice against *Proteus mirabilis*, *Kl. pneumoniae* and *E. coli* strains. Antibiotics (I) and (II) are obtd. by cultivation of *Nocardia* sp. NRRL 5646. 21.8.76 as 099241 (clg. 21.8.75-US-606634) C07h-7/06, A61k-31/41 C12d-9/04, 13/00 (17.12.79) AMERICAN CYANAMID CO (15pp48) (J5 2025089)

AJIN D16 80125X/43 = J7 9043-073
Easily digestible yeast bodies prodn. - by culturing yeast of high dyeing property

AJINOMOTO KK 03.03.75-JA-025076

(18.12.79) *J51101-189 C12k-01/02 + A23k-01 C12c-11/18

Easily digestible yeast bodies are prepd. by culturing yeast of high dyeing property in usual culturing medium and collecting yeast bodies. Though the yeast stock of high

dyeing property can be obtd. without particular treatment to obtain varieties, the treatments by usual physical and chemical means, are effective to obtain varieties with high efficiency.

The yeast stock which usually forms white, milky white or yellow colony on the agar medium without pigment, usually forms pale pink colony on the medium added with rose Bengale and sky blue colony on the agar medium added with aniline blue. The varieties which form red colony on the rose Bengale medium or dark blue colony on aniline blue medium are appeared, and yeast bodies are recovered by culturing those varieties.

When the artificial digestive ratio with pepsin in measured on dry yeast bodies obtained, those of yeast stocks of high dyeing property are superior to usual yeast stocks by 10-40%. Further yeast stocks of high dyeing property often give yeast bodies of high coagulating property, and the sedimentation speed of yeast bodies is remarkably increased. 3.3.75 as 025076 C12k-1/02, C12c-11/18, A231-1/00 (18.12.79) AJINOMOTO KK (3pp) (J5 1101189)

SAKB D16 72986T/46 = J7 9043-074
Modified proteases as anti-inflammatories - with reduced side-effects

OTSUKA KAGAKU YAKUHI (SAKA) 14.04.71-JA-024005

A96 B04 (A18) (18.12.79) *DT2218-162 A61k-37/54 C07g-07/02 + C12d-13/10

Anti-inflammatory agent contains (a) usual pharmaceutical adjuvants and (b) an anti-inflammatorily active amt. of water-insol. modified protease obtd. by chemical binding of a protease to a substance of mol. wt. ≤ 10000 (pref. 20000-200000) selected from (i) amino-acid polymers with a main chain with repeating peptide bonds, (ii) polyamino-styrenes, (iii) polysaccharides and (iv) copolymers of ethylene and maleic acid or maleic anhydride.

The agent has anti-inflammatory activity when administered orally or locally, and does not give rise to undesired side-effects, due to its greatly reduced proteolytic activity and antigenicity and to its insolubility. 14.4.71 as 024005 C07g-7/02, A61k-37/54, C12d-13/10 (18.12.79) OTSUKA KAGAKU YAKUHI, KK (3pp) (J4 7035193)

KYOW D16 38838A/22 = J7 9043-075
Choline oxidase enzyme prodn. - by cultivation of *Brevibacterium* or *Corynebacterium* strains

KYOWA HAKKO KOGYO 19.11.76-JA-139120

B04 R16 (18.12.79) *DT2751-879 C12d-13/10

New chlorine oxidase (I) is prepd. by cultivation of chlorine oxidase-producing microorganisms of the genus *Brevibacterium* or *Corynebacterium* and isolation from the fermentation mixt. (I) has the properties (a) catalytic acceleration of the oxidn. of chlorine to betaine aldehyde and of betaine aldehyde to betaine; (b) stable at pH 7-8.3; (c) pH optimum for the reaction 7.5-9 (d) temp. optimum for the reaction 20-35°C; (e) temp. stable at 20-45°C; (f) enzymatic activity towards choline and its salts, slight activity towards 2-dimethylamino-ethanol, no or very slight activity towards acetylchlorine chloride, sarcosine, betaine, glycoll, 2-methylaminoethanol and ethanolamine hydrochloride; (g) stabilisation by EDTA (h) inhibition by NaN_3 ; (i) molecular wt. of ca. 97000; and (i) isoelectric point pH 4.05.

Choline oxidase can be used for the enzymatic determination of choline oxidase is accompanied by formation of H_2O_2 . Decomposition of the H_2O_2 by peroxidase in the presence of phenol and 4-aminoantipyrine gives rise to the formation of a dye the absorption of which can be determined to give a measure of the choline concn. 19.11.76 as 139120 C12d-13/10 (18.12.79) KYOWA HAKKO KOGYO (9pp) (J5 3066492)

SAGA D16 76091W/46 = J7 9043-076
Peptides enzymatic synthesis - by reacting peptide free acids with amino acids or peptides in the presence of pepsin

SAGAMI CHEM RES CENTRE 29.04.74-JA-046261

B04 (18.12.79) *DT2518-256 C07c-103/52 C12d-13/06

Peptides of the formula: X-A-B-C-Y (I), (where A is Ala, Gln, Asn, ω -Boc-Lys, Leu, Gly, Glu, Glu or Pro, or is a gp.

OMe

$\text{A}_1\text{-A}_2$ in which A_1 is a hydrophilic amino acid residue and

A₂ is Val, Met, Leu or Glu; B is Phe, Tyr, Leu, Met, Glu, Asp, Gln, Asn or Trp; C is Phe, Leu, Ileu, Tyr, Cys-SBzl, Ser-OBzl, Trp or Met; X is an α-amino acid protecting gp. or an amino acid or peptide residue carrying a protecting gp. on its N-terminal; and Y is a carboxyl-protecting gp. or an amino acid or peptide residue carrying a protecting gp. on its C-terminal) (e.g. α, ω-Boc-Lys-Phe-Phe-Gly-Leu-Met-NH₂) are prepd. by reacting peptides of the formula X-A-B-OH (II) (e.g. α, ω-Boc-Lys-Phe-OH) with an amino acid or peptide of the formula H-C-Y (III) (e.g. HCl-H-Phe-Gly-Leu-Met-NH₂) in the presence of the enzyme pepsin. High yields are obtd. 24.4.74 as 046261 C12d-13/06, C07c-103/52 (18.12.79) SAGAMI CHEM RES CENTRE (10pp) (J5 0140686)

ASAHI D16 02661W/02 = J7 9043-078
Secalonic acid microbial prodn. - using medium contg. controlled amounts of carbon and complex organic nitrogen
ASAHI CHEMICAL IND KK 22.12.72-JA-128260
C03 (18.12.79) *J49085-290 + A01n-09/28 C12d-13

Secalonic acid (I) known as a rat poison was produced by microbial cultivation in a medium contg. C source at >2% and controlling the amt. of complex organic N at 0.1-2%.
In an example, *Penicillium oxalicum* IFO 5748 was cultured in a medium (pH 5) contg. corn steep liquor 0.5, (NH₄)₂SO₄ 0.2, KH₂PO₄ 0.1, MgSO₄ 0.05, FeSO₄ 0.001, CaCO₃ 0.5, and silicon KM-75 0.04% and varying amts. of lactose, starch, glucose or sucrose. Prodn. of (I) was high in a medium contg. C >4%. Mycelia were washed with MeOH and extd. with CHCl₃. The ext. was concd. and the resulting ppte. were washed with n-hexane and dissolved in 50 fold hot CHCl₃. The soln. was filtered hot and (I) was crystd. by cooling. 22.12.72 as 128260 C12d-13/00, A01n-9/28 (18.12.79) ASAHI CHEMICAL IND CO (9pp) (J4 9085290)

HOFF D16 59310S/37 = J7 9043-079
Iodinine prodn by bacterial fermentation
HOFFMANN-LA ROCHE AG 24.02.70-US-013785
B02 (18.12.79) *DT2108-760 C12d-13

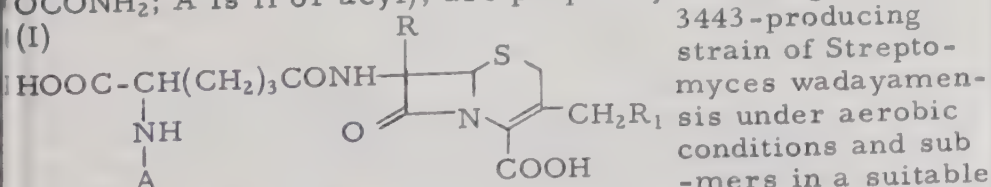
Strongly iodinine-producing *Brevibacterium iodinum* strains selected for culture exhibit a deep purple colour in colony growth. The selected strains are cultured aerobically in a liq. nutrient medium with 0.2-5wt. % complex N-contg. product, such as a hydrolysed seed flour and/or hydrolysed bean meal (pref. soya bean meal) and/or hydrolysed milk product and/or hydrolysed meat- and/or fish protein 1-10wt. % carbohydrates (pref. glucose) and 0.5-10 g/l surface active agent (pref. an emulsion of non-ionic polyalkylene oxide silane) until an appreciable amt. of iodinine is generated (pref. 20-40°C, pH 5-9.5 for 2-12 days) and removed from fermentation liquor.

Iodinine is a useful starting material for antibiotic myxin. 23.2.71 as 008946 (clg. 24.2.70-US-013785) C12d-13/00 (18.12.79) HOFFMANN LA ROCHE & CO AG F (12pp) (J4 6003285)

FUJI D16 04971V/03 = J7 9043-080
Antibiotics WS 3442 A, B, C, D and E
FUJISAWA PHARM KK 20.07.72-JA-073223
B02 (18.12.79) *NL7308-948 + A61k-31/43 C07d-499 C12d-09/14 C12d-13

Cpds. of formula (I) (where R is H or OCH₃; R₄ is H, OH or CONH₂; A is H or acyl); are prepd. by culturing a WS-3443-producing strain of *Streptomyces wadayamensis* under aerobic conditions and submers in a suitable nutrient medium and isolating (I); A is H) from the medium

Alternatively the broth contg. (I) may be reacted with an acylating agent to give the acyl derivs. of (I). The acyl derivs. may also be used as inters in the prepn. of antibacterial cephalosporins. 20.7.72 as 073223 C12d-9/14, 13/00, A61k-31/43, C07d-499/00 (18.12.79) FUJISAWA PHARMACEUTICAL CO LTD (15pp) (J4 9030593)



PROT = ★ D16 04618C/03 ★SU-659-605
Microbial biomass, e.g. yeast, prodn. - using higher petroleum paraffinic hydrocarbon based water-in-oil emulsion contg. specified stabiliser for high yield

PROTEIN BIOSYNTHESI 27.12.74-SU-124660
A97 H04 (30.04.79) C12b-01/20

Microorganisms e.g. yeast are cultivated in a hydrocarbon-base emulsion of the water-in-oil type with addition of an aid.

High yields of the biomass are obtained by using as an aid a 80:20 to 20:80 copolymer of 1,4-butyleneglycol-formal and diethyleneglycolformal, or its mixt. with a polymer of one of the above cpds.; or a 16-22C alkylamine. The oil phase in the emulsion is pref. a 12-30C normal paraffin, or a petroleum distillate contg. 0.5-60 wt. % of normal paraffins. The microorganisms are hydrocarbon-utilising bacteria or yeasts.

Ringpfeil, M., Klappakh, G., Weichert, D. et al. Bul.16/30.4.79. 27.12.74 as 124660 (2pp70)

LEFO = ★ D16 04619C/03 ★SU-659-609
Food grade citric acid microbiological prodn - includes stagewise submerged aerated fungal producer strain culturing using specified amts. of sugar

LENGD FOOD IND RES 09.03.77-SU-461713
E17 (30.04.79) C12d-01/04

Citric acid is produced by deep cultivation of a fungus (e.g. *Aspergillus niger*) with aeration. The well developed mycelium is introduced into a soln. contg. a carbohydrate, e.g. molasses; after the completion of the fermentation, the citric acid is sepd.

This process is accelerated by carrying out the development of the mycelium stepwise in a series of fermenters. In each fermenter, the concn. of sugar is increased by 1.5-2%; pref the sugar concn. in the first fermenter is 2.5-3.5%, in the second fermenter 4.5-5.5%, in the third 6.5-7.5%. The vol. of the medium increases in such a manner that in the preceding fermenter the vol. amounts to 10-15% w.r.t. the vol. in the next fermenter.

The initial sugar concn. in the molasses is 8.5-10%. Molasses solns. having relatively high sugar concn. can be utilised.

Ermakova, V.P., Smirnov, V.A., Shcherbakova, E.Ya. et al. Bul. 16/30.4.79. 9.3.77 as 461713 (6pp70)

ASBI = ★ D16 04620C/03 ★SU-659-610
Trypsin inhibiting agent prodn. - by cultivating specified *Actinomyces* strain producer, and sepn. of prod. from filtrate
AS USSR BIOCHEM PHY 17.03.76-SU-335740
(30.04.79) C12d-13

Substances inhibiting the proteolytic activity of trypsin, for use in medical research, are produced by cultivating in a nutrient medium *Actinomyces* of the violet group, in particular *Actinomyces violaceus confinus* 2476, *A. violaceus vicinus* 1074, *A. janthinus* 118, *A. violoroseus* 25, or *A. violatus* 1205.

The trypsin inhibition produced in this manner are cheaper than the known preparations, and yet more effective. They suppress the proteolytic activity of trypsin by 70%.

Bezborodov, A.M., Andreeva, N.A., Chermenskii, D.N. Bul. 16/30.4.79. 17.3.76 as 335740 (3pp70)

MOSU ★ D16 04621C/03 ★SU-659-611
L-aspartic acid prodn. for use in food or medicine - by *Escherichia coli* bacterial strain producer cell immobilisation in polyacryl amide gel, activation by heating and specified extrn.

MOSCOW LOMONOSOV UNIV 09.02.77-SU-451483
A97 B05 E16 (A14) (30.04.79) C12d-13/06

L-Aspartic acid is produced by cultivating *Escherichia coli* in a nutrient medium; sepg. the cells from the culture liq-uid; washing the cells; immobilising the cells in a polyacryl-amide gel; comminuting the gel; activating the cells and eluting with an aq. ammonium fumarate soln. This process is intensified by using *Escherichia coli* strain 83 or Ah52 or 85. The activation is carried out by heating a cell suspension at 45-55°C for 40-60 min.

The immobilisation of the cells is carried out in presence of a salt of aspartic acid (3-9 wt. %). Subsequently, the cells are cooled to 0-10°C whilst irradiated with visible

light (intensity 15,000-20,000 lux) for 5-10 min.

Berezin, I. V., Kondrateva, E. N., Egorov, N. S. et al. Bul. 16/30.4.79. 9.2.77 as 451483 (5pp70)

LEAN= ★ D16 04622C/03 ★SU-659-612
Prodn. of beta-galactosidase for medical purposes - includes growing *Curvularia inaequalis* microbial strain in nutrient contg. soya grist and ultrafiltration using cellulose acetate membrane
LENGD ANTIBIOTIC 06.05.76-SU-357215

A88 (A11) (30.04.79) C12d-13/10

β-Galactosidase is produced for medical purposes by deep cultivation of 7 *Curvularia inaequalis* in a nutrient medium with aeration; the product is then sepd. from the culture liquid.

The yield of the product is increased and its activity is enhanced by carrying out the cultivation in presence of 1-2 wt. % (w.r.t. the nutrient medium) of soya grist. The product is sepd. from the culture liquid by adsorption on highly dispersed cationite. The desorption is carried out with a citrate buffer. The soln. is then subjected to ultrafiltration through a cellulose acetate membrane (pore size 80-150 Å) at pH 4.2-7.0; followed by lyophilic drying. The activity of the β-galactosidase soln. is increased from 1-2 to 3-4 units/ml.

Momot, N. N., Polyakov, O. N., Galynkin, V. A. et al. Bul. 16/30.4.79. 6.5.76 as 357215 (4pp70)

BIOT= ★ D16 04623C/03 ★SU-659-613
Stable pectolytic enzyme complex prodn. - by ultrafiltration and addn. of aluminium sulphate stabiliser; used in wine prodn., preserve industry and agriculture

BIOTECH RES INST 24.09.76-SU-407893

(30.04.79) C12d-13/10

Complex of pectolytic enzymes, used in wine prodn., preserve industry and agriculture, is stabilised by introducing $Al_2(SO_4)_3$ into the enzyme-contg. soln., and concentrating the soln.

The process is intensified, and the yield and quality of the product is improved by concentrating the enzyme-contg. soln. before the introduction of the stabiliser, using ultrafiltration. Subsequently, the soln. is spray-dried.

$Al_2(SO_4)_3$ is used in an amt. of 1-3 wt. % w.r.t. the solids.

The enzyme prepn. contains only a small amt. of impurities so that it is esp. suitable for use in the food industry. The prodn. cost is reduced compared with the known products.

Kalunyants, K. A., Golger, L. I., Losyakova, L. S. et al. Bul. 16/30.4.79. 24.9.76 as 407893 (3pp70)

ASBI= ★ D16 04624C/03 ★SU-659-614
Polynucleotide-ligase enzyme prodn. in *Escherichia coli* cells - by introducing phage T4, extracting treating with streptomycin sulphate and ammonium sulphate and chromatography

AS USSR BIOCHEM PHY 11.04.77-SU-473287

A97 (A11) (30.04.79) C12d-13/10

Polynucleotide ligase is produced by introducing phage T4 into *Escherichia coli* cells; disintegrating the cells; extracting; centrifuging the extract; precipitating with streptomycin sulphate and then with $(NH_4)_2SO_4$; subjecting the enzyme-contg. soln. to dialysis and chromatographic sepn.; and concentrating the soln. using a hydroxylapatite column.

The purity of the product is improved, the yield is increased and the process is simplified by carrying out the chromatographic sepn. first in a series of columns contg. DEAE-cellulose and phosphocellulose, and then in columns contg. DEAE-cellulose and DNA-agarose.

Solonin, A. S., Glukhov, I. L., Tanyashin, V. I. et al. Bul. 16/30.4.79. 11.4.77 as 473287 (2pp70)

BIOT= ★ D16 04625C/03 ★SU-659-615
Alkaline protease microbiological prodn. - using *Bacillus subtilis* 310 mutant strain as enzyme producer for prod. high activity and yield

BIOTECH RES INST 12.04.77-SU-477264

(30.04.79) C12d-13/10

Strain *Bacillus subtilis* 310, producer of alkaline protease is kept at the All-Union Institute of the Genetics and Selection of Industrial Microorganisms (No. T₃MPM-1380).

This strain has higher activity than the known strains *Bacillus subtilis*. The 310 strain was obtained by mutation with 1% soln. of nitrosoethylurea for 60-120 min., follow-

ed by selection.

Kalunyants, K. A., Emtseva, T. V., Konovalov, S. A. et al. Bul. 16/30.4.79. 12.4.77 as 477264 (2pp70)

AGBI= ★ D16 04626C/03 ★SU-659-617
Acid-resistant alpha-amylase and glucoamylase - produced by *Aspergillus niger* 147-a strain, for use in bakery
AS GEOR BIOCHEM PLA 20.04.77-SU-479129
(D11) (30.04.79) C12d-13/10 C12k-01/02

Aspergillus niger strain 147-A is a producer of acid-resistant α-amylase and glucoamylase. These enzymes improve the taste of bread, ensure uniform porosity and delay staling.

The new strain was obtd. by u.v. irradiation and mutation of the strain *Aspergillus niger* 475. The 174-A mutant is kept at the substitute of the Plant Biochemistry of Acad. Sci. of Georgian SSR.

The strain appears in the form of rectangular cells. The conidiophores are colourless, nonbranched; average size 660 x 9.9 μ. Conidial vacuole are round (average dia. 46.2 μ). The sterigmatae are cylindrical, double (average size 15.2 μ). The conidia are round (average dia. 6.6 μ).

Kvesitadze, G. I., Kvachadze, L. L., Pavlenishvili, M. D. et al. Bul. 16/30.4.79. 20.4.77 as 479129 (4pp70)

DAIR= ★ D16 04627C/03 ★SU-659-618
Bacteriophages killing thermophilic lactic flora streptococci - detected using specified phage-susceptible *Streptococcus thermophilus* strain for accuracy

DAIRY IND RES INST 29.04.77-SU-483900

(D13) (30.04.79) A23c-09/12 C12k-01/02

Strain *Streptococcus thermophilus* 24-Ch is used for detection of bacteriophages destroying thermophilic lactic-acid streptococci used in the prodn. of e.g. Emmental cheese.

This strain was selected from 46 cultures of *Streptococcus thermophilus* for its high susceptibility to bacteriophages. (the phage titre was 2.2×10^5 parvits/ml.; compared with 2.5×10^1 to 6.0×10^2 units/ml. for the other strains). The strain is kept at the All-Union Institute of Milk Industry (No. 12).

Mytnik, L. G., Melnikova, E. V., Bobrova, L. V. Bul. 16/30.4.79. 29.4.77 as 483900 (3pp70)

KIME= ★ D16 04628C/03 ★SU-659-619
Dense media for cultivation of microorganisms - comprising polyacrylamide gel contg. nutrient substances

KIEV MEDICINE INST 21.04.72-SU-778614

A97 (A14) (30.04.79) C12k-01/06

Dense media for the cultivation of various microorganisms for medical purposes contain a polyacrylamide gel and a nutrient substance; they are sterilised.

A medium for universal use can be prepd. by first producing a polyacrylamide gel, washing it with water, and only then, before or after the sterilisation, imbuing the gel with the desired nutrient substance selected to suit the cultivated microorganisms.

The polyamide gel has sufficient mechanical strength and flexibility, and heat resistance so that it can be thermally sterilised and imbued with hot liquids. The gel is chemically inert and is resistant to chemical attacks in the pH range from 1 to 14. In examples, *Staphylococcus aureus*, *Escherichia coli*, *Sh. sonnei*, *B. proteus*, *Mycoplasma orali*, etc. were cultivated using different nutrient substances.

Gashinskii, V. V., Bordonos, V. G., Bilko, I. P. Bul. 16/30.4.79. 21.4.72 as 778614 (3pp70)

ALMI= ★ D16 04629C/03 ★SU-659-620
Nutrient medium for microorganisms producing L-lysine - based on molasses, maize extract, ammonium salt, potassium phosphate and protein hydrolysate

AS LATV MICROBIOLOG 12.10.76-SU-410441

(30.04.79) C12d-13/06 C12k-01/06

Nutrient medium for microorganisms producing L-lysine e.g. *Brevibacterium* sp. 22, contains molasses, an ammonium salt, KH_2PO_4 , K_2HPO_4 , a maize extract, a stabiliser and water. The cost of this compsn. is reduced by addition of protein hydrolysate because of the higher concentration of L-lysine in the culture liquid (35.3-52.3 g/l. compared with 12.9-22.4 g/l. in the known process). The

Utilisation of sugar is increased (from 15.9-27.6%, to 27.7-37.8%).

The nutrient medium for L-lysine producers contains (g/l.) molasses, 100-150, an ammonium salt (e.g. $(\text{NH}_4)_2\text{SO}_4$) 25-35, KH_2PO_4 0.5-1.0, K_2HPO_4 0.5-1.0, a maize extract 5-20, albumin milk 5-20, a stabiliser (e.g. alk) 10; the balance is water.

Lezhinya, G.R., Shumanis, I. Zh., Udrovskii, G.A. et al. Bul. 16/30.4.79. 12.10.76 as 410441 (3pp70)

EDI = ★ D16 04725C/03 ★SU-660-638
Cultivating malaria mosquito larvae for experimental purposes - using aq. nutrient and floating objects for breaking air-impenetrable film formed by bacteria introduced with feed
MEDICAL PARASITOLOG 04.07.77-SU-505543
C03 P14 (15.05.79) A01k-67

Malaria mosquito larvae are cultivated, for experimental purposes, in an aq. medium into which feed is introduced. The introduction of various bacteria with the feed results in the formation of an air-impenetrable film on the surface of the aq. medium, which may cause suffocation of the larvae. This is prevented by breaking the film by means of floating circles or other closed shapes made from sealed segments of plastic or glass tubes.
Masnitsin, S.P., Demina, V.T. Bul. 17/5.5.79. 4.7.77 as 505543 (3pp70)

POU = ★ D16 04731C/03 ★SU-660-653
Determining mycotoxins in feedstuffs - by culturing *Candida pseudotropicalis* 44wk in agar-contg. medium, on developed thin layer silica gel chromatogram
UKR POULTRY RES INS 04.04.77-SU-473360
C03 R16 (D13) (11.05.79) A23k-01 G01n-33/02

Mycotoxins of the 12,13-epoxy- Δ^9 -tricotene group are determined in animal feedstuffs by thin layer chromatography on silica gel. *Candida pseudotropicalis* 44 wk is cultured in an agarised nutrient medium applied to the gel and mycotoxin content is evaluated from *Candida* growth.

A feedstuff sample is extracted with 1:1 chloroform-acetone and an amt. of 5-50 μl is applied to the plate together with a 0.1 mg/ml standard soln. of mycotoxin T-2 or HT-2. The plate is developed with 3:1 ethylacetate-toluene and is then dried and coated with Capek agar contg. 10% hop-free beer wort. The surface is inoculated with *C. pseudotropicalis* 44 nk and the plate left for 18-20 hr. at 30°C. Accuracy is 20% and the method can detect concentrations of 0.6-1.0 $\mu\text{g/g}$ or more.

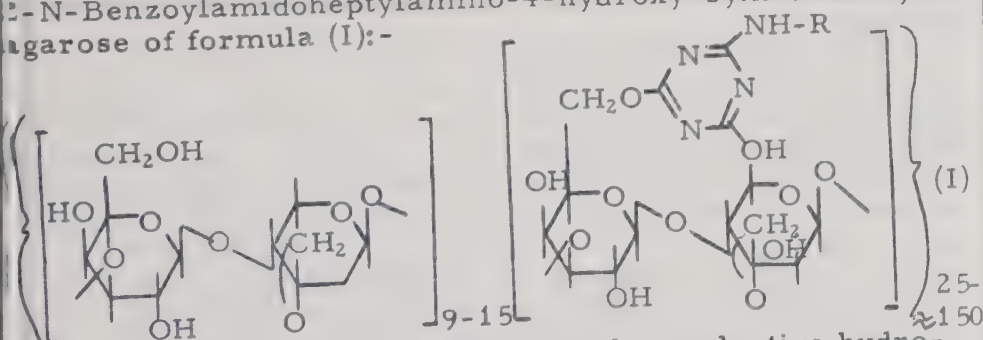
Kotik, A.N., Rukhlyada, V.V., Trufanova, V.A. Bul. 17/5.5.79. 4.4.77 as 473360 (2pp1358)

ASFA = ★ D16 04866C/03 ★SU-660-975
4-benzoyl-amido-heptyl-amino hydroxy sym triazinyl-agarose - is used as selective hydrophobic chromatographic sorbent for sepn., immobilisation, concn. and purificn. of glycosidase

AS USSR FAR EAST 10.03.77-SU-460959

A97 J01 (A11) (05.05.79) C07g-07/02

2-N-Benzoylamidoheptylamino-4-hydroxy-sym-triazinyl-agarose of formula (I):-



where R is $(\text{CH}_2)_7\text{NHCOC}_6\text{H}_5$, is used as selective hydrophobic chromatographic solvent for sepn., immobilisation, concn. and purificn. of glycosidase, in particular N-acetyl- β -D-hexosaminidase and β -galactosidase. The introduction of hydrophobic molecule N-benzoylamidoheptylamine into agarose gel sharply changes the hydrophilicity of the polymer and allows reversible formation of micelle-like complexes between sepd. enzymes and hydrophobic parts of gel. The sorbent is described as a new cpd.

Artyukov, A.A., Molodtsov, N.V. Bul. 17/5.5.79. 10.3.77 as 460959 (4pp1347)

BIOT = ★ D16 04890C/03 ★SU-661-002
Cultivating microorganisms producing enzymes e.g. pectinase - includes use of solid nutrient and multistage solvent extrn. with addn. of nutrient in each stage for high yield
BIOTECH RES INST 03.01.77-SU-440408
(25.05.79) C12b-01/04 C12d-13/10

Microorganisms producing enzymes (e.g. pectinase) can be cultivated in a medium contg. a solid nutrient component; the enzyme is then washed out with a suitable solvent.

This process is intensified and the enzyme yield is increased by removing excess moisture from the culture after the washing out of the enzyme, and then returning the culture to the cultivation station. A suspension of 0.1 μ -5 min. particles of the solid nutrient in water is used as a washing solvent.

Preferably, the washing out of the enzymes from the culture and the removal of moisture excess is carried out repeatedly at 1-12 hr. intervals; the number of the cycles is 6-8.

Kalunyants, K.A., Ivanov, L.F., Golger, L.I. et al. Bul. 17/5.5.79. 3.1.77 as 440408 (2pp70)

KIFO = ★ D16 04891C/03 ★SU-661-003
Microorganisms culture control system - has a heat flow sensor and temperature transducers of air and water connected to computer
KIEV FOOD IND TECHN 01.12.77-SU-548474
(25.05.79) C12b-01/08

The accuracy in control of microorganisms growth is improved using a transducer sensing the density of the heat flux with sensor fitted in the fermenter, and temperature sensors checking air fed for the aeration and water for cooling.

The signals from the sensors are transmitted to the computer which controls the servo of substrate feeder.

The acidity of the medium is monitored by a pH meter for setting the flow rate of ammonia liquor, while foam level is adjusted by a transducer connected to the servo regulating the feed of oleic acid. The level of culture medium is determined by the controller of aeration, and nutrient salts metering is set by a programmer.

Nikolaenko, V.F., Shubenko, B.P., Fedorov, V.G. et al. Bul. 17/5.5.79. 1.12.77 as 548474 (2pp89)

ASBI = ★ D16 04892C/03 ★SU-661-004
Microbiological culture growing fermenter - has concentric glass shell with lid and bottom and heater comprising outside annular electric current conducting film

AS USSR BIOL INSTR 03.05.77-SU-483933
(25.05.79) C12b-01/10

Optimum conditions for microorganisms growth in the fermenter are due to the maintenance of sterility with precise control of temp. in the vessel.

To eliminate local overheating of the culture fluid, a glass shell is set concentrically on the outside to form an annular space. The shell has an attached lid and a bottom, while the electric heater is fitted in the annular space.

The heater is made up of a current conducting film on the outside of the vessel, and limited by slip rings, the film is of SnCl_2 and is transparent. The fluid is stirred, and the signal from the temp. transducer controls the thermostat in the supply circuit of the conducting film.

Sedov, V.A., Smolin, B.I. Bul. 17/5.5.79. 3.5.77 as 483933 (2pp89)

BIOT = ★ D16 04893C/03 ★SU-661-005
Microbial culture growing unit - has solid partitions and peripheral overflow tubes in air cushion zone of surrounding shells
BIOTECH RES INST 22.11.77-SU-546680
(25.05.79) C12b-01/10

The multiple circulation of culture fluid in the sections of microorganisms growth unit improves mass exchange and process efficiency.

The flow is controlled by solid partitions and by overflow tubes near the circulation tube and near the periphery. The tubes exhibit holes for air passage in the zone of the air cushion, and cylindrical shells are around the circulation tube for holding the overflow tubes.

The air is admitted to the culture fluid by the bubbler in the lower section, the gas-fluid emulsion ascending the annular clearance between the tank and the circulation

tube. The air forms a cushion, and part of it is transferred to the next section by the overflow tubes.

Grechikhin, O.P., Damanskii, I.V., Kalunyants, K.A. et al. Bul. 17/5.5.79 22.11.77 as 546680 (2pp89)

SHMI/ ★ D16 04894C/03 ★SU-661-006
Escherichia coli microbial strain - used in high yield polynucleotide-phosphorylase enzyme prodn. using specified nutrient

SHMITE I A 08.06.76-SU-370072

(25.05.79) C12d-13/10

Microbial biomass with high polynucleotide-phosphorylase content is obtd. by culturing Escherichia coli microbial strain in nutrient medium contg. glucose, peptone, magnesium sulphate and phosphate.

The biomass yield is increased and the accumulation of polynucleotide-phosphorylase is accelerated by culturing Escherichia coli MRE-600 strain in nutrient medium contg. 0.025 vol. % citric acid, casein hydrolysate, glucose, peptone, phosphate and yeast extract. The glucose:peptone:phosphate ratio is 1:0.02:1.66 for optimal results.

Shmite, I.A., Gravite, D.E., Vivesture, Z.A. et al. Bul. 17/5.5.79. 8.6.76 as 370072 (3pp938)

GPOL/ ★ D16 04896C/03 ★SU-661-008
Wine and other materials blender - has header connected to annular receiver and sections with truncated cone partitions

GEOR POLY 10.02.77-SU-452185

(25.05.79) B01f-05/12 C12g-01/02

The blending of wine and other similar materials is accelerated if the header is connected to the annular receiver and its partitions are in the form of a truncated cone with downward apex, with spiral ribs attached to the top and bottom of the partitions, and exhibiting a variable pitch. The ribs of each consecutive section face opposite directions.

The materials for blending are loaded by feed tubes set tangentially in the annular receiver. The flow is then directed through the central bore of the conical partition, header and nozzles connecting the sections. The spiral ribs impart a shift between the layers of wine materials which contributes to enhanced mixing.

Zaldastanishvili, I.K., Deisadze, A.G., Kurdadze, A.D. Bul. 17/5.5.79. 10.2.77 as 452185 (4pp89)

KRYM= ★ D16 04897C/03 ★SU-661-009
Wine or juice blender control circuit - has two transformers with common sensing coil fed by transducer electrodes set in pairs on similar levels

KRYMSK WINE-MAKING 15.06.77-SU-497965

(25.05.79) C12g-01/02

The quality of blended juices or wines is improved by improving the accuracy of detecting the moment of blending process end.

The measuring circuit comprises electronic transducers placed at various points of the tank as pairs on the same level. Two identical transformers have a common measuring winding, and their primaries are connected to the a.c. supply in opposition phases. The secondaries are connected to the electrodes of the transducers.

Gnusov, E.K., Pitsyn, P.A., Danilevskii, A.S. et al. Bul. 17/5.5.79. 15.6.77 as 497965 (3pp89)

TBLI= ★ D16 04898C/03 ★SU-661-010
Blended brandy-type spirit prodn. - includes addn. of conc. grape juice vacuum must as sugar content regulator to improve organoleptic characteristics and flavour

TBLISSI COGNAC COMB 21.06.77-SU-498883

(25.05.79) C12g-03/12 C12h-01/22

Blended brandy prodn. includes mixing brandy-type spirits with distilled water, addn. of colouring agents, agents producing brandy flavour, adjusting prod. sugar content, maturation, filtration and bottling.

The quality of the final prod. is improved and its organoleptic characteristics are increased if vacuum must obtd. from conc. grape juice of 70-80% sugar content is used as reagent for the regulation of prod. sugar content.

Gvelesiani, K.Sh., Robakidze, O.D., Elidzishvili, D.A. Bul. 17/5.5.79. 21.6.77 as 498883 (3pp938)

KSWI= ★ D16 04899C/03 ★SU-661-011
Liquid prod. e.g. wine sulphitation unit - includes transmission device converting filling chambers oscillation into switch cam rotation

KISH WINE-MAKING 04.01.76-SU-307799

(25.05.79) C12h-01/14

The efficiency of unit claimed in parent patent 475395 is improved due to the transmission mechanism and the profiled disc. The adjustment is provided by a screw pair and the profiled disc controlling the valves. The gravity controlled flow ensures filling of one chamber so that its gravity centre is shifted, and the chamber is tilted so that the chamber on the other side is filled.

The number of filling cycles is proportional to the flow rate, and the transmission mechanism converts the tilts into rotation of the profiled disc which actuates the valves.

Vorobev, S.G. Bul. 17/5.5.79. 4.1.76 as 307799 Add to 475395 (3pp89)

VOST/ ★ D16 04900C/03 ★SU-661-012
Cladosporium gossipicola-1902 fungal strain - used to evaluate resistance of organic material, e.g. polymers to microbial degradation

VOSTROVIS 01.12.76-SU-427607

A35 (25.05.79) C12k-01

Cladosporium gossipicola-1902 fungal strain is used in microbiological test to evaluate the resistance of organic cpds. to microbial degradation. The strain has high resistance to fungicidal and other metal-structure and polymeric material protecting agents. It has high growth rate and degrades F-contg. polymers. It is sepd. from fluorine-contg. polymeric material having protective coating and forming part of a structure below ground level.

Vostrov, I.S., Gerasimenko, A.A., Anikanov, V.E. et al. Bul. 17/5.5.79. 1.12.76 as 427607 (3pp938)

INMI= ★ D16 04901C/03 ★SU-661-013
Corynebacterium glutamicum bacterial strain - used as high yield producer of L-lysine animal feed additive

IND MICROORG GENETI 30.09.76-SU-408876

B05 E16 (25.05.79) C12d-13/06 C12k-01/02

Bacterial strain; Corynebacterium glutamicum VN11-gentica-4995, is used as producer of L-lysine. This amino-acid is used in agriculture as balanced animal feed mfr. additive. The strain is described as new. It is cultured on molasses-based nutrient. The bacterial biomass accumulates L-lysine at stable rate which does not depend on the intensity of aeration of nutrient medium. It is obtd. from parent Corynebacterium glutamicum T-3 strain by stagewise selection method and using N-methyl-N'-nitro-N-nitroso-guanidine as agenic agent.

Zhdanova, N.I., Vikhanskii, Yu.D., Zaitseva, Z.M. et al. Bul. 17/5.5.79. 30.9.76 as 408876 (6pp938)

FERM= ★ D16 04902C/03 ★SU-661-014
Thermophilic Bacillus diastaticus strain - used as high yield alpha-amylase producer for starch solubilisation in alcohol mfr. and textile finishing

FERMENTATION PROD (ASMI=) 12.05.77-SU-487242

F06 (15.05.79) C12k-01/02

Thermophilic bacterial strain Bacillus diastaticus NENG 6-108 is a producer of α-amylase enzyme, useful in starch-based wort solubilisation in alcohol mfr. and in textile industry for fabric finishing. This bacterial strain is described as new.

The strain is cultured in nutrients medium contg. (in wt %): peptone 0.3; maltase 0.7; NH₄CO₃ 0.1; NaCl 0.05; CaCl₂ 0.01; MgSO₄ 0.01; Na₂HPO₄ 0.01; MnCl₂ 0.005; CaCO₃ 0.1; thiamine p-amino-benzoic acid 2 mg/l, biotin 0.3 mg/l., and DL-alanine, phenyl-alanine and methionine 3 mg/l. each.

Imshenetskii, A.A., Murigina, V.P., Yarovenko, V.L. Bul. 17/5.5.79. 12.5.77 as 487242 (3pp938)

AUZH= ★ D16 04903C/03 ★SU-661-015
Saccharomyces vini yeast strain - used in prodn. of late crop apple wine and cider at high fermentation rate

AS UZB MICROBIOL 19.05.77-SU-489456

(15.05.79) C12g-01 C12k-01/02

Saccharomyces vini UZ-Yas-1 yeast strain is used in the prodn. of apple wine and cider. It is described as new.

The strain has high fruit juice fermentation activity and it is resistant to changes in local climatic conditions. It can be used in the fermentation of late crop apple juice at increased fermentation rate giving prod. with increased alcohol content and improved flavour.

Mavlin, M.I., Gulyamova, N.Kh., Kadyrev, F.M. et al
Bul. 17/5.5.79. 19.5.77 as 489456 (3pp938)

SAUZM= ★ D16 04904C/03 ★SU-661-016
Saccharomyces vini yeast strain - used in high rate apple juice fermentation for high alcohol content apple wine and cider mfr.

AS UZB MICROBIOL 19.05.77-SU-489459
(05.05.79) C12g-01 C12k-01/02

Yeast strain Saccharomyces vini Yz-Yas-158 is used in the fermentation of apple juice at 30-32°C at high rate giving apple wine or cider of improved flavour. The fast fermentation rate of apple juice prevents the contamination of must with aerobic bacteria. The activity of the strain is not affected by climatic changes during the fermentation process.

Mavlin, M.I., Gulyamova, N.Kh., Kadyrov, F.M., et al
Bul. 17/5.5.79. 19.5.77 as 489459 (3pp938)

NCAU= ★ D16 04905C/03 ★SU-661-017
Prophylactic anti-chlamydiosis vaccines for farm animals and poultry - produced using strain Chlamydia equis B-73 having good immunogenicity and reduced virulence

N CAUCASUS VET RES 03.10.77-SU-528672
B04 C03 (15.05.79) C12k-05

Strain chlamydia equis B-73 is used for the prepn. of prophylactic anti-chlamydiosis vaccines for farm animals and poultry.

This strain was sepd. from an aborted foal; adapted to chicken embryos; passed through organisms of white mice and then, 32 times, through yolk envelopes of 7-day old chicken embryos. By this method, the virulence of the strain was diminished without affecting its immunogenic properties. The strain is kept at the North-Caucasian Veterinary Institute.

Shcherban, G.P., Ostrovskii, S.N., Orlova, S.A. Bul.17/5.5.79. 3.10.77 as 528672 (2pp70)

ODVI= ★ D16 04906C/03 ★SU-661-018
Antigenically modified influenza virus strain - obtd. by culturing parent viral strain in passively immunised chick embryo using specified serum

ODESS VIROLOGY 22.03.73-SU-897261
B04 C03 (15.05.79) C12k-07

Antigenically modified influenza virus strain variant is obtd. by injecting chick embryo with influenza virus immune serum and corresp. viral strain, followed by incubation and prod. sepn. The virus immunogenic characteristics are stabilised if the chick embryo is preliminary passively immunised with serum which is immune to all type of influenza virus and, 24-48 hrs. later, adding influenza virus strain in 106 x 10⁹ viral count dose.

The method prevents the change of viral strain variant into its parent strain type.

Skripchenko, G.S., Vlasova, A.G. Bul. 17/5.5.79.
22.2.73 as 897261 (3pp938)

ROHM ★ D16 04972C/03 ★US 4180-917
Prepn. of freeze dried enzymes - by ultrafiltration concn., addn. of water-insol. salts, and freeze drying

ROHM & HAAS CO 05.09.78-US-939745
Q76 (01.01.80) F26b-05/06

A liq. enzyme soln. is conc. by ultrafiltration; water-insol. salts (II) and opt. suspenders and thickeners are added to the concentrate to afford a non-settling concentrate compsn.; and the compsn. is freeze-dried at -78 to +30° in vacuo.

Process affords a highly conc., dry, flowable, light coloured, odourless, non-hygroscopic prod. with good stability. In partic., the process is suitable for the prepn. of freeze-dried protease and α-amylase compsns. from bacterial and fungal cultures, which are useful in the food, brewing and detergent industries. 5.9.78 as 939745 (6pp478).

MA SI ★ D16 04991C/03 ★US 4181-128
Inactivation of microorganisms and cells, esp. Herpes virus - by subjecting to light, an electric field and an activator

MASSACHUSETTS INST TECH 21.02.78-US-879822 (28.11.75-US-636290)

B04 P34 (01.01.80) A61m-37

Virus, including Herpes simplex, microorganisms, and cells are inactivated in vivo by subjecting concurrently to light and an electric field in the presence of a cpd. (I) which assumes an excited electronic state in such circumstances. Hydrogen peroxide may also be added, to enhance the formation of hydroxyl free radicals by the Haber-Weiss reaction.

Used for inactivation of microorganisms, cells, toxins, including tumours. Suitable (I) include methylene blue, methylthionine and toluidine blue. 21.2.78 as 879822 (13pp916).

BRIM D16 09321B/05 =US 4181-574
Antibiotics Bu-2313A and Bu-2313B - obtd. by culturing Micropolyspora caesia ATCC 31295-8

BRISTOL MYERS CO 11.10.77-US-841242 (13.07.77-US-815329)

B02 (01.01.80) *NL7807-570 C12d-09/14

Microbiological prepn. of a mixt. of the antibiotics Bu-2713A and Bu-2313B comprises cultivating a strain of Micropolyspora caesia ATCC 31295, 31246, 31297 or 31298 under submerged aerobic conditions in an aq. culture medium contg. assimilable sources of carbon and nitrogen until a substantial amt. of the antibiotic mixt. is produced. The antibiotic mixt. is then recovered.

The antibiotic mixt. is structurally related to the streptolydigin-tirandamycin gp. of antibiotics, and is active against anaerobic bacteria. 13.11.78 as 960200 (18pp982).

BOEF D16 35060A/20 =US 4181-575
Total or bound cholesterol determination - using NAD or NADP-dependent cholesterol dehydrogenase from liver or from an anaerobic microorganism

BOEHRINGER MANNHEIM GMBH 29.10.76-DT-649749

B04 J04 R16 (01.01.80) *DT2649-749 G01n-31/14

In a cholesterol assay, a sample suspected of contg. bound cholesterol is treated with cholesterol esterase, and the liberated cholesterol is subsequently or simultaneously measured by enzymatic conversion to cholesterol using a cholesterol reacting enzyme. In the improvement, the cholesterol reacting enzyme is an NAD- or NADP-dependent cholesterol dehydrogenase obtd. from either an anaerobic microorganism or from a mammalian liver.

Prof. the dehydrogenase is obtd. from Eubacterium sp. ATCC 21408. The method is simplified, more accurate and direct photometric measurement of NADH or NADPH can be made without inserted reactions. 13.10.77 as 842001 (4pp997).

PHIP D16 02417B/02 =US 4181-576
Fermentation plant to reduce monocellular protein from methanol etc. - in closed circuit tube, using static mixing and simplified cooling

PHILLIPS PETROLEUM CO 29.03.77-US-782599 (07.08.78-US-931636)

(01.01.80) *FR2385-797 C12b-01

Fermentation is conducted in a loop flow appts. comprising pressuriser and nozzle between two conduits, and a tube forming a continuous loop. The medium is fed along the continuous loop and part of it is removed along the first conduit, pressurised, atomised, mixed with assimilable O₂ and cooled. Part of the obtd. mixt. is withdrawn from the flow path via the second conduit and sepd. into gas and liq. phase.

The system is simple, gives good contact with O₂ by using a high surface area and give good mixing. 7.8.78 as 931636 Div. ex 4148691 (6pp976).

USAS ★ D16 05066C/03 ★US 4181-589
Sepg. biological cells - by suspending mixed cell population in aq. polymer subjected to electrostatic field

NAT AERO & SPACE ADMIN 06.03.79-US-017888

A96 B04 R16 (01.01.80) G01n-27/26

Sepn. of biological cells is effected by first depositing a

cell suspending medium in a sepn. chamber. The medium consists of an aq. polymer system including ≥ 1 phase which exhibits electrophoretic mobility in an electrostatic field. An electrostatic field between a pair of electrodes is established across the sepn. chamber for causing droplets of the phase to migrate towards one electrode of the pair.

Method is used for biological cell sepn. e.g. for the prepn. of a pure state of a specific cell for its classification. 6.3.79 as 017888 (5pp295).

KIKA- D16 80900A/45 = US 4181-714
Fungicide contg. Bacileucine-A or -B or its complex - used to control blast and sheath blight in rice, anthracnose and grey mould of cucumber etc.

KIKAGAKU KENKYUSHO (RIKA AJIN) 11.03.77-JA-026771

C03 (01.01.80) *J53113-013 +A61k-35

Antibiotics Bacileucine A and Bacileucine B are new. They are prepd. as a complex by (a) culturing *Bacillus* sp. AW-3 (ATCC 31268) in a culture medium at pH 6.2-8.2 at 15-35°C, (b) maintaining the pH of the medium around 7 and filtering out the cells, (c) adjusting the pH of the filtrate to 4 and centrifuging, (d) dissolving the resulting residue in buffer soln. of pH 7 and filtering out impurities; (e) repeating steps (c) and (d) several times and (f) sepg. a pure complex of Bacileucines A and B.

To separate the individual cpds., the filtrate obtd. following step (e) is adjusted to pH 5.0 whereby Bacileucine A is pptd. and is filtered off. Bacileucine B is pptd. by reducing the pH of the resulting filtrate to 4.

The cpds. are effective against plant pathogenic fungi and cause no environmental pollution. 7.3.78 as 884254 (13pp945).

MEIJ D16 49100Y/28 = US 4181-715
Antibacterial and antifungal antibiotic SF-1540 - produced by cultivating pref. *Streptomyces hygroscopicus* SF-1540 (ATCC 31257)

MEIJI SEIKA KAISHA 19.04.76-JA-043659 (29.12.75-JA-157469)

B04 C03 (01.01.80) *DT2659-180 A61k-35

Novel antibiotic SF-1540 is claimed which has analysis 65.16% C, 8.24% H, 2.17% N and 23.79% O; it is colour positive to KMnO_4 and H_2SO_4 and negative to ninhydrin. Spectral and solubility details are also specified.

SF-1540 is produced by culturing *Streptomyces hygroscopicus* SF-1540 (ATCC 31257) under aerobic conditions, pref. at 25-35°C for 2-5 days. Medium pref. contains glucose, wheat embryo, soluble vegetable protein and NaCl. A deriv. of SF-1540 is also claimed with analysis 66.69% C, 8.62% H, 1.68% N and 23.96% O, this being obtd. by treating SF 1540 with methanol.

Cpds. have antiprotozoal and esp., the deriv., also antifungal activity. 24.5.78 as 908983 (+ 16.12.76 - US - 751437) (13pp963).

BEEC D16 67721W/41 = US 4181-716
Beta-lactamase inhibitor MM 4550 - isolated from product of *Streptomyces* culture, for use in antibacterial medicaments

BEECHAM GROUP LTD 28.03.74-GB-013855

B04 (01.01.80) *DT2513-855 A61k-35

Prepn. of di-Na or di-K salt of MM 4550 A which is $\geq 70\%$ pure and where MM 4550 A is a solid carboxylic acid of molecular formula $\text{C}_{13}\text{H}_{16}\text{O}_4\text{N}_2\text{S}_2$, comprises chromatographically purifying a soln. of MM 4550 (Complex) by passing a soln. of MM 4550 (Complex) in an aq. lower alcohol through a bed of cellulose, collecting those fractions having a UV absorption maxima at about 238 and 287nm. and removing solvent from the soln. at $\leq 30^\circ\text{C}$.

The salt in aq. soln. has UV spectra maxima at 238 and 287nm., IR spectra maxima at 3450, 2950, 1765, 1695, 1510, 1340 and 1260cm^{-1} , NMR spectra having a pair of low field doublets at 2.45°C and 3.65°C with coupling constants of about 15Hz, a doublet at 8.55°C and a sharp singlet at 7.95°C. It is effective against *Staphylococcus aureus*, *Bacillus subtilis*, *E. coli*, *Klebsiella aerogenes*, *Proteus mirabilis*, *Acinetobacter antiratus*, *Serratia marcescens* and *Shigella sonnei*, and synergises ampicillin against β -lactamase producing bacteria. It is not a polypeptide or protein. 20.9.76 as 724947 (+ 13.7.76 - US - 704786) (17pp982).

ASAK D16 90438A/50 = US 4181-742
Beer prepn. - in which acidic protease is added after filtration or to the prod. to prevent loss of beer when bottles are opened
ASAHI BREWERIES KK 13.04.77-JA-042169
(01.01.80) *J53127-896 C12h-01/14 + C12b-01/18

Beer is chill-proofed and rendered free from a tendency to foam excessively when a bottle or can filled with the beer is opened after prolonged storage, e.g. for 1-3 months, by adding to the beer, prior to its placement in the container, (1) a chill-proofing cysteine protease selected from papain, ficin and bromelain, which renders the beer haze-free when cooled at 0°C but which causes the beer to contain substances causing the excessive foaming of the beer as described, and (2) an isolated acid protease of microbial origin that (i) has its activity inhibited by the papain inhibitor S-PI of formula (acetyl-valyl)-(valyl)-(4-amino-3-hydroxy-6-methyl-heptanoic acid)-(alanyl)-(4-amino-3-hydroxy-6-methyl-heptanoic acid) which is produced by *Streptomyces naniwaensis*, and (ii) is ineffective as a chill-proofing agent, the acid protease decomposing the substances causing the excessive foaming.

The acid protease is pref. produced e.g. by the micro-organism *Aspergillus-niger* or -saitoi, *Rhizopus chinensis* or *Trametes sanguinea*, and is esp. added in an amt. of 1-100ppm. 15.6.78 as 915922 (+ 15.7.77 - US - 815912) (5pp990).

STEI D16 74492A/42 = US 4182-228
Plant to mfr. beer wort by hydrating crushed malt - introduces water as unbroken film to avoid aeration of prod.

STEINECKER A MASCH GMBH 01.03.78-DT-808712 (30.08.77-DT-739049)

+P41 (08.01.80) *BE-868-092 C12c-07/08 + C12c-05

Brewing mash production apparatus comprises a housing forming a lower end chamber to hold malt and water. The water is guided into the chamber as a coherent film to minimise air entrainment by a plate pivotably between a position with its lower end engaging the housing to form a water-holding channel and a second position spaced from the housing at its lower end.

The pivot axis is located such that when the channel is full of water, the weight of water keeps the plate lower end against the housing. The malt is pref. fed via crushing rollers each with strippers. The housing base is pref. hopper-like and formed by four inclined walls. 24.7.78 as 927420 (7pp1358)

BOEH D16 12290A/07 = US 4182-655
Immobilised enzyme on hardened porous protein support - fixed by means of glutaric di:aldehyde

BOEHRINGER INGELHEIM 12.08.76-DT-636206

B04 (08.01.80) *BE-857-718 C07g-07

Prepn. of an immobilised enzyme compsn. comprises (i) dissolving a water-soluble protein in water, (ii) adding a crosslinking agent to the soln. to crosslink the protein and form a gel, (iii) drying the gel by heating to form a dried insoluble protein having a water-absorption capacity of 2-8 times its dry wt., (iv) mixing the protein with an enzyme-contg. soln., (v) allowing the protein to swell and completely suck up the enzyme soln., and (vi) mixing the swollen protein with a soln. of glutardialdehyde in a lower aliphatic alcohol or ketone to provide 0.5-5% glutardialdehyde in the resultant reaction mixt. to bond the enzymes to the swollen protein.

Pref. protein is gelatin and the crosslinking is formaldehyde. The immobilised enzymes are esp. suitable for repeated and continuous use. 8.8.77 as 823007 (7pp924)

JOHN-★ D16 05303C/03 ★ US 4182-656
Detection of biologically active agents - by culture with ^{13}C cpds. to produce ^{13}C carbon di:oxide without radioactivity

JOHNSTON LAB INC 10.09.76-US-722270

K08 R16 (08.01.80) C12k-01/04 G01n-27/78 G01n-33 16

Method is as follows: (a) a sterile, sealable container is partially filled with a sterile, non-radioactive culture medium consisting of a ^{13}C -labelled substrate (I) which is fermentable to produce $^{13}\text{C}^{16}\text{O}_2$, the remainder of the container being filled with a culture gas; (b) a sample of material to be tested is sealed into the container; (c) the container is incubated for up to 48 hr. to allow fermentation

(I) to $^{13}\text{C}^{18}\text{O}_2$; (d) the relative proportions of $^{13}\text{CO}_2$ and $^{12}\text{CO}_2$ in the culture gas are determined to give the ratio $^{13}\text{CO}_2 : ^{12}\text{CO}_2$; and (e) the ratio determined in (d) is compared with a control (i.e. an increase shows the presence of a biological agent).

Method is rapid, inexpensive, objective and detects the presence of a variety of biologically active agents (esp. bacteria), but avoids the use of radioactive materials. 9.9.76 as 722270 (11pp478)

DEF D16 63398A/36 = US 4182-695
Protein, esp. enzyme, fixed to polyamide - using formaldehyde and polyfunctional reagents giving neutral prod.

BOEHRINGER MANNHEIM GMBH 24.02.77-DT-708018
A96 B04 R16 (A23) (08.01.80) *BE-863-861 C08g-69/50 + A61k-31/76

Biologically active protein compsn. comprises protein (substrate) bound onto a polyamide of formula $\text{R}-\text{CO}-\text{NR}_1-\text{CH}_2-\text{R}_2(\text{R}_3)_n-\text{P}$ (where R and R_1 are polyamide residues, R_2 is the residue of a cpd. which can be condensed with formaldehyde and which contains ≥ 1 further reactive gp.; R_3 is the residue of a bi- or polyfunctional protein reagent; $n = 0$ or 1 and P is a biologically active protein).

The compsn. is obtd. by the reaction of polyamide with equal moles of formaldehyde and a cpd. which can be condensed with formaldehyde in a solvent for polyamides. The resulting prod. is reacted with a bi- or polyfunctional protein reagent selected from, dialdehydes, dihydroxy-succinimide esters, diacetals, bis-maleinimides, bifunctional amino esters, diepoxides and dicarboxylic acid chlorides. The resulting prod. is then coupled with a biologically active protein (substrate).

The carrier remains neutral or uncharged. 16.2.78 as 78545 (8pp964)

NMR D16 86595Y/49 = US 4182-751
Immunostimulant compsn. prepn. - by phenol extraction of microorganisms, fractionation of the protein extract and water solubilising

INST MERIEUX 04.06.76-FR-016937
A97 B04 C03 (08.01.80) *BE-855-357 A61k-39/02

Prepn. of a medicament for stimulation of non-specific immunity comprises (a) extracting suitable bacteria at $< 70^\circ\text{C}$. by a phenol (I) extn., (b) collecting the phenol phase and eliminating (I) to leave an extract; (c) rendering extract water soluble and (d) purifying extract to free it of endotoxin.

Pref. (I) is phenol or cresol; extn. is pref. at $60-67^\circ\text{C}$. for 30 mins. - 3 hrs. In the case of gram-positive bacteria or microbacteria, a grinding or bacterial lysis is pref. effected before extn. After sepg. phenolic and aq. phases, (I) may be eliminated by (i) alcohol pptn.; (ii) pptn. by addn. of polyethylene glycol of mol. wt. 1,5000-20,000; (iii) evapn. under vacuum; or (iv) dialysis. Pref. bacteria is *Neisseria meningitidis*. 6.6.77 as 804150 (13pp)

SALT/★ D16 05355C/03 ★ US 4182-753
Prod. of tumour growth inhibitor effective against sarcoma-180 - by cultivation of *Candida albicans* CBS in synthetic medium
SALTARELLI C G 29.03.78-US-891334
B04 (08.01.80) A61k-35

Tumour growth inhibitor (I) effective against sarcoma-180 is prepd. by culturing *Candida albicans* CBS 5736 in a synthetic medium contg. glucose for 30 days at 30°C . Then centrifuging the medium, discarding the cells and adding EtOH to ppte. the (I).

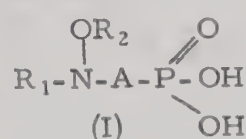
(I) is effective against sarcoma-180 in living tissues by arresting blood supply to the tumour without adverse side effects such as ulcerations, haemorrhaging or necrosis of the type that would be expected.

The medium used pref. contains 0.1 g. $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$, 0.1 g. NaCl, 0.4 g. $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$, 1 g. K_2HPO_4 , 3.5 g. $(\text{NH}_4)_2\text{SO}_4$ and 40 g. glucose, all per 1. water. The medium is suitably at pH 5.6 and traces of Mn, Zn, Cu and Fe ions are added, with 12.5 $\mu\text{g./l.}$ biotin added to the medium after autoclaving. (I) is formed extracellularly during cultivation at 30°C ., and harvesting is usually after 30 days. The pptd. (I) is dissolved in water at 10 mg. /ml. for use. 29.3.78 as 891334 (5pp1248)

FUJI D16 84781Y/48 = US 4182-758
Hydroxyamino-alk(en)yl-phosphonic acid (derivs.) - for use as antimicrobial agents

FUJISAWA PHARM KK 20.06.77-GB-025700 (27.07.76-GB-031339)

B05 (08.01.80) *BE-857-211 C07f-09/40 + A01n-09/36
Phosphonic acid derivs. of formula (I) and their salts are new:



In (I), R_1 is H or acyl; R_2 is H, aralkyl or acyl and A is lower alkylene, lower alkenylene, or hydroxy (lower) alkylene. The esters at the phosphono gp. are also included. 3-(N-Acetyl-N-hydroxy-amino)propyl phosphonic acid and 3-(N-acetyl-N-hydroxy-amino)-2-hydroxypropyl phosphonic acid are excluded.

The cpds. have potent antimicrobial activity against various pathogenic organisms, including Gram-positive and negative bacteria. 27.7.77 as 819554 (+11.10.76-GB-042222) (40pp997)

NASL/ D16 86400A/48 = US 4182-860
Modified polysaccharide bio:polymers for flooding oil-bearing strata - giving improved filtration and clarity

NASLUND LA (ESSO) 09.05.77-US-794725 (10.11.75-US-630468)
A97 B04 H01 Q49 (A11 D13) (08.01.80) *DT2725-069 E21b-43/22 + C08b-37 C12d-13/04

Process for removing proteinaceous materials and/or residual whole bacterial cells or other cell debris from a heteropolysaccharide prod. (I) and improving the filterability of (I), (I) having been produced by the fermentation of *Xanthomonas* bacteria, is described.

Process comprises first preparing an aq. soln. contg. (i) 200-30000 ppm. by wt. (I) and (ii) ≥ 0.5 wt.% inorganic salt. The soln. is heated at $\geq 100^\circ\text{C}$. to increase the injectivity and filterability characteristics of (I) but for an insufficient time to impair the viscosity-imparting characteristics.

Proteinaceous material etc. is removed giving a (I) capable of imparting a viscosity of ≥ 4.0 cP to an aq. test soln. contg. 2 wt.% NaCl and 0.2 wt.% CaCl_2 when added at ~ 600 ppm. by wt. (Brookfield viscosimeter with UL adapter, 60 rpm, 250°C .). (I) is capable of imparting a filterability such that > 1000 ml. of a different aq. test soln. contg. 8.8 wt.% salt comprised of NaCl and CaCl_2 on a 10:1 wt. ratio and ~ 600 ppm. concn. by wt. of (I) will pass without plugging through a 'millipore' (RTM) filter of dia. 13 mm. and pore size $\sim 5 \mu$ at a constant pressure drop of ~ 1.55 psig. (I) is used in oil recovery processes, food additives, pharmaceutical preps. etc. 9.5.77 as 794725 (18pp936)

DYNN D16 04131B/03 = US 4182-904
Racemisation of optically active N-acyl-amino acid(s) - by reacting an aq. soln. of their metallic salt, pref. alkali metal salt, with a ketene

DYNAMIT NOBEL AG 08.09.77-DT-740380
B04 (08.01.80) *BE-870-318 + C07d-20

Optically active N-acyl amino acids (I) are racemised in aq. soln. by reacting an aq. soln. of an alkali metal salt of (I) with ketene at 0°C . to the b.pt. of the soln. Pref. racemisation is at $30-90^\circ\text{C}$. and pH 4-7. Pref. an acid is added to adjust the pH, esp. acetic acid.

Process is rapid and prods. are esp. suitable for further enzymatic cleavage to give optically active amino acids. 22.8.78 as 935835 (4pp974)

SCHM/ D16 89577B/50 = WP 8000-001
Softening tough parts of mushrooms - by incubating in acidic salt soln. opt. with addition of enzymes

SCHMITZ H 05.06.78-DT-824553
(D13) (10.01.80) *DT2824-553 A23b-07/10 A23l-01/28
D/S: N(DK,JA,SU,US).

Prod. of soft, edible fungal fruiting bodies (or their parts) from tough fungal material, rich in softening enzymes, comprises treating the material with an acid soln. of pH 3-5.5 and salt concn. 0.02-0.5M at $20-55^\circ\text{C}$ for 0.5-10 days. The treatment may be under aerobic or anaerobic conditions.

Pref. the acid soln. is a pH4 acetic, citric or lactic

acid buffer, or an acid whey made by fermentative milk acidification. The fungal material may be fresh or stored for up to 2 years at -2° to -40°C.

A similar process can be used with fungal material of low softening enzyme content if combined with treatment with glucanase and chitinase (supplied e.g. as an extract of enzyme-rich fungi).

5.6.79. as EP0043 (21pp1251).

(G) ISR: DT2197531; FR2050070; DS-271938;

FR-786121; FR1596887; GB1009430; 4 Journal References.

HARV-★ D16 05454C/03 ★WP 8000-030
Protein prodn. from bacterium contg. recombined gene - derived from gene for extracellular or periplasmic protein

HARVARD COLLEGE 08.06.78-US-913533

B04 (10.01.80) C12d-21/20 C12n-15 C12p-21/02

D/S: N(BR).

Prodn. of a selected protein is carried out by (a) cleav-

ing the bacterial gene for an extracellular or periplasmic carrier protein; (b) inserting a non-bacterial DNA fragment, which codes for the selected protein, into the cleavage site by a recombinant step; (c) transforming a bacterial host with the recombined gene; and (d) culturing the bacteria to excrete the selected protein.

The process may be used to produce eukaryotic cell proteins (e.g. insulin, human growth hormone or interferon), viral antigens (for vaccine prodn.), and industrial enzymes.

The use of extracellular or periplasmic carrier proteins avoids contamination of the product with other proteins within the bacterium and avoids degradation of the product by intracellular enzymes.

7.6.79 as US0399 (19pp367).

(E) ISR: US4082613; 2 Journal References.

See Also

D13 EP --6821

D13 J5 4154554

D13 J5 4154571

D13 SU 660993

D17 CS 7807365

D17: SUGAR; STARCH

TURE/★ D17 C/03 ★CS 7806-002

Aldose saccharides determ. agent

TUREK S 18.09.78-CS-006002

R16 (31.08.79) G01n-31/22

STAN/★ D17 C/03 ★CS 7807-365

L-Erythro-pentulose prepn. by biochemical dehydrogenation

STANKOVIC L 31.01.78-CS-007365

E17 (D16) (31.08.79) C07h-03/02

PHYL-★ D17 C/03 ★HU T017-516

Sugars, e.g. maltose, fructose and glucose, prodn. - by hydrolysing material contg. starch, used as sweeteners in foods and fodder

PHYLAXIA OLTO ANYAG 16.11.77-HU-PI0602

E13 (28.12.79) C13k-01/06

KIFO=★ D17 04630C/03 ★SU -659-621

Sugar prodn. diffusion juice purificn. - includes electrochemical treatment using pulsating current to coagulate non-sugar components

KIEV FOOD IND 05.04.76-SU-344281

J03 (30.04.79) C13d-03/18

Non-sugar impurities removal from sugar mfg. diffusion juice includes clarification, saturation, filtration and electrical treatment using electrode reactor. The prod. purity is increased and the electric power consumption is reduced if the clarified and satd. juice, prior to filtration, is treated with aluminium sulphate (0.02-0.04 vol. %). The juice passed through the electrochemical reactor in pulsating stream (relative amplitude 8-10 and frequency 1-5 Hz) where it is treated with pulsating electric current of 90-110 Hz frequency; current density 0.05-1.0 A/cm² and voltage 6-12V.

The electric current is passed for 15-20 mins. changing electrode polarity every 5-10 mins. The treatment produces the coagulation of impurities. The suspended non-sugar particles are then sepd. by known method. Fedotkin, I. M., Zharik, B. N., Melnichuk, V. S. et al. Bul. 16/30.4.79. 5.4.76 as 344281 (2pp938)

STRA- D17 84980Y/48 =US 4181-442

Amino acid determ. in sugar beet products - based on fluorometric detection of fluorescamine or phthalaldehyde

GES STRAHLEN & UMWE 20.05.76-DT-622547

J04 R16 (01.01.80) *DT2622-547 G01n-21/52

Appts. for measuring fluorescence comprises a metal block having a sample recess and a beam divider recess, both connected by a receiving bore. Radiation is fed into the receiving bore from a radiator source and optical focussing device, and passes out to detectors via exit bores at angles to the two recesses, part of the radiation having passed through the sample and part reflected by the beam divider.

The method may be used for determining amino acids. It is accurate, sensitive and eliminates mechanical, thermal and optical interferences. 15.2.78 as 877985 (+

20.5.77 - US - 799121) (7pp976).

ALFA D17 82169A/46 =US 4181-535

Starch and by/products prepn. from corn - by maceration and sepn. of fractions, with vapour recycled from driers to evaporator

ALFA-LAVAL AB 16.05.77-SW-005679

+Q76 (01.01.80) *BE-867-052 C13l-01

The water phase from corn steeping is evaporated in a multistage evaporator to a steeping concentrate, the steeped corn being divided into an aq. germ fraction, an aq. fibre fraction and a gluten suspension which is partly dewatered to an aq. gluten fraction.

The three fractions are dried to a low water content by heating while subjected to a direct air flow, causing steam-air flows from the fractions. When drying the fractions, the air flow is limited to make the enthalpy of the steam-air flows relatively high, and part of the steam-air flows is fed to one stage of the evaporator to which the water from the steeping is fed.

The system has good heat economy. 10.5.78 as 904376 (4pp976).

CARG/ D17 23601A/13 =US 4182-632

Multistage diffusion (extrn.) plant - esp. for extrn. of cane sugar from bagasse moving over sieves (NL 16.3.78)

CARGILL J M 14.09.76-GB-038018

J04 (08.01.80) *DT2741-065 B01d-11 C13d-01

Diffusion apparatus, particularly for sugar production, comprises vertical stationary screens about a fixed central cylindrical column carrying liquid collecting trays located below the screens, with screens and trays in the annulus between column and outer shell.

The shell is rotatable and radial members attached to it move the material treated over the screens. The arrangement simplifies the movement of prepared cane or bagasse. There is pref. a number of stages with a recirculating percolation system for counter-current extraction, and material travels about almost a full revolution in each stage. 14.9.77 as 833177 (8pp1358)

MITU D17 50030A/28 =US 4182-633

Simulated moving bed operation - measuring concn. of one component to predict and set concn. distribution to desired curve

MITSUBISHI CHEM IND KK 13.01.77-JA-002576 (21.12.76-JA-153668)

J04 (08.01.80) *DT2756-496 C13k-03 +C13d-03/14 C13k-01 C13k-11

A simulated moving bed, particularly for separating a solution of 15-35% glucose and 20-40% fructose, is operated by flowing a solution with sorbed and non-sorbed components unidirectionally along a solid sorbent packed bed with the ends connected in a circulation loop, introducing feedstock and desorbent to the circulation and withdrawing the components separately from set bed positions.

The concentration of at least one component in the bed flow is measured at one or more points to predict concentration distribution, and flow rate is controlled to maintain the predicted distribution in the desired wave pattern as the positions of inlets and outlets are moved at set time intervals. 19.12.77 as 862163 (11pp1358)

HOKA D17 92127A/51 = US 4182-634
Maltose liq. purificn. - by contacting with activated carbon in an aq. soln. of methanol, ethanol or acetone (DK 13.11.78)
HOKKAIDO SUGAR KK 21.04.77-JA-045175
E13 (08.01.80) *J53130-754 +C13d-03/12

Purificn. of maltose soln. with activated C comprises (a) contacting activated C with aq. soln. of methanol, ethanol or acetone, (b) adding the same organic solvent to the maltose soln. until the solvent concn. in the soln. equals that in the aq. soln. of solvent in (a), (c) feeding the resultant soln. to a bed formed of the pretreated activated C, (d) feeding the same aq. soln. as that used in (a) to the bed, (e) recovering a maltose-rich eluate from the bed and (f) sepg. the solvent from the eluate.

Pref. (c) is effected at 50-60°C. The amt. of solvent-contg. maltose soln. fed to the bed is >100 mg. reducing sugar per ml. activated C.

Maltose soln. of purity >98.5% is thus obtd. from soln. of 75-90% purity in high yield. 20.4.78 as 898073 (8pp393)

ABBO D17 40906B/22 = US 4182-756
Glucose polymer mixed soln. - with high calorie content suitable for intravenous feeding

ABBOTT LABORATORIES 21.11.77-US-853366
A96 B04 (08.01.80) *DT2850-247 A61k-31/71 C07h-01 C08b-37

Clear, nonpyrogenic, stable and sterile soln. for intravenous admin. to humans comprises ≥20 (20-50) % w/v of a glucose polymer mixt. having an average degree of polymerisation of ≥4 (4-10) and ≥99% of its mols. <26 glucose units, ≥85% of its mols. <11 glucose units and ≥20% of its mols. <4 glucose units. Soln. is pref. isotonic with human blood.

Prepn. soln. comprises 20-30% w/v of the mixt. of average polymerisation degree 4-6, where <1% of its mols. >25 glucose units; 4-10% of 11-25 units; 1-3% of 10 units; 3-5% of 9 units; 5-8% of 8 units; 14-17% of 7 units; 16-18% of 6 units; 8-9% of 5 units; 10-13% of 4 units, 13-17% of 3 units; 8-13% of 2 units and 1-3% of 1 unit.

Used for amin. of calories for patients pref. via a peripheral vein. Can be used for patients suffering from malnutrition and also may be given to diabetics. 21.11.77 as 853366 (8pp963)

See Also

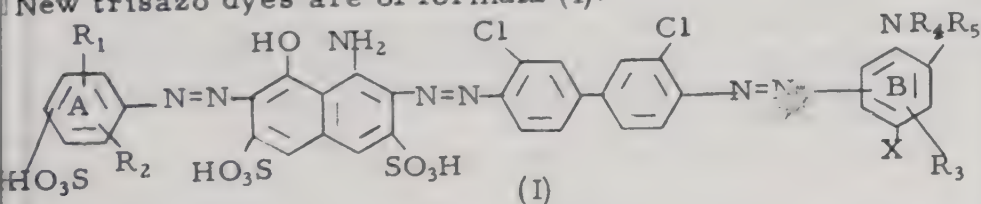
D13 EP --6592

D14 SU 659861

D18: SKINS; HIDES; LEATHER; TOBACCO

BAJA/★ D18 C/03 ★CS 7707-017
Cyclic dehydration of flat fibrous materials
BAJAK K 28.10.77-CS-007017
(31.08.79) C14b-01/08

FARB★ D18 03697C/03 ★DT 2828-132
Black tris:azo acid dyes of aromatic series - for use on nitrogen-contg. fibres esp. leather
BAYER AG 27.06.78-DT-828132
E21 F06 (10.01.80) C09b-31/16 D06p-01/02
New trisazo dyes are of formula (I):



(in which R₂ is H, CH₃, OCH₃, OC₂H₅ or Cl; R₁ is as R₂ or NH-Ac; R₃ is H, CH₃, SO₃H, Cl, NO₂ or OCH₃; R₄ is H or 1-4C alkyl; R₅ is as R₄ or CH₂SO₃H, CH₂COOH, phenyl or o-tolyl; X is NH₂ or OH; Ac is formyl, 1-4C alkylcarbonyl, Cl-acetyl, benzoyl, benzenesulphonyl or p-toluene sulphonyl).

(I) have good levelling behaviour and constancy of shade on leathers of different tannings, with good affinity to chrome leather from formic or acetic acid baths. Fastness to buffing and migration are also good. 27.6.78 as 828132 (13pp195)

SELB-★ D18 03743C/03 ★DT 2829-048
Fur carding machine - with third roller on feed roller pair for discharge to belt conveyor
SELBECK CO 01.07.78-DT-829048
(10.01.80) C14b-15

A carding machine for furs is equipped with a pair of feed rollers to introduce the material to the carding cylinder. A third roller below the lower roller of the feed pair forms a roll gap through which the material is transferred from the carding area to a belt conveyor.

This ensures a good detachment of the material from the carding cylinder and eliminates the risk of injury when manual assistance is needed. The risk of damage to the fur is removed and one operator is now required instead of two. 1.7.78 as 829048 (5pp39)

BRTA★ D18 03991C/03 ★GB 1559-177
Treatment of tobacco esp. 1,1-ethylene-2,2' di:pyridylum di:bromide, - to effect drying and curing before harvest (BR 22.11.77)

BRIT AMER TOBACCO LTD 28.06.76-GB-026871 (02.12.75-GB-049513)

C03 P15 (16.01.80) A24b-01 A24b-03/12

Process for treating tobacco comprises (a) applying a desiccant which accelerates leaf wilt to growing mature tobacco plants; (b) allowing the leaves to wilt and cure for 2-50 days, until the water content of the leaves has decreased by ≥25 (pref. 40-90) wt.% of its initial value, without killing the plants; (c) harvesting the leaves; and (d) further processing the harvested leaves.

The process allows post-harvest curing times and fuel costs to be reduced and facilitates harvesting and transport of the leaves. The smoke of tobacco prods. thus produced is generally less acid than that of Virginia flue-cured tobacco and resembles that of Burley air-cured tobacco. 9.11.76 (4pp367)

NOGA-★ D18 04453C/03 ★J5 4154-502
Repairing leather prods. - using alpha-cyanoacrylate contact adhesive

NOGAWA CHEMICAL KK 20.05.78-JA-060439
A81 G03 (A14) (05.12.79) C14c-09

The method comprises using α-cyanoacrylate-type instantaneous adhesive having viscosity of 100-2000 cps. As the adhesive has high viscosity it is hardly impregnated into the leather products and can be hardened instantaneously. Both natural and synthetic leather products can be repaired easily and even small crevices can be mended. 20.5.78. as 060439 (2pp5)

SVRO=★ D18 04727C/03 ★SU -660-648
Hide bristles removal appts. - has disc holder with flexible elements and scrapers fastened together in angular relationship
SVERD ROSMYASOMOLPR 27.01.77-SU-447253
(11.05.79) A22b-05/08

Device for cleaning pig hides, to remove bristles, or the scorched epidermis, comprises a holder with movable scrapers, mounted on flexible elements arranged at an angle to the plane of the holder. Productivity is increased and the manual labour needed during the processing of the curved surfaces of the carcasses is reduced, by making the holder in the form of a disc, positioned so that it can rotate. The ends of the flexible elements supporting the scrapers are directed oppositely to the direction in which

the disc rotates. The angle between each radial plane, passing through the point at which each flexible element is fastened to the disc and the middle of the scraper blade, is 87-93°.

Luzhetskii, N.I. Bul. 17/5.5.79. 27.1.77 as 447253 (3pp 29)

EAST D18 42517A/24 =US 4181-640
Non-crystalline polyester fibres prodn. from terephthalic acid - and alkylene glycol(s), used for cigarette filters and nonwoven fabrics
EASTMAN KODAK CO 06.12.76-US-748037 (08.12.78-US-967654)
A23 F01 + P15 (01.01.80) *DT2753-789 + C08k-05/15

Plasticiser bonded fibrous article is formed of a fibre of a polyester of terephthalic acid or its ester forming deriv. and a glycol of 60-100 mole % 1,2-propylene glycol and 0-40(10-30) mole % ethylene glycol. The polyester has an inherent viscosity of $\geq 0.35(0.5)$ in a 60/45 pts. wt. soln. of phenol/tetrachloroethane at a concn. of 0.5g. of polyester in 100ml. solvent, and Tg of $\geq 80^{\circ}\text{C}$.

Pref. plasticiser is triethylene glycol diacetate, glycerol triacetate, dimethyl phthalate, 1,3-butanediol diacetate and/or γ -butyrolactone. Pref. fibrous article is in the form of a (non-)woven web. The fibres are useful for the prodn. of bonded coherent cigarette filters, etc.
8.12.78 as 967654 Div. ex 4145518 (10pp924).

BRTA D18 04112B/03 =US 4182-348
Eliminating nitric or carbon monoxide(s) from tobacco smoke - using Perovskite ruthenium cpds. as catalysts
BRIT AMER TOBACCO LTD 06.09.77-DT-740011
J01 P15 (08.01.80) *BE-870-257 A24b-15 A24b-15/02 B01d-53/34

Catalytic removal of NO and CO from tobacco smoke is effected by contacting the smoke with a cpd. (I) of formula $\text{M}_2\text{M}'\text{RuO}_6$ in which M is a divalent metal, M' is a trivalent rare earth metal and Ru has a valence of 5, M and M' being such that their ions are capable of forming a perovskite lattice with the Ru ions. Pref. M is Sr or Ba and M' is Yt or La. In partic. (I) is $\text{Ba}_2\text{LaRuO}_6$.

(I) may be added to tobacco, cigarette filters or cigarette paper, pref. in an amt. of ≥ 10 mg. of (I) per g. of tobacco, filter or paper. 30.8.78 as 938004 (3pp927)

KIMB D18 37435B/20 =US 4182-349
Reconstituted tobacco mfr. from whole plants - by separate grinding of woody stem parts and of leaves
KIMBERLY CLARK CORP 04.11.77-US-848431
P15 (08.01.80) *DT2847-860

Reconstituted tobacco is made from the whole plant by separating woody stalk from leaf, refining separately with the

stalk refined to a greater extent, forming an aqueous slurry from both fractions, and making a paper-like sheet from the slurry using conventional papermaking techniques.

The leaf and stalk are pref. extracted before refining, then the fibrous residues are refined and the extracts introduced into the final sheet. Refining is pref. by beating and unrefined leaf may be added to partly refined stalk, before completing refining. Conventional non-tobacco papermaking fibre may be added to the slurry. 4.11.77 as 848431 (4pp1358)

FARH D18 88426Y/50 =US 4182-350
Cigarette filter contg. polyolefin fibres - made weakly hydrophilic and prepd. by expansion of a heated aq. emulsion
HOECHST AG 28.05.76-DT-623844
A88 F04 P15 (A17) (08.01.80) *DT2623-844 A24b-15/02 + B01d-29/08

Cigarette filter is claimed which has been produced by flash evaporation of pressurised, superheated emulsion through a nozzle into a low pressure zone and formation of the evapn. prod. into a fibrous filter mass. The emulsion comprises (a) an aq. soln. of polyolefin in a low b.pt. solvent and (b) an aq. soln. of 0.05-0.7 wt.%, relative to the polyolefin, of a hydrophilising agent (I).

Pref. the polyolefin is a polyethylene having a reduced specific viscosity of 0.3-30 dl./g. and a density of 0.93-0.97 g./cm.³ Pref. (I) has an amine, amide, COOH, OH gp. or their mixt.

The filter has excellent adsorption properties for tar and nicotine. 26.5.77 as 800917 (4pp393)

PHIM ★ D18 05350C/03 ★US 4182-743
Filter for selective removal of aldehyde(s) - comprises hydrogen peroxide water and stabiliser on porous carrier
PHILIP MORRIS INC 03.03.77-US-773866 (10.11.75-US-630355)
A88 E19 J01 (08.01.80) B01d-53/34

A filter element for selectively removing low mol. wt. aldehydes and related cpds. from a gas stream, while leaving unaffected unsatd. hydrocarbons which may be present, consists of granules of a porous carrier, contg. hydrogen peroxide, 1-10 wt.%, based on wt. of hydrogen peroxide.

The filters are esp. useful for removing aldehydes from tobacco smoke, while leaving behind the unsatd. cpds. which contribute to aroma. They may also be useful in air conditioning systems, for removing pollutants from gas streams, and in gas masks. 3.3.77 as 773866 (7pp955)

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

BUCH- ★ D21 03656C/03 ★DT 2827-020
Electric welding of metal dental prostheses in patients mouth - using hand tongs which press prostheses together and supply welding current pulse with low voltage
BUCHI LAB TECHNIK A 20.06.78-DT-827020
M23 P32 (10.01.80) A61c-05/08 A61c-13/20

A pair of tongs is used to press at least two metal parts in the patient's mouth together so they are in contact on a joint surface (I); and an electrode is pressed onto each metal part so the area of each joint surface (II) between the electrodes and the parts is larger than surface (I) at least prior to welding. The two electrodes are then connected to a low voltage DC source to make the weld.

The surfaces forming joint (I) are pref. wetted with an electrically conducting substance, esp. a salt soln., prior to welding. The process is used esp. to repair crowns, inlays and bridges.

Substantial savings are achieved in time and cost, because it is not necessary to remove the crowns, etc. from the patient's teeth or jaw. 20.6.78 as 827020 (14pp1144)

WAAH/ ★ D21 03682C/03 ★DT 2827-635
Dental cavity sealing compsn. - based on polystyrene or poly(meth)acrylate and contg. ethyl acetate as solvent in place of chloroform
WAAHLSTAM H 23.06.78-DT-827635
A96 (10.01.80) A61k-05

Ethyl acetate is used as solvent for the plastic material present in dental cavity sealing compsns. It thus replaces chloroform. Ethyl acetate evaporates rapidly, has no unpleasant taste or smell, and in the small amts. used for sealing, has no toxic effects.

Polystyrene is the pref. plastic material, but a poly(meth)acrylate may also be used. The presence of 1-10g/100 ml of the sealant of ZnO and partic. $\text{Ca}(\text{OH})_2$ as suspending substance increases the adhesion of the sealant to the exposed dentine surface of the cavity, probably because of its dehydrating action. The sealant may also contain a non-toxic balsam. Calcium monofluorophosphate and diiododithynol may also be present. 23.6.78 as 827635 (8pp004)

ES-★ D21 03741C/03 ★DT 2829-037
 Germicidal mouth- and throat-care compsns. - contg. a water-soluble germicide e.g. chlorhexidine and a polysaccharide e.g. dextran
 DRE FRESENIUS CHEM 01.07.78-DT-829037
 A96 (A11) (10.01.80) A61k-07/16
 The compsns. contain a water-sol. germicide in combination with a sol. native and/or modified polysaccharide giving a mean mol. wt. of ca. 10000-3000000. Inclusion of the polysaccharide in the formulation increases the activity of the germicide by up to one-third, partic. against *Candida* and *Pseudomonas* species in the oral cavity.
 Pref. water-sol. germicides are salts of chlorhexidine and hexetidine. The germicide is pref. present in a concn. of ca. 0.05-3 wt.%. Pref. polysaccharides are dextrans, hydroxyethyl-starch and carboxymethylcellulose. The polysaccharide is pref. present in a concn. of ca. 0.5-10 wt.%. Suitable formulations include mouthwashes, gargles and sprays. 1.7.78 as 829037 (7pp280)

UNIL D21 23892B/12 =EP ---6-708
 Dental anti-calculus compsns. - contg. non-astringent zinc carboxymethoxy succinate salt
 UNILEVER LTD 15.06.78-US-916032
 B05 E12 (09.01.80) *US4144-323 A61k-07/16
 D/S: E(DT, FR, GB, IT, OE).

Dentifrice compsn. comprises as active ingredient a zinc cpd. of formula (I):



n is 1 or 2;
 when n is 1, x and y are both 1 and M is H, Na, K, Li, NH_4 or 10-18C alkyl-substd. ammonium;
 when n is 2, x and y are 1 or 2 and $x + y$ is 3 and M is Ca, Mg or Zn; and
 CMOS is the tri-anion of carboxymethyloxysuccinic acid, i.e. $^{\ominus}OOC-CH_2(COO^{\ominus})OCH_2-COO^{\ominus}$.

The dentifrice is non-astringent and is useful for the control and retardation of both plaque and calculus. The compsn. may be in the form of toothpaste, toothpowders, mouthwash or rinse, dental chewing gum, tablets or lozenges.

12.6.79 as 301120 (18pp1248).
 (E) ISR: FR2368948; DT2748570; GB1536261; US4138477.

REPH-★ D21 03897C/03 ★EP ---6-724
 Topical or rectal compsns. contg. medicament - together with urea adduct and solid powder
 SOC RECH PHARM SA 16.06.78-GB-027115
 B07 (09.01.80) A61k-09/02
 D/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

Pharmaceutical compsns. comprise (a) an effective amt. of a medicament; (b) 5-40% of small particles of an inclusion cpd. of urea with one or more 4-30C straight-chain aliphatic cpds.; (c) $\leq 50\%$ of a powder which is inert to and insoluble in the other ingredients; and (d) 25-90% of a carrier which does not dissolve or react with components (a)-(c), opt. together with a thickener. Components (a)-(c) are dispersed in component (d).

The compsns. are esp. useful for topical or rectal administration of water-sensitive medicaments (e.g. corticosteroids and derivs., dithranol for the treatment of psoriasis, salicylates for the treatment of rheumatic conditions, griseofulvin, nystatin, miconazole, tolinaftate, undecanoic acid and related antifungal agents, glycyrrhithinic acid and salts thereof and related antiinflammatory agents, ephedrine and related vasoconstrictors, vasodilators, antibiotics such as tetracycline, erythromycin and clindamycin, and sun-screening preps. comprising mixts. of vitamins A and D). The compsns. have good storage stability and a smooth texture; the urea assists percutaneous transport of the medicament and, in some cases, potentiates its effect.

15.6.79 as 301159 (23pp367).
 (E) ISR: GB-804492; GB1404583; 2 Journal references.

UNIL★ D21 03901C/03 ★EP ---6-738
 Aq. solns. of basic aluminium chloride, bromide, iodide and nitrate - used as antiperspirants, are stabilised against gelation by addn. of urea
 UNILEVER LTD 23.06.78-GB-027756
 E33 (09.01.80) A61k-07/38
 D/S: E(DT, FR, GB).

Antiperspirant compsn. contains (i) an aq. soln. of a basic aluminium chloride, bromide, iodide or nitrate having an aluminium to chloride, bromide, iodide or nitrate molar ratio of 6.5-1,3:1; (ii) polymeric hydroxyaluminium species of $> 100 \text{ \AA}$ contg. 2-80 wt.% of the total Al; and (iii) urea as gelation inhibitor.

The addn. of urea inhibits gelation of aq. and aq./alcoholic solns. of basic Al chloride, bromide, iodide and nitrate cpds. as described in DT2700711.

21.06.79 as 301202 (9pp513).
 (E) ISR: FR2278319; FR2259587; US2814584; US3211620; FR2303527; DT2700711.

UNIL★ D21 03902C/03 ★EP ---6-739
 Basic aluminium chloride, bromide or iodide antiperspirants - with specific particle size distribution
 UNILEVER LTD 23.06.78-GB-027755
 E33 (09.01.80) A61k-07/38 C01f-07/48
 D/S: E(CH,DT,FR,GB,IT,NL,OE,SW).

Antiperspirant compsns. contain as active component a basic aluminium chloride, bromide or iodide having an Al to chloride, bromide or iodide ratio of 0.5-2.5:1. At least 20% of the total Al in the cpd. is in the Band III fraction and $< 2\%$ of the total Al is contained in polymers having a size of $> 100 \text{ \AA}$. The antiperspirant is in the form of a powder or aq. soln. contg. $\geq 2.5\%$ by wt. of Al.

Basic Al chlorides, bromides or iodides with the above specified particle size analysis give compsns. with improved antiperspirant action.

21.06.79 as 301203 (37pp513).
 (E) ISR: FR2278319; FR2259587; FR2039249; DT2700711.

HENK★ D21 03903C/03 ★EP ---6-741
 Self-emulsifying cosmetic base - comprising a mixt. of a nitrogen contg. surfactant and a fatty alcohol
 HENKEL CORP 23.06.78-US-918260
 E19 (09.01.80) A61k-07/08
 D/S: E(DT, FR, GB, IT).

Solid cosmetic base (II) with self-emulsifying properties comprises (a) a mixt. of cpds. (I):



(where R is a fatty alkyl gp.; and M is a mixt. of

salt forming cations and H in a wt. ratio of 1:1 to 1:10⁻¹⁰); and (b) a satd. fatty alcohol, in a wt. ratio (a):(b) = 1/10:1 to 2/13:1.

Pref. R is 10-24 (esp. 12-18)C alkyl and M is Na, K, NH_4 or substd. ammonium. Component (b) is pref. 10-24 (esp. 12-18)C fatty alcohol. In a pref. compsn., the alkyl gp. R and the fatty alcohol (b) contain the same number of C atoms.

The combination of (a) and (b) forms emulsions when mixed with oil and water. The resulting cosmetic emulsions are made at lower temps. and with less expenditure of energy than if the components (a) and (b) are added separately to the oil and water and are more stable.

21.06.79 as 301206 (13pp513).
 (E)ISR: FR2125531; BE-516807; 1 Journal Reference.

OSUL/★ D21 03909C/03 ★EP ---6-757
 Tool for mixing catalysed dental filling compsns. - is coated at one end with an adherent coating contg. a curing catalyst
 O'SULLIVAN DJ 26.06.78-EI-001266
 (09.01.80) A61k-06
 D/S: E(BE, DT, FR, GB, IT).

Elongate tool for mixing catalysed dental filling compsns. has one end as a handle and the other end carrying an adherent coating of a catalyst-contg. compsn. comprising a firm, non-tacky binder contg. the catalyst. The catalyst may be

dispersed or dissolved in the binder. The binder may consist of one of the coreactive filling materials or it may be a non-reactive material.

The tools are esp. useful for polymeric filling materials having a two-part catalyst system, in which one part of the catalyst can be mixed with the bulk of the filling paste and the other part of the catalyst can be applied to the end of the mixing tool. The tools give better mixing of the filling compsns. and allow more accurate colour matching than with conventional two-part filling compsns.

26.6.79. as 301240. (9pp513).

(E)ISR: DT2309905; FR1265734; US3336669.

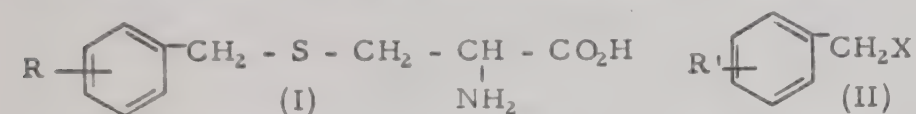
PARC- D21 00431C/01 = EP ---6-784
Mucolytic S-benzyl-L-cysteine derivs. - useful in pneumology and otorhinolaryngology

PARCOR 22.06.78-FR-018693

B05 C03 (09.01.80) *GB2023-598 A61k-31/19 C07c-149/40 + C07c-69/78

D/S: E(DT, NL, SW).

S-Benzyl-L-cysteine derivs. of formula (I) and their salts, and intermediates of formula (II), are new



(R is lower alkoxyacetyl or carboxy;

R' is alkoxyacetyl; and X is halogen, esp. Cl or Br).

(I) have mucolytic activity with high tolerance and low toxicity. (I) also have trophic properties towards skin protecting epidermis, nails and hair. Admin. is pref. p.o. or as drops or nasal spray. Doses are 0.05-3 g/day. (I) are useful in human or veterinary medicine in treatment of chronic bronchitis, tracheo-bronchitis, bronchorrhea, otitis, sinusitis, pharyngitis and rhino-pharyngitis.

6.6.79. as 400364 (11pp949)

(F) ISR: —

GCSH- D21 50642Y/29 = GB 1559-308
Resinous compsns. for repair or construction of dental crowns - comprising modified bismethacryloxy ethoxy phenyl propane and polymethyl methacrylate

G-C SHIKA KOGY KK (GCDE-) 15.12.75-JA-148406

A96 E14 + P32 (A14 A25) (16.01.80) *DT2656-847 A61c-05/08 + C08f-265/06

A 2,2-bis (4-methacryloxy-ethoxyphenyl) propane deriv. of formula $(\text{CH}_3\text{C}(\text{=CH}_2)\text{CO}(\text{OCH}_2\text{CH}_2)\text{C}_6\text{H}_4)_2\text{C}(\text{CH}_3)_2$ (I) and a powder component of methacrylic resin comprise a compsn. for forming crowns for teeth. In the formula each m is the same or different and the average mol. amt. of ethylene oxide units is 2.2-6. Each m > 1.

Pref. the viscosity of (I) is 2,000-13,000 cps. the mixing ratio of (I) to powder component is 1:3-4:1. The powder component is PMMA contg. a proportion of a powdered inorganic filler.

The compsn. is esp. prepd. as a slurried material, obtd. by mixing the powdered methacrylic resin polymer with (I). The prod. is finally shaped to form a crown.

15.12.76 as 052338 (6pp931)

PROC ★ D21 04012C/03 ★ GB 2024-623
Hair conditioning article - comprising flexible substrate coated with solid conditioning agent and water soluble salt

PROCTER & GAMBLE CO 06.06.78-US-913145

E19 (E37) (16.01.80) A61k-07/06

Hair conditioning article comprises a flexible substrate (e.g. of paper, (non)woven fabric, sponge, etc.) coated with releasable coatings of (a) 1.5-20 g/m², esp. 6-15 g/m² of a normally solid hair conditioning agent and (b) 0.3-15.0, esp. 1.5-6.0 g/m² of a water soluble salt chosen from (i) halides, sulphates, (acid)phosphates, borates, acetates, bicarbonates, formates and benzoates of Na, K, NH₄ or Mg; (ii) aluminium hydroxychloride or aluminium sulphate; (iii) zirconium oxychloride, zirconium sulphate or zirconium hydroxychloride; (iv) manganese acetate, manganous chloride or manganous sulphate; or (v) mixts. of these.

The conditioner is easier to apply to the hair than conventional liq. conditioners, and can be applied to those parts of the hair (esp. the ends) most requiring it. The

prod. may be applied to dry hair or, pref. to shampooed and partially dried hair to give combing, detangling, static fly-away, softness and manageability to the hair. No rinsing off is needed after application. 5.6.79 as 019630 (9pp)

LIOY ★ D21 04294C/03 ★ J5 4153-80
Shampoo stable at low temps. - based on hydroxy-alkane sulphonate and cation exchanged cellulose or starch

LION FAT & OIL KK 23.05.78-JA-061434

A96 E17 (A11) (04.12.79) C11d-01/14 C11d-03/37 C11d-10/02

Shampoo contains 2-35 wt. % 10-16C hydroxy-alkanesulphonate having OH gp. in 3rd-6th position to sulphonic gp. and 0.05-5 wt. % of cationated cellulose contg. 0.5-3.5 wt. % of quat. nitrogen or cationated starch contg. 0.5-5 wt. % of quat. nitrogen.

Such shampoos foam well, have hair-conditioning properties and high stability at low temp. i.e. no precipitation in case of prolonged storage at low temps.

23.5.78. as 061434 (6pp170)

SUNZ ★ D21 04470C/03 ★ J5 4154-539
Saccharine-free dentifrice compsn. - contg. neo:hesperidin di:hydro-chalcone, naringin di:hydro-chalcone and ascorbic acid (deriv.)

SUN STAR HAMIGAKI K 25.05.78-JA-062991

B02 E13 (B03 D13) (05.12.79) A61k-07/16

Saccharin-free dentifrice composition is prepd. by combining neohesperidin-dihydrochalcone, naringin-dihydrochalcone, and ascorbic acid in conventional dentifrice base.

In dentifrice composition saccharin has been mainly used as the sweetener to suppress the basic smell originated from other ingredients, but recently its use has been a problem from the viewpoint of safety. The inventor has found that through the sweetness of neohesperidin-dihydrochalcone and naringin-dihydrochalcone has defects in taste and aftertaste, they show excellent refreshing sweetness synergistically together and that the pink-colouration of the dentifrice composition due to their application, can be prevented by adding ascorbic acid or its deriv.

Usually neohesperidin-dihydrochalcone and naringin-dihydrochalcone are combined 0.02-0.05 wt. % and 0.02-0.075 wt. % respectively in compsn. and ascorbic acid or its derivative (e.g. L-ascorbic acid, its salt and its ester) is combined 0.05-0.50 wt. % in compsn. 25.5.78. as 062991 (4pp5)

KOKE ★ D21 04490C/03 ★ J5 4154-683
Cosmetic foundation cream compsn. - contg. enzymically digested collagenous material, poly-hydric alcohol, water and antiseptic

KOKEN KK 26.05.78-JA-062954

A96 P78 (05.12.79) B44c-03

The foundation cream for cosmetics is prepd. by digesting collagen and removing selectively telo-peptide present at their terminal part of collagen molecule by protein hydrolyase enzymic to form atelcollagen having no antigenicity, and dissolving the atelcollagen in a mixed liquid consisting mainly of polyhydric alcohols (e.g. polyethylene glycol) and water.

The material gives nutrition and dampness to skin and can prevent skin roughness. It can protect skin from harmful substances in cosmetics.

Typical material contains 0.3% of atelcollagen, 7% of polyethylene glycol and 0.25% of antiseptic agent.

26.5.78. as 062954 (5pp50)

LEIT D21 59928X/32 = J7 9042-384
Composite prosthetic matl. - comprises methacrylate-based polymer matrix contg dispersed bioactive material

LEITZ E GMBH 17.01.75-DT-501683

A96 L02 P32 (13.12.79) *DT2501-683 A61c-13/08 A61f-01/24 C08k-03/40 C08l-33/10

A composite material for prosthetic uses comprises a methacrylate-based matrix contg. ≥1 bioactive material (I). The material is used esp. in dental/bone surgery. The material 'grows into' the surface it contacts. (I) may be a glass ceramic having an apatite crystal phase and contg. 20-60 wt. % SiO₂, 5-40 wt. % P₂O₅, 2.7-20 wt. % Na₂O, 0.4-20 wt. % K₂O, 2.9-30 wt. % MgO, 5-40 wt. % CaO and, opt. 0.005-3 wt. % F (cf. DT 2326100).

It is used in powdered form ($\leq 200\mu\text{m}$) and may be (an)-isotropically dispersed in the polymer matrix in amts. of 20-70 vol. %. Fibres may also be added to the matrix to improve its mechanical characteristics. 5.1.76 as 000046 (clg. 17.1.75-DT-501683) C081-33/10, A61c-13/08, A61f-1/24, C08k-3/40 (13.12.79) LEITZ E GMBH (4pp) J5 1098754)

SCCO-★ D21 04971C/03 ★US 4180-911
Direct bonding of orthodontic appts. to teeth - using a cyanoacrylate resin and inorganic filler as adhesive, after teeth swab with stannous fluoride

APPLIED SCIENCE COR 16.09.77-US-833717

A96 G03 P32 (A14) (01.01.80) A61c-07 C09k-03

In securing an orthodontic fixture to a tooth surface (a) the tooth surface is cleaned and then swabbed with an SnF_2 soln. (which in addn. to its anticaries properties, also provides a bridging means between the tooth surface and an adhesive); (b) after ca 120 sec. excess SnF_2 soln. is rinsed off, and the tooth surface is dried; (c) a cyanoacrylate resin (I) and a hydrophobic filler powder (II) are mixed to form a homogeneous adhesive; (d) the orthodontic fixture is then stuck to the tooth surface with the prep. adhesive (using pressure).

Method allows the direct bonding of the orthodontic appts. to the tooth surface without acid etching of the tooth. In addn., the interface between the appts. and the tooth surface is protected from caries, and the resin is easily and safely removed after removal of the appts. The method is also suitable for restoring teeth, etc. 16.9.77 as 833717 (7pp478).

OC D21 50248A/28 =US 4180-913
Coloured, teeth filling compsn. - comprises thixotropic mixt. of alpha cyanoacrylate and coated silica powder, hardened after application by basic amine cpd.

LION HAMIGAKI KK 13.11.76-JA-136783 (13.11.76-JA-136782)

A96 (A14) (01.01.80) *J53061-192 +C08k-09/04

Fillers for α -cyanoacrylate dental materials comprise a silica powder substrate of particle size range 1-100 μm coated with >1 solid catalyst having a weak activity to the cyanoacrylate.

The catalyst is >1 amino acid or acid-amide cpd. The filler gives, with the cyanoacrylate, a thixotropic compsn. which can be cured by polymerisation with a setter.

Pref. the amino acid is a monoamino mono- or dicarboxylic acid, esp. glycine, valine, methionine, glutamic acid or tyrosine. Pref. catalyst is at 1-50 pts. wt. per 100 pts. wt. silica. 14.11.77 as 851080 (9pp974).

LEN D21 55806W/34 #US 4181-621
Centrifuge cleaning compsn in tablet/powder form - contains urea and acts rapidly

BLENDAX WERKE SCHNEIDER 31.01.74-DT-404494

E16 (01.01.80) *DT2404-494 +C11d-07/54

Centrifuge cleaning compsns. consist of ≥ 30 wt. % urea and ≥ 1 surfactant, flavourant, filler, complexing agent, binder or antimicrobial.

Pref. urea is 45-80 wt. % of the compsn. Pref. 3-15 wt. % of a 2-12C polybasic organic carboxylic acid with 1-6 acid gps. is present, esp. tartaric, citric, adipic, succinic, maleic, fumaric and/or gluconic acid.

Compsns. have improved cleaning capacity. 8.7.75 as 94106 (4pp974).

CK/★ D21 05112C/03 ★US 4181-695
Embedding flat element in soap cake - by inserting through extrusion-formed end slot and positioning precisely with pointed trailing element hole

RICKERT GE 09.01.78-US-867919

(01.01.80) B29c-17/14

Perforated flat sheet element is embedded in a cake of soap by inserting edgewise into the cake through a slot created during soap extrusion to within half the element hole dia. of the required position, then inserting a pointed punch into the bar to enter the element hole and move the element into the position.

The cake is pref. subsequently formed to close the element insertion slot. The method is suitable for high-speed prodn. and permits element insertion without the cake cracking open. The element does not interfere with

full utilisation of the soap. 9.1.78 as 867919 (4pp1358).

RIAL/★ D21 05122C/03 ★US 4181-712
Tooth paste compsn. contg. no abrasive - comprises detergent base, and a mixt. of micronised silica gel and activated charcoal
RIALDIG 06.06.75-IT-012642 (14.02.77-US-768199)
(01.01.80) A61k-07/16 A61k-33/44

Toothpaste compsn. consists of (a) 91-97 wt. % of compsn. of a detergent base and (b) 3-9 wt. % of compsn. of a mixt. of micronised colloidal silica gel and activated C (of a grain size 0.2-0.3 μ ; in wt. ratio 2-20:1) with 40-80 wt. % of demineralised H_2O . Detergent base consists of (all by wt. of compsn.) 1-3% of a detergent (I), 23-28% of a humectant (II), 6-9% flavouring agents and aromatic improvers, 0.5-1.5% of a germicidal agent, and 50-55% demineralised H_2O .

Although the compsn. contains no abrasives, it has good detergent and whitening action on teeth. The compsn. has no detrimental effect on tooth enamel, but does have a prophylaxis effect against caries. 31.8.78 as 938493 (4pp478).

CARR-★ D21 05170C/03 ★US 4181-804
Complexes of allantoin with urocanic acid (and salts) - useful as non-irritant sunscreens agents, for cosmetic compsns.

CARROLL PROD INC 10.01.79-US-002289

E13 (01.01.80) A61k-07/42 C07d-233/88

Complexes of formula $(\text{C}_4\text{H}_5\text{N}_4\text{O}_3)_a - (\text{C}_6\text{H}_6\text{N}_2\text{OX})_b$ (I) of allantoin (II) and urocanic acid (III) (or salt of (III)) (where X is O, Na, K, NH_4 ; a and b are 1) are new.

Complexes are stable to sunlight and heat, do not cause skin irritation, and possess the combined properties of (II) (healing, anti-irritant, cleansing, emollient, moisturising and skin softening) and the ultraviolet absorption (sun screening) properties of (III). In addn., (I) are soluble in organic solvents (e.g. EtOH), and are readily formulated. 10.1.79 as 002289 (3pp478).

KURS D21 18156A/10 =US 4182-035
Adhesives for teeth and bone - comprise a hardener comprising peroxide, amine and sulphate salt and a radical-polymerisable monomer

KURARAY KK 31.08.76-JA-104772

A96 E19 +P31 P32 (08.01.80) *DT2739-282 A61k-05/06

Packaged adhesive compsn. for bonding a dental filling material to the tooth comprises (1) a radical-polymerisable monomer, (2) a diacyl peroxide, (3) a sec. or tert. amine attached to an aryl gp., and (4) and alkali(ne earth) metal salt of an arylsulphinic acid. The compsn. comprises 2 independent packages whose contents are admixed on use. One package contains (1) and (2) and the other contains (3) and (4) dissolved in a volatile solvent.

Pref. (1) is a (meth)acrylic acid ester deriv., (2) is dibenzoyl peroxide, (3) is N,N'-di(β -hydroxyethyl)-p-toluidine and (4) is Na, Ca or Sr benzenesulphinate. Compsn. is also suitable for mending bone fractures, fixing artificial joints etc. Compsn. cures rapidly to give a high strength bond. 31.8.77 as 829486 (8pp927)

CABL-★ D21 05204C/03 ★US 4182-106
Dental brace wire comprising five strands - helically wound around slightly larger core strand

CABLESTRAND 05.07.78-US-922188

F07 P32 (08.01.80) A61c-07 D02g-03/12 D07b-01

Five equal cross sectional area stainless steel filaments (14A-E) are helically wound at 60-65° around a stainless steel centre filament. The ratio of dias. of the centre filament : outer filaments is less than 1.2 to 1.

Pref. the centre wire is circular and of dia. ≤ 0.025 " dia. The outer wires are formed into slightly elliptical shape during stranding. The wires are 0.004-0.007 inches diameter and have a tensile strength of 340,000-415,000 kg./sq. inch.

Wire has 40% elastic recovery from lateral deflection and has good strength and durability. The wire is used in dental braces. 5.7.78 as 922188 (6pp1320)

KAYI/ ★ D21 05269C/03 ★ US 4182-447
Capsule for storing and mixing reactive ingredients - with rupturable PVdC membrane dividing capsule during storage and ruptured by shaking, used esp. for dental compsns.

KAYI 27.07.77-US-819236

A92 Q32 (08.01.80) B65d-25/08

A storage container holds premeasured amts. of two mutually reactive ingredients. It comprises a sealed capsule formed of two opposed, abutting, rigid, hollow chambers, closed at their remote ends and open at their abutting ends. A thin rupturable PVdC membrane is mounted over the open end of one of the chambers to divide the contained into two separate closed compartments.

One of the ingredients is placed in each compartment, and in one of the compartments is a freely movable membrane rupturing device. This can rupture the membrane on vigorous shaking so that the two ingredients can mix and react together.

The container is esp. for use with dental amalgams but it may also be used for storing and transporting dental restoratives and cements, and other mutually reactive substances in the fields of medicaments, cosmetics, hair dyes, pigments, epoxy adhesives and cleansing solns. The container is easy to handle and the rupture of the membrane is easily effected by shaking rather than telescoping, twisting or bending. 27.7.77 as 819236 (9pp295)

GILL ★ D21 05284C/03 ★ US 4182-612
Cationic polymeric dyes - prepd. from cationic polymers and dyes, for dyeing hair

GILLETTE CO 31.01.77-US-763850

A96 E24 (A26) (08.01.80) A61k-07/13

Method of dyeing human hair consists of applying to the hair a compsn. consisting of an aq. medium contg. ≥ 5 wt. % of a cationic polymeric dye (I). (I) (mol. wt. 1000-100,000) is the reaction prod. of a cationic polymer (II) and a dye (III) such that up to 25% of the available prim. and sec. amine gps. of (II) are substd. by (III). (II) are

suitably polyethyleneimine (mol. wt. 300-200,000), polydiallylamine (mol. wt. 10,000-2,000,000), or the reaction prod. obtained by condensation of alkylene polyamines, (mol. wt. 60-400; 3 or more prim., sec., or tert. amino gps. sepd. by 2-5C alkylene) with 2-54C dibasic acids, 2-10C α, ω -aliphatic dihalides, epihalohydrins, or 3-18C diepoxides.

(III) may be a dye from azo, anthraquinone, nitro, nitroso, stilbene, diphenylmethane, triarylmethane, xanthene, acridine, quinoline, methine, thiazole, indamine, indophenol, azine, thiazine, lactone, aminoketone, hydroxyketone, indigoid, and phthalocyanine dyes.

Method using (I) rapidly dyes hair a wide variety of colours. (I) are resistant to removal by washing or shampooing, but leave minimal skin staining after being flushed with H_2O . In addn., no colour build-up occurs on repeated use. (I) are also suitable for dyeing other substrates, leaving a desirable smooth, coated feel. 31.1.77 as 763850 (8pp478)

FARB D21 86157A/48 = US 4182-829
Prod. of polyurethane with vinyl gps. for dental impressions - by reacting diisocyanate dihydroxylated cpd. and unsatd. mono:hydroxylated cpd.

BAYER AG 28.05.77-DT-724260

A25 P32 (A96) (08.01.80) *BE-867-527 C08g-18/34

Dental impression material comprises (i) the reaction prod. of (a) a di- or tri-isocyanate, (b) a dihydroxy cpd. selected from polyesters, polyethers, polythioethers, polyacetals, polycarbonates, and polyesteramides of mol. wt. 300-10000 and (c) a deriv. of acrylic and/or methacrylic acid having a OH gp.; and (ii) an inert dental carrier. The material has a hardening time of 4-5 min.

Molar ratio of (a):(b):(c) is 2:1:2. Compsn. may further contain a hardening catalyst. The material is odourless, and no polymerisation shrinkage occurs on hardening. 8.5.78 as 904071 (7pp927)

See Also

D13 US 4182885
D25 DT 2827291

D23 EP --6616

D23 SU 660969

D22: BANDAGES; DRESSINGS

MUND D22 75039S/47 #DS 2123-551
Solid iodine-contg germicidal detergents

MUNDIPHARMA AG 05.05.69-US-822002 (12.05.71-DT-123551)

B07 E17 (10.01.80) *BE-767-573 +C11d-03/48

Pharmaceutical, germicidal cleansing agent in solid form, comprises (a) 30-87 wt. % polyoxyethylene glycol(s) of mol. wt. 200-6000 (which includes 1 of mol. wt. 1500-6000) as diluent, (b) 0.5-25 wt. % satd. prim. alcohol(s) ROH (where R is 10-18C alkyl), (c) 3-20% iodine carrier e.g. polyvinyl pyrrolidone-iodine, nonylphenoxy poly(ehtyleneoxy) ethanol iodine, and/or undecyluim chloride-iodine, and (d) 10-25% surfactant e.g. alkyl-acyl ester of sodium 2-hydroxyethane sulphonate with 14-18C alkyl chain, Na-N-cyclohexyl-N-palmitoyltairate, Na-N-fatty acid -N-methyltaurate, Na-N-methyl-N-palmitoyl taurate and/or Na-lauryl sulphate.

Pref. agent comprises 65-75% polyoxyethylene glycol 4000, 0.5-3% ethyl alcohol, 5-20% polyvinyl pyrrolidone-iodine and 15-25% coconut acid ester of Na-2-hydroxyethane sulphonate. The new agent can be used in cosmetic soaps, etc or for washing cellulotics, linen, wool, silk and animal skin prods. 12.5.71 as 123551 (11pp913)

CIBA D22 88275R/47 = DS 2125-893
Anti microbial compositions

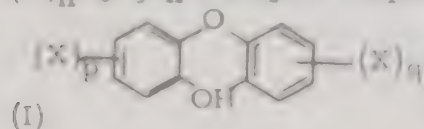
CIBA GEIGY AG 26.05.70-BE-750969 (26.05.70-BE-089520)

B05 C03 E14 +P34 (10.01.80) *BE-750-969 A611-13 +C07c-43/28

Antimicrobial prepn. comprises a mixt. of halogenated 2-phenoxyphenols of formula I and a cpd. of formula (X)_nC₆H_{5-n}YCH₂OH dispersed with the usual carriers

and additives. In these formul

-ae, X is halogen, p and q are integers such that each is 0-5 and that p+q = 1-5, the rings



in I may also have lower (opt. halogenated) alkyl or alkoxy, allyl, CN, NH₂ or Ac substits, and the OH may be acylated, n is 0-5, and Y is OCH₂, CH₂ or a bond.

Pref. active cpds. are 5-chloro-2-(2,4-dichlorophenoxy)phenol, 2-(4-chlorophenoxy)ethanol, and substd. phenylethanol, esp. 2-(4-chlorophenyl)ethanol. 25.5.71 as 125893 (13pp047)

SCHU D22 83375X/45 = DS 2516-922
Disinfectants contg. alpha, beta-unsatd. aldehydes - pref. aldol condensates having bactericidal, fungicidal, sporicidal and virucidal activity

SCHULKE & MAYR GMBH 17.04.75-DT-516922

B05 C03 E17 P34 (10.01.80) *DT2516-922 A611-13

Disinfectant compsn. contains a 6-12C (pref. 8-10C) $\alpha\beta$ -unsatd. aldehyde of formula $R_1R_2C=C(R_3)CHO$ as active component. In this formula, $R_1 R_3$ are each H, (un)branch- ed 1-5C alkyl and/or alkenyl.

Pref. cpds. are 2-ethylhex-2-ene-1-al, 2-isopropyl-5-methylhex-2-ene-1-al, and 2-propylhept-2-ene-1-al. The aldehydes is present at 0.001-1 (0.05-5) wt. % in the compsn. 17.4.75 as 516922 (7pp047)

EURO- ★ D22 03692C/03 ★ DT 2828-098
Composite splint for positioning patient's lower leg and ankle - comprises tubular pads hooked together and filled with hardenable plaster or polyurethane foam

EUROCOM EST 27.06.78-DT-828098

A96 F07 P32 (10.01.80) A61f-13 06

Legging adapted to cover a person's foot and leg near the ankle joint and fix it in the rest position at a pre-determined angle whilst preventing pivoting motion of the ankle joint is claimed.

The legging is composed of 2 tubular communicating

sections along whose longitudinal edges one half-tape of a closure, e.g. a slide fastener closure, burr-type closure or hook-and-eye closure is fixed. These half closures enable the legging to be fixed together after the tubular sections have been filled with plastically deformable but hardenable material. The sections, thus hooked together, form a demountable split about a person's leg when the packing inside the tubular sections has set. Plaster or curable polyurethane foam is a suitable packing. 27.6.78 as 828098 (28pp267)

EURO- ★ D22 03693C/03 ★DT 2828-099
Surgical appliance for immobilising a joint - comprises two lengths of communicating tubular knit fabric pref. packed with hard-curable polyurethane foamable compound

EUROCOM EST 27.06.78-DT-828099

A96 F07 P32 (10.01.80) A61f-13

Bandage for fixing 2 jointed parts esp. for placing a person's or animal's limbs e.g. foot/lower leg or lower leg/thigh or upper arm/forearm, into a rest position, so as to keep these limbs at a pre-determined angle w.r.t. each other whilst preventing swivel motion, is claimed.

The bandage comprises two sections of tubular knitted fabric connected together at an angle so that their interiors are open towards each other and define a chamber adapted to receive a fixing material. When the chamber has been packed with still-deformable material then the sections can be pivoted into the intended fixing position and the packing is then hardened. The sections are connected by welding, stitching or glueing. The packing is suitably a foamable polyurethane compsn. that hardens to an inelastic mass. 27.6.78 as 828099 (26pp267)

SCHU ★ D22 03725C/03 ★DT 2828-724
Disinfectant cloth contg. absorbent and disinfectant(s) - convertible to active form by wetting with water

SCHULKE & MAYR GMBH 30.06.78-DT-828724

E19 P28 (10.01.80) A47k-10/16

Disinfectant cloth consists of an absorbent contg. ≥ 1 disinfectant, (I) which changes to its disinfectant form by wetting with water. (I) may be organic precarboxylic acids, carboxylic acid anhydrides, mixts. of inorganic peracid salts and/or H_2O_2 -donors and o-acyl cpds. and/or N-acyl cpds., and may be impregnated on, or bonded chemically or physically to, or held loosely by, the absorbent.

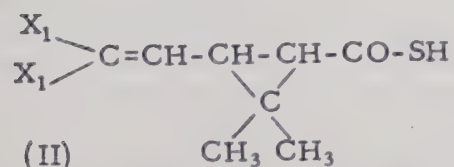
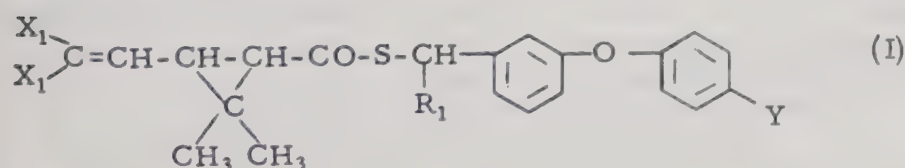
The cloth is used for disinfecting the skin and hands, for pre-operative prepn. of patients and for surgical disinfection of hands, as well as for disinfecting surfaces. Non-toxic (I) are used. The cloths can be stored without taking protective measures and are ready for immediate use. 30.6.78 as 828724 (23pp200)

CIBA ★ D22 03790C/03 ★DT 2925-290
Insecticidal cyclopropane carboxylic acid thiol ester derivs. - prepd. by esterification of the thio-acid with a 3-phenoxy-benzyl halide (NL 28.12.79)

CIBA GEIGY AG 11.05.79-CH-004414 (26.06.78-CH-006935)

C03 E14 F06 (10.01.80) A01n-09/12 C07c-153/11

New cyclopropanecarboxylic acid thioester derivs. are of formula (I) (where X_1 is F, Cl or Br; R_1 is H, CH_3 , ethynyl or CN; and Y is H, F, Cl or Br). Also new are the par-



ent thioacids of formula (II) (where X is halo).

(I) are pesticides

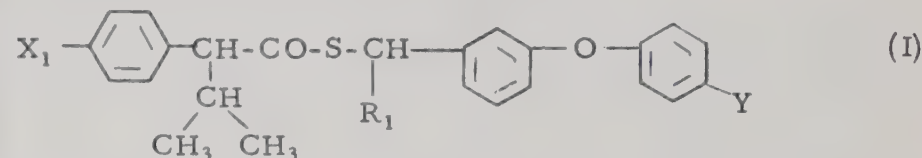
partic. useful for combatting insects, phytopathogenic mites and ticks. They are esp. useful as insecticides against phytopathogenic insects, flies (e.g. *Musca domestica*) and mosquito larvae, and as agents against keratin-eating insects and their larvae (e.g. clothes and carpet moths, pelt and carpet beetles). 22.6.79 as 925290 (20pp280)

CIBA ★ D22 03798C/03 ★DT 2925-337
Insecticidal isopropyl-phenyl:acetic acid thiol ester derivs. - prepd. by esterification of the thioacid with a 3-phenoxy-benzyl halide (NL 28.12.79)

CIBA GEIGY AG 11.05.79-CH-004413

C03 E14 F06 (10.01.80) A01n-09/12 C07c-153/09

New thioester derivs. are of formula (I):



(where R_1 is H, CH_3 , ethynyl or CN; X_1 is Cl, Br, CH_3 or OCH_3 ; and Y is H, F, Cl or Br).

(I) are pesticides partic. useful for combatting insects, phytopathogenic mites and ticks. They are esp. useful as insecticides against phytopathogenic insects, flies (e.g. *Musca domestica*) and mosquito larvae, and as agents against keratin-eating insects and their larvae (e.g. clothes and carpet moths, pelt and carpet beetles). 22.6.79 as 925337 (19pp280)

CIBA ★ D22 03833C/03 ★EP ---6-600
Phenoxy:benzyl tetra:haloethyl-cyclopropane carboxylate cpds. - used as insecticides and acaricides and for moth proofing textiles

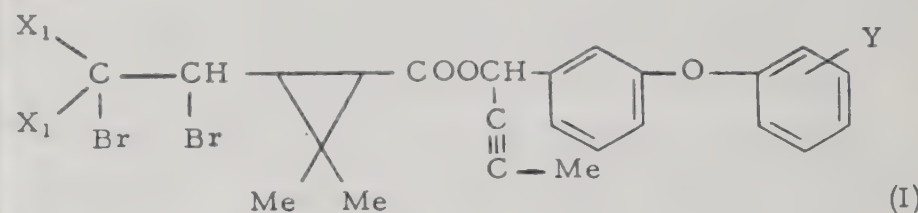
CIBA GEIGY AG 16.05.79-CH-004553 (27.06.78-CH-006992)

C03 E14 F06 (09.01.80) A01n-53 C07c-69/74

Intermediate Priority: 15.1.79-CH-000356.

D/S: E(BE, CH, DT, FR, GB, IT, NL).

Cyclopropane-carboxylic acid derivs. of formula (I) are new:



(X_1 is F, Cl or Br;

Y is H, Me, F, Cl, Br or I).

(I) are pesticides, esp. insecticides and acaricides. They are partic. active against plant-pathogenic biting insects (e.g. *Spodoptera littoralis*, *Heliothis virescens*, *Leptinotarsa decemlineata*, *Myzus persicae*), flies and mosquito larvae. (I) are also active against *Tineola bissellia*, *Tinea pellionella*, *Attagenus piceus* and *Anthrenus vorax*, and can be used for moth-proofing textiles. (I) are pref. used in combination with pyrethroid synergists, e.g. piperonyl butoxide.

25.6.79. as 102086 (20pp941)

(G) ISR: DT2805193; DT2805312.

EURO- ★ D22 03836C/03 ★EP ---6-607
Joint immobilising bandage - mfd. from contoured textile laminations impregnated with hardenable fixing material

EUROCOM ESTAB 16.11.78-DT-849678 (27.06.78-DT-828084)

A96 P32 P34 (09.01.80) A61f-13/04 A61l-15/07

D/S: E(BE, FR, IT, NL).

A bandage for human or animal patients which is to keep a joint, e.g. ankle, knee or elbow joint, immobile, consists of one or several layers of a fixing material or of a flexible carrier (woven tissue) in several layers supporting a fixing material (pref. gypsum or plastics). The fixing material can be made to set hard by applying moisture, air or heat.

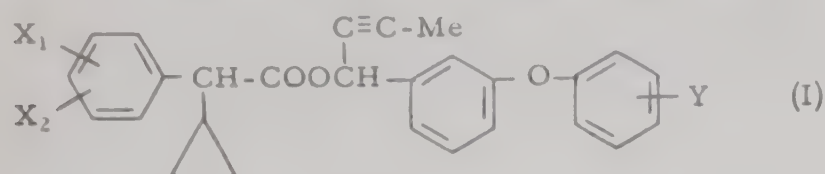
Bandage is easier and less messy to apply than wrapped gypsum bandages. If fitted with a sliding clasp fastener, it can be re-used after it has been taken off for the night.

26.6.79. as 102112 (29pp39).

(G) ISR: US 4019505; US 2512081; DT 2509933; DL-126689; OE-311545; DT 7834078; DT 7819199; DT 7819206; US 3538914; DT 2618613.

CIBA ★ D22 03850C/03 ★EP ---6-630
Phenoxy:benzyl alpha-phenyl-alpha-cyclopropyl acetate derivs. -
used as insecticides and acaricides and for moth proofing textiles
CIBA GEIGY AG 19.03.79-CH-002560 (03.07.78-CH-007241)
C03 E14 F06 (09.01.80) A01n-53 C07c-43/20 C07c-69/74
D/S: E(BE, CH, DT, FR, GB, IT, NL, OE)

Cyclopropylacetate derivs. of formula (I) are new:



(X₁ and X₂ are each H, halogen or 1-4C alkyl;
Y is H, halogen, OMe or Me).

(I) are pesticides, esp. insecticides and acaricides. They are partic. active against (i) plant-pathogenic biting insects (e.g. *Spodoptera littoralis*, *Heliothis virescens*, *Leptinotarsa decemlineata*, *Myzus persicae*); (ii) flies (e.g. *Musca domestica*) and mosquito larvae and (iii) keratin-eating larvae (e.g. of *Tineola bisselliella*, *Tinea pellionella*, *Attagenus* sp., *Anthrenus* sp.), i.e. in moth-proofing textiles.

(I) are pref. used in combination with pyrethroid synergists, e.g. piperonyl butoxide.

29.6.79 as 102186 (19pp941)

(G) ISR: DT2717414.

BUKY ★ D22 03859C/03 ★EP ---6-647
Disposable absorbent nonwoven laminate - comprising alternate layers of nonwoven absorbent material and nonwoven hydrophobic material

BUCKEY CELLULOSE CORP 16.06.78-US-916298

A96 F04 P32 P73 (09.01.80) A61f-13/20 B32b-05/08 D04h-13

D/S: E(BE, DT, FR, GB, IT, LU, NL, SW).

An absorbent laminate comprises alternate layers of nonwoven absorbent material and non-woven thermoplastic hydrophobic material, the absorbent material forming the outer layers of the laminate. Each hydrophobic layer has an open area of at least 40% and a basis weight of 5-25 gm/m². The layers are spot bonded together.

The laminate finds particular use as a surgical sponge, partic. for a laparotomy. The laminate has excellent absorbency and wet and dry bulk, low lint discharge, and a cloth-like feel.

7.6.79 as 200284 (27pp525).

(E) ISR: - US3214323; GB1432978.

JOHJ D22 04990C/03 =EP ---6-714
Non-occlusive, non-adherent wound dressing - consisting of imperforate flexible sheet to cover wound, and outer absorbent pads

JOHNSON & JOHNSON 29.06.78-US-920530

A96 P32 + P34 (09.01.80) *US4181-127 A61f-13 + A61l-15/*

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

A wound dressing comprises an imperforate sheet having a wound cover portion and an absorbent for wound exudate which overlies part of the flexible sheet. The sheet has an adherence of ≤ 20 gm/cm² and a moisture vapour transmission rate of ≥ 0.08 mg/cm²/hr. The moisture vapour transmission rate of the dressing is > 0.06 mg/cm²/hr.

The dressing construction is non-occlusive and non-adherent to the wound surface. A adequately absorbs wound exudates and affords sufficient vapour transfer to prevent or minimise maceration.

13.6.79 as 301132 (15pp1044)

(E)ISR: DT1957851; US3521631; DT2750592; US3800792;

US2870129; US3520306; DS1629465; US3399672;

US3285245; CH-432723.

OPTR- D22 03127X/02 =GB 1460-064
Sterile eye lotion container - particularly a moulded plastic eyebath sealed by a membrane and packed in an outer plastic envelope

OPTREX LTD 20.06.74-GB-027444

P33 Q34 + P34 (09.01.80) *NL7507-420 A61h-33/04 A61j-01

A packaged assembly comprises an eye bath contg. sterile eye lotion. The bath has a rim portion formed providing a

smooth skin-contacting surface area, and is sealed to a lid at a position away from the skin-contacting area.

Pref. the eye bath and its contents have been sterilised after having been sealed by radioactive sterilisation. The lid is formed with a peripheral line of weakness and with a tab to allow easy removal of the membrane.

The eye bath is formed in a sterile condition and is aseptically filled with a sterile lotion by a blow moulding process. 18.6.75 (3pp931)

PFAU D22 63088Y/36 =GB 1559-212

Surgical prosthetic fixing with selfcutting screw threads - having abrasive coating to facilitate insertion and improve screw grip

PFAUDLER-WERKE AG 14.05.76-DT-621384

P32 + P31 P61 Q61 (16.01.80) *BE-852-131 A61f-01 + B24d-17

F16b-25

Medical securement element is prepd. comprising a substrate having a self-tapping screw thread sub-divided by cut-out notches into thread portions. The thread portions at least, have an abrasive biocompatible surface for producing a counter-thread in a bone.

Pref. the abrasive surface contains abrasive grains of size 0.2-0.4 mm. comprising Ca hydroxyl apatite or quartz sand, and are embedded in an enamel layer. The material constituting the abrasive surface comprise 20-64 wt.% of abrasive grains and 80-40 wt.% of enamel matrix.

A definite end position is achieved for the element, allowing for optimum utilisation of the strength of the bone reducing the torque required for insertion in a way beneficial to the patient. 24.2.77 as 007795 (8pp931)

COLG D22 68442X/36 =GB 1559-294

Disposable absorbent pad - with absorbent fibres mixed with nonabsorbent fibres to give wet resilience

COLGATE PALMOLIVE CO 08.08.75-US-603071

F04 P21 P32 + P34 P73 (16.01.80) *US3976-074 D04h-01/42

An absorbent pad has a layer of cellulosic hydrophilic fibres with dispersed hydrophobic fibres, part of the hydrophobic material being comminuted thermoplastic film of comminuted waste absorbent material.

The hydrophobic material is in the interfibre spaces, pref. along with comminuted cellulosic material, e.g. wood pulp. Pref. part of the hydrophobic material is fused to the hydrophilic fibres. The hydrophobic material is pref. 1-15 wt. % of the pad.

The absorptive capacity of the pad is maintained for a longer time. 38.76 as 032309 (14pp1376)

COLG D22 68442X/36 =GB 1559-294

Disposable absorbent pad - with absorbent fibres mixed with nonabsorbent fibres to give wet resilience

COLGATE PALMOLIVE CO 08.08.75-US-603071

F04 P21 P32 + P34 P73 (16.01.80) *US3976-074 D04h-01/42

Disposable absorbent pads are mfd. on appts. which includes a source of hydrophilic and thermoplastic hydrophobic synthetic polymer mixt., a comminuter to form a loose fibrous mass, and a device to form pads from the mass.

Pref. the source includes a feed roll of a compressed web of a mixt. of the hydrophilic and hydrophobic substances. The pad mfd. has a long-lasting absorbent capacity. 3.8.76 as 3650/77 Div. ex. 1559294 (14pp1370)

COLG D22 68442X/36 =GB 1559-294

Disposable absorbent pad - with absorbent fibres mixed with nonabsorbent fibres to give wet resilience

COLGATE PALMOLIVE CO 08.08.75-US-603071

F04 P21 P32 + P34 P73 (16.01.80) *US3976-074 D04h-01/60

Supply feed roll for the mfr. of absorbent pad is formed of a compressed web of hydrophilic fibres with dispersed comminuted hydrophobic material. At least part of hydrophobic material is comminuted thermoplastic film made from waste absorbent articles.

Hydrophobic material may be polyethylene, and the roll may also include cellulosic material, e.g. wood pulp. The absorbent pad mfd. from the roll has longer-lasting absorptive capacity. 3.8.76 as 36561/77 Div. ex 1559294 (14pp)

COLG D22 68442X/36 =GB 1559-297
Disposable absorbent pad - with absorbent fibres mixed with nonabsorbent fibres to give wet resilience

COLGATE PALMOLIVE CO 08.08.75-US-603071

F04 P21 P32 + P34 P73 (16.01.80) *US3976-074 D04h-01/60

A supply feed roll for the mfr. of absorbent pads is produced by comminuting a hydrophilic and hydrophobic material mixt., forming the mixt. into a fibrous web, compressing and heating the web, and winding the web to form a roll. Pref. the comminuting is achieved by shredding, and then the particles are fiberised.

The absorbent pads produced from the roll have a longer lasting absorptive capacity. 3.8.76 as 36562/77 Div ex 1559294 (14pp1376)

GYOG ★ D22 C/03 ★HU T017-484
1,6-Bis-Chloro:phenyl:biguanido-hexane prodn. - used as skin disinfectant

GYOGYSZERKUTATO INT 07.07.76-HU-GO1347

B05 E14 (28.12.79) C07c-129/16

MATU ★ D22 04120C/03 ★J5 4152-340
Ventilating fan including gas removing agent - contg. activated charcoal, alkali, cement agent and/or platinum Gp catalyst and CMC

MATSUSHITA ELEC IND KK 19.05.78-JA-060159

A81 J01 Q74 (30.11.79) B01d-53/34 B01j-23/40 F24f-07

A ventilating intake fan is improved by providing a harmful gas-removing agent comprising powdered activated charcoal, alkali (e.g. alkali metal hydroxide of carbonate) and cement agent (e.g. alkaline earth metal hydroxide, aluminate or sulphate etc.), and/or a compsn. comprising powdered activated charcoal, the alkali, the cement agent and Pt group metal(s) catalyst, e.g. Pt and Pd etc. On passage of air, N oxides, esp. NO₂ etc. are removed by absorption at high efficiency under ordinary temp. over long periods without lowering of activity. The compsn. also reacts with SO₂.

The cement agent serves as aggregate to form porous hardened product, and is baked gypsum, alumina cement etc. Also CMC is added to increase the strength of the hardened prod. esp. under high temp. and moisture conditions. 19.5.79. as 060159 (5pp34)

MATU ★ D22 04125C/03 ★J5 4152-374
Lamp with air cleaning unit - contg. active carbon, alkali, cement and/or platinum Gp. catalyst

MATSUSHITA ELEC IND KK 19.05.78-JA-060107

J01 Q71 (30.11.79) F21s-01 F21v-33

A room lamp has an air cleaning circulator consisting of a fan arrangement for circulating air, and ≥ 1 type of filter selected from (a) a compsn. contg. active C powder, alkali, and cement, and (b) a catalyst consisting of a hardened body contg. active carbon powder, alkali, and cement, and ≥ 1 of Pt gp. elements carried on the hardened body.

The alkali is pref. of hydroxide or carbonate of alkaline metal. The cement is pref. of ≥ 1 kind of hydroxide, aluminate or sulphate of alkaline earth metal.

The lamp also acts as an air cleaner and it is pref. used on the ceiling or on the wall. Injurious gases, esp. NO₂, CO and SO₂ are eliminated. 19.5.78. as 060107(6pp)

JAPC ★ D22 04127C/03 ★J5 4152-392
Prodn. of absorbent material for water or body fluids - by treating paper or textile substrate with crosslinked polyacrylic acid

NIPPON SHOKUBAI KAGAKU 23.05.78-JA-060650

A96 P21 P32 (A14) (30.11.79) A41b-13/02 A61f-13/18

An absorbent is made by preparing a compsn. (A) consisting of (a) Na polyacrylate powder with grain size $< 350\mu$ and viscosity (1 wt. % aq. soln.) of > 3000 cps (25°C, 12 rpm, by Brookfield rotation viscosity meter), (b) crosslinked polyacrylic acid and/or polyacrylic acid with viscosity (1 wt. % aq. soln. of 100% neutralised by a sodium hydroxide) of > 30 cps (25°C, 12 rpm, Brookfield rotation viscosity meter), and (c) hydrophilic organic solvent or a mixed solvent of hydrophilic organic solvent and water. The compsn. is applied to a fibrous body, e.g. paper, cotton or nonwoven cloth and then dried to obtain the desired sheet.

The absorbent gives excellent liquid absorbing effect

with water or body fluid with a harmless pH value, and it is preferably used as sanitary napkin or a paper diaper. 23.5.78. as 060650 (7pp30)

UNIC ★ D22 04142C/03 ★J5 4152-545
Simple disposable diaper - contg. hygroscopic powdery polymer e.g. modified CMC

UNI CHARM KK 20.05.78-JA-060364

A96 P21 (30.11.79) A41b-13/02

Method comprises placing uniformly water-insoluble and hygroscopic and swelling powdery polymer in sprinkled state between a water-permeable sheet and a waterproof sheet, bonding the two sheets by a water-insoluble adhesive applied onto the inner face of ≥ 1 of the sheets so as to surround the powdery polymer, and bonding the circumferential parts of the two sheets in belt form.

The simple and disposable diaper using powdery polymer of high water absorbing and retaining power is very suitable for absorbing excrements of baby, patient, etc. without causing leakage of absorbed matters.

Water-permeable sheet and waterproof sheet are e.g. nonwoven cloth consisting mainly of hydrophobic fibre such as polyacryl, polyester, polyamide, etc. or rayon paper. Powdery polymer is e.g. starch-modified carboxymethyl cellulose, modified polyvinyl alcohol, etc. 20.5.78. as 060364 (3pp)

TOKE ★ D22 04169C/03 ★J5 4152-659
Gas deodorising appts. - regulating of washed gas before treating with ozone and contacting with active carbon

TOKYO SHIBAURA ELEC LTD 23.05.78-JA-060577

E36 J01 (01.12.79) B01d-53/34

This appts. comprises a washing means for contacting a gas to be treated containing a foul-smelling component with a water, a heater for regulating the humidity of the gas after washing, and a reactor for contacting an active carbon filling layer with the gas to be treated which is mixed with the ozone.

NH₃ and fatty acid may be effectively removed from the gas thus preventing air pollution. It is possible to prevent the deterioration of the active carbon due to the sulphur cpd. in the reactor. The foul smelling components may be efficiently removed from the gas to be treated in the reactor because the humidity in the gas is regulated. 23.5.78. as 060577 (3pp35)

NIRA ★ D22 04190C/03 ★J5 4152-687
Absorbent for removal of obnoxious fumes - e.g., ammonia, tri:methylamine, hydrogen sulphide and mercaptan, prepd. from alkene-sulphonic acid, active carbon and acid or base

UNITIKA KK 24.05.78-JA-062426

J01 (01.12.79) B01d-53/02

Adsorbent consists of 1-30 pts. of α -olefin sulphonic acid (A), 1-50 pts. wt. of an inorganic acid or base (C), and 100 pts. wt. of additive carbon.

The base is NaOH, KOH, Mg(OH)₂, Ca(OH)₂, Zn(OH)₂, Na₂CO₃, K₂CO₃ or CaCO₃. The acid is phosphoric acid, (meta)phosphoric acid, polyphosphoric acid, sulphuric acid, nitric acid, hydrochloric acid, boric acid, or carbonic acid.

In an example, 10 g of sodium olefinsulphonate was dissolved in 10 ml of water to obtain an aq. soln. (1) 10g of NaOH was dissolved in 50 ml of water to obtain an aq. soln. (2). (1) and (2) were mixed 100 g of active carbon was immersed in the mixed soln. for 60 mins., and dried at 105°C for 30 mins. and at 150°C for 3 hrs. to obtain the adsorbing agent. 24.5.78. as 062426 (3pp51)

METE ★ D22 04343C/03 ★J5 4153-886
Water-absorbing sheets used as diapers etc. - contain water-swelling resin grains and small and large dia. thermoplastic resin grains, and water absorbing base sheets

METERU KK 25.05.78-JA-062575

A94 P21 P32 P73 (A96) (04.12.79) A41b-13/02 A61f-13/16 B32b-05/16 B32b-27/10

Water-absorbing sheets are obtd. by inserting (1) nearly 100 pts. of water-swelling resin grains, (2) 50-0.01 part of thermoplastic resin powders of average grain diameter of 100-1000 μ and (3) 100-0.01 part of thermoplastic resin powders having an average grain diameter of $< 70\mu$ between water-absorbing base sheets, and hot-melting

the thermoplastic resin powders.

Component (I) comprises mainly modified starches such as polyacrylic acid type graft copolymers, carboxymethyl starch. Components (2) and (3) include, e.g. vinyl chloride, polyethylene, polypropylene, acrylic type resins.

As the present sheets have large adhesive points comprising thermoplastic resin powders of a small grain dia. water-swelling resin grains are fixed before water-absorption, and even after water-absorption migration of swollen resin grains is prevented effectively. The sheets are used as paper diapers and menstruation aids. 25.5.78. as 062575 (3pp136)

OKAD-★ D22 04466C/03 ★J5 4154-528
Solid granular deodorant - contg. glyoxal and aluminium sulphate in an amt. sufficient to solidify the glyoxal

OKADA FUSENZAI KAGA (DAIL) 24.05.78-JA-061944

E17 P34 (E33) (05.12.79) A611-09/*

Solid deodorant contains as essential component glyoxal and Al sulphate to solidify the glyoxal. Since the deodorant is used in granular form, it is possible to use the deodorant in combination with other solid form deodorant. The amt. of Al sulphate used is 0.5-3 times the wt. of 40% glyoxal aq. soln.

In an example, 2500 g of 40% glyoxal aq. soln. is added to 2500 g of anhydrous Al sulphate, and the mixt. is kneaded at 50-60°C so that the mixt. becomes paste-like. The paste is granulated and dried at 5-60°C to obtain 3800g of solid deodorant. 24.5.78. as 061944 (5pp108)

OKAD-★ D22 04467C/03 ★J5 4154-529
Deodorant, used as granules or aq. soln. - contains the reaction prod. of glyoxal and urea as active component

OKADA FUSEN KAGA (DAIL) 24.05.78-JA-061945

E16 P34 (05.12.79) A611-09/*

The deodorant can be dissolved in water for use. The granules do not become misshapen, even when contacted with air contg. moisture, and are resistant to mechanical impact. Pref. 0.1-2 moles glyoxal and 0.2-1 moles urea are used. Sodium sulphate, sodium carbonate, aluminium sulphate, citric acid, activated carbon surfactant, fungicide, aroma and pigment can be added. When using the deodorant in the form of an aq. soln. the reaction prod. must be not too viscous.

In an example, 200g urea and 500g 40% glyoxal aq. soln. are mixed at 40-50°C with stirring until complete dissolution. The soln. is added to 4,300g anhydrous sodium sulphate, and the mixt. is kneaded at 50-60°C to evaporate water. This gives 4,780 g glyoxal-urea reaction prod. contg. sodium sulphate. This is granulated and dried at 50-60°C to give the solid deodorant. 24.5.78. as 061945 (6pp108)

NISH/★ D22 04468C/03 ★J5 4154-530
Quick-acting, non-toxic deodorant prodn. for drains etc. - by disinfecting soil, adding nitrogenous material, culturing bacteria from the soil in the mixt. then adding bentonite

NISHIKAWA J 24.05.78-JA-062684

P34 (05.12.79) A611-09/*

Prepn. of deodorant comprises disinfecting the fine powder of soil by heating; adding 0.5 wt. % of nitrogenous material (e.g., nitrogen fertiliser, ammonium sulphate) to the resulting white powder of soil; culturing deodorising bacteria recovered from soil, in the mixt.; and adding bentonite to the resulting culture.

The deodorant is applied directly to bad smell-generating source such as excrement and drain, is nontoxic to humans and animals and has immediate effect. The soil is disinfected at ~100°C. Cultivation is generally carried out for about 10 days. The deodorising bacteria is recovered from agricultural land, forest, beach, etc. The deodorant is directly applied to excrement or drain, and deodorising effect is obtd. after 3-4 days, and non-smell condition can be kept by applying 50 g of the present deodorant every 10 days. 24.5.78. as 062684 (1pp108)

MOCH/ D22 66098T/41 = J7 9043-053
Disinfecting/skin protecting liquid - which forms fine bubbles on the skin, contg protein surface activator

MOCHIDA N (MOC/) 19.02.71-JA-007554

B07 (18.12.79) *J47020-077 +A61k-09/12

The liq. consists of 0.10-5 wt. % disinfectant, 0.40-0.50% of water-soluble lanolin alcohol, 2.70-5% of protein surfaces activator, 2.70-4.50% of wax, 25-36% of ethyl alcohol, 7-12% of spray-promoting agent and water remainder.

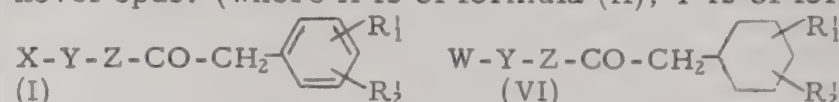
The special fine bubbles are not liquefied after ≥2 hrs. in air at <32°C and when the fine bubbles are sprayed on the human skin (32-35°C) and the skin is rubbed, the bubbles are liquefied gradually and the fine bubbles of about 1g are liquefied in 60-80 secs. 19.2.71 as 007554 A61k-9/12 (18.12.79) MOCHIDA, N. (2pp) (J4 7020077)

SAOC D22 50424Y/29 = J7 9043-060
Phenylacetyl-deacyl-deltamycin macrolide antibiotics - and their tetrahydro derivs., active against Gram positive bacteria and mycoplasmas

SANRAKU OCEAN (AJIN) 30.11.76-JA-144556

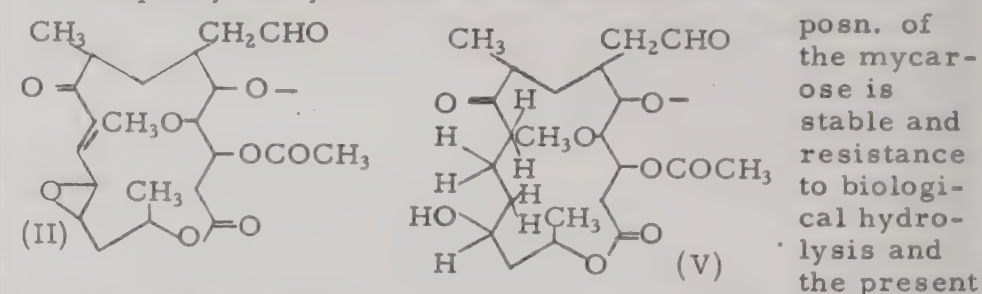
B02 C02 E13 + P34 (D13) (18.12.79) *BE-850-462 A61k-31/71

4''-Phenylacetyl-4''-deacyl-deltamycin macrolide antibiotics of formula (I) and their hydrogenated derivs., esp. those of formula (VI) including their salts and esters are novel cpds. (where X is of formula (II); Y is of formula



(II); Y is of formula (III); Z of formula (IV) and W of formula (V); R₁, R₂=H, F, Cl, Br, amino, acetamido, dimethylamino, nitro, hydroxy, (m)ethoxy, propoxy, butoxy, methylmercapto, methylsulphonyl, trifluoromethyl or cyano).

The phenylacetyl radical attached to the O- in the 4''-



cpds. have superior activity and give higher blood levels than known cpds. where the ester gp. is readily hydrolysed. They are active against various (Gram-pos. bacteria and mycoplasmas and are

used in human and veterinary medicine, as growth promoting feed additives (5-50 ppm), for preservation of food and as disinfectants (0.1-1 wt. % solns. or suspensions). They may be administered orally, topically or parenterally in the usual formulations, opt. with other antibiotics. 30.11.76 as 144556 A61k-31/71 (18.12.79) SANRAKU OCEAN KK (24pp) (J5 3069836)

KRIV/★ D22 04663C/03 ★SU -659-842
Ventilation air purification by scrubbing - by treatment with salt solns. and oxidisers in stages

KRIVOPISHIN I P 14.05.75-SU-137405

J01 Q74 (21.06.79) F24f-03/16

The method can be used in the poultry ind. and the air is purified by scrubbing with salt water solns., and treated with oxidiser. In order to increase purification efficiency and ensure disinfection, the air is scrubbed with salt soln. and oxidiser in stages. Initially 10-20% wt. of ammonium sulphate and nitrate solns. are used. Then the air is treated by solns. contg. 3-5% wt. sodium carbonate and 1-3% wt. sodium hydroxide. Prior to each scrubbing stage ozonised gas is introduced into the air. At the end of treatment the excess ozone is removed by using solid catalysts.

Krivopishin, I. P., Tregubov, B. A., Emelyanov, B. V. et al. Bul. 16/30.4.79. 14.5.75 as 137405 (4pp110)

KISE/★ D22 04868C/03 ★SU-660-977
Prod. of high water solubility para-formaldehyde - by polycondensing aq. formaldehyde soln. in presence of sodium carbonate, used as agricultural disinfectant

KISELEVA L A 22.08.77-SU-523263

A25 (05.05.79) C08c-02/08

Paraformaldehyde having high solubility in water is obtd. by polycondensing a 56-70% aq. soln. of formaldehyde at 80°-110°C. under a vacuum of 600-700 mmHg. and in the presence of Na carbonate as catalyst in an amt. 2-8 wt. % on formaldehyde.

The prod. is used as disinfectant in agriculture etc.

In an example, 2700 kg. of a 58% soln. of formaldehyde is polycondensed at 90°C/600-620 mmHg in the presence of 125 kg. of Na₂CO₃. The period is 20 mins. A yield of 1000 kg. is recovered having 97% solubility in water at 30°C.

Kiseleva, L.A., Yakovenko, Z.I., Kruglikov, A.A. et al
Bul. 17/5.5.79. 22.8.77 as 523263 (2pp314)

COLG D22 78453A/44 = US 4180-869
Full length therapeutic elastic stockings - relieved adjacent to the groin to avoid excessive compression or chafing near the crutch
COLGATE PALMOLIVE CO (KEND) 01.07.77-US-812057
F07 P32 + P21 (01.01.80) *BE-868-668 A61f-13/08 + A41b-11/04

A full length therapeutic stocking includes a boot section with elastomeric yarns and a hip panel between this and a waist support. A pair of fabric support strips extend between the support and boot section top and are circumferentially spaced, the spacing at the boot section top being 20-40% of the circumference.

The boot section pref. has an insert of circumferentially elastic fabric extending downwardly from the upper edge between the strip connection points. The insert may be of double fabric with the fold forming part of the boot section top, or may be shaped as a rounded V with the boot section slit for its insertion. The arrangement minimises edge rolling and discomfort. 1.7.77 as 812057 (7pp1358).

JOHJ ★ D22 04990C/03 ★US 4181-127
Non-occlusive, non-adherent wound dressing - consisting of imperforate flexible sheet to cover wound, and outer absorbent pads

JOHNSON & JOHNSON 29.06.78-US-920530

A96 P32 + P34 (01.01.80) A61f-13 A61i-15/*

Wound dressing consists of (a) an imperforate (continuous) flexible sheet (I) designed to cover and be in contact with the wound; and (b) an absorbent (II) for wound exudate which overlies part of (I) and extends beyond at least a portion of the edge of (I).

(I) has adherence $\leq 20\text{g/cm}^2$, and an H₂O vapour transmission rate (MVT) $\leq 0.08\text{mg/cm}^2/\text{hr}$. The distance between any point on (I) and (II) is sufficiently short to prevent accumulation of wound exudate under the covering portion of (I). The MVT of the dressing is $\leq 0.06\text{mg/cm}^2/\text{hr}$.

The dressing is non-occlusive and non-adherent and greatly reduces the degree of maceration, etc. normally produced by fully occlusive dressings. 29.6.78 as 920530 (5pp478).

BAXT ★ D22 05006C/03 ★US 4181-232
Plastic bottle with sealed closure - including sealed primary and overcaps and screwed outer ring, used for storing and dispensing sterile liq.
BAXTER TRAVENOL LAB 31.07.78-US-929096 (14.03.77-US-777749)

Q33 (01.01.80) B65d-41/32

A thermoplastic bottle has a primary cap closing the dispensing outlet and having a thin frangible section adjacent the outlet. An overcap covers the primary cap and has an area fused to a transverse abutment surrounding the bottle neck. This also has a thin frangible section in the fused zone. An overring is screwed onto the overcap. This overlies the transverse abutment.

Interlocks limit relative axial movement between the primary cap and overcap. Relative rotation movement of the overcap and bottle neck is also limited. Rotation of

the outer ring against the transverse abutment moves the overcap axially upwards to sever the frangible sections.

Both the primary cap and overcap are hermetically sealed by fusing to the bottle neck. The closure is tamper-proof as the seals must be fractured to remove the caps and tampering is easily detected. 31.7.78 as 929096 C.i.p. 4111325 (+23.1.78 - US - 871320) (5pp295).

CDC-★ D22 05009C/03 ★US 4181-255
Odour filtering device - consisting of rigid porous substrate, and malodour counteractant-perfume accelerator compsn.

CDC CHEM CORP 31.05.77-US-801983

A97 J01 P34 (01.01.80) A61i-09/04

Odour filtering device for space dispensing a volatile oil at a predetermined rate, consists of a rigid substrate which contains uniform voids of cross-section 10-150 μ . The substrate is soaked with the oil, which consists of a mixt. of malodour counteractant (I) capable of producing reversible selective anosmia, together with a perfume accelerator (II).

Safe, effective, compact device releases controlled amts. of non-toxic and non-irritant (I) over extended periods of time. 31.5.77 as 801983 (6pp478).

BECT ★ D22 05032C/03 ★US 4181-511
Anaesthesiology and respiratory system bacterial filter - with conductive strip on non-conductive housing exterior linking conductive end caps for electrical continuity

BECTON DICKINSON CO 19.05.78-US-907843 (26.08.74-US-500405)

B07 (01.01.80) B01d-46

The filter includes an electrically conductive connector on a reduced tip end of a non-conductive transparent tubular housing with a conductive cap on the other end, a cap opening terminating in a projecting connector, the two connectors being linked in a flow system.

A filter element is mounted in the housing and a conductive strip is mounted on the housing to extend between the first connector and cap. The arrangement maintains the electrical continuity through the system. The strip is adhered to the housing exterior. 19.5.78 as 907843 Div. ex 4063913, 4133656 (+23.3.76; 2.2.77 - US - 669622; 765111) (11pp1358).

BECT ★ D22 05033C/03 ★US 4181-512
Anaesthesiology and respiratory system bacterial filter - with end connectors linked by conductive elements between housing walls to maintain electrical continuity

BECTON DICKINSON CO 19.05.78-US-907842 (23.03.76-US-669622)

B07 (01.01.80) B01d-46

The filter includes an electrically conductive connector on a reduced tip end of a non-conductive transparent tubular housing with a conductive end cap on the other end, a cap opening terminating in a projecting connector, the two connectors being linked in a flow system.

A filter element is mounted in the housing and the connectors are interconnected by spaced conductive suspenders connected each between the first connector and the cap. The suspenders are located between the double wall of the housing to form a conductive basket, the arrangement maintaining electrical continuity. 19.5.78 as 907842 Div. ex 4063913, 4133656 (+2.2.77 - US - 765111) (11pp1358).

NITL D22 69189A/39 = US 4181-786
Bactericidal and fungicidal materials contg. metal ions - ionically bonded to a carboxylic polymer

NITTO ELECTRIC IND KK 04.03.77-JA-024096 (04.03.77-JA-024095)

A97 C03 F01 P34 (A14) (01.01.80) *DT2809-244 C08f-20/04

A new antibacterial and antifungal material comprises a polymer contg. carbonyl gps. in an amt. of ≥ 0.008 mequiv. per g. of the polymer and silver ions ionically bonded to the carboxyl gps. in an amt. of ≥ 0.0009 mmole per g. of the polymer, the polymer being free of cyano gps. Pref. the metallic ions are present in an amt. of 0.01-10 wt. % based on total polymer wt., and esp. the polymer is formed from (meth)acrylic acid, crotonic acid, itaconic acid, maleic acid, methacryloxyethyl acid-succinate, -maleate, -phthalate or -hexahydrophthalate, maleic anhydride or itaconic anhydride.

The antibacterial and antifungal effect is sustained for a long period, and the material has excellent physical properties such as high chemical resistance, solvent resistance and weather resistance (resistance to discolouration). The material can be used in the form of a film, sheet or fibre. 6.3.78 as 883988 (10pp990).

KULK/ ★ D22 05187C/03 ★US 4181-983
Assimilable porous hydrophilic implantable prosthesis - formed by removal of solvent e.g. by lyophilisation from hydrophobic polymer compsn. contg. wetting agent

KULKARNI R K 29.08.77-US-828659

A96 P32 (08.01.80) A61f-01 A61f-13

Prosthesis for implantation into a body cavity is formed by the removal of solvent by lyophilisation or selective leaching without substantial volume change from a homogeneous solution in org. solvent of (a) assimilable hydrophobic polymer composed of polymerised units of a satd. aliphatic hydroxy carboxylic acid and (b) small amt. of a physiologically acceptable wetting agent that remains in the polymer and imparts hydrophilicity to the polymer. Pref. soln. contains ≥ 3.5 wt.% assimilable polymer

Esp. the prosthesis is a bandage for a dry solvent in dental therapy. It is readily wet by blood and eventual granulation is facilitated so that healing is promoted. 29.8.77 as 828659 (6pp966)

BEIG/ D22 12504A/07 =US 4182-318
Epicondylitis treatment bandage - with two foam lined pressure jaws on semicircular plastic clamp

BEIGE G 06.08.76-DT-635426

P32 (08.01.80) *DT2635-426 A61f-05/* A61f-13/10

A brace for treating an arm with epicondylitis comprises a resilient U-shaped spring band with its ends forming opposed jaws engaging the medial and lateral aspects of the elbow respectively, while the U bight is spaced from the arm. The arms can be spread for application, the resiliency then applying substantial pressure on arms muscles and tendons to change pulling directions.

The band inner surface is pref. padded and a retaining strap bridges between the band ends. The pressing surfaces of the jaws are pref. directly opposed and one is larger than the other to contact an unaffected side without distorting underlying tissue. The brace does not restrict blood flow or mobility. 4.4.77 as 784449 (4pp1358)

COLG D22 87884A/49 =US 4182-333
Baby's disposable napkin with adhesive securing straps - has reinforced waistband to prevent leakage from absorbent pad

COLGATE PALMOLIVE CO 10.08.77-US-823259

P21 + P32 (08.01.80) *BE-869-501 A61f-13/16

A disposable diaper comprises an absorbent pad folded along longitudinal lines to form accordion pleats from each side to give a three-layer thickness. The folded pad is folded back on itself from one end about a transverse line. A tape fastener has a release sheet on the back surface of the folded-over end section.

A tap strip has an inner section attached to an outer pleat below the central panel of the end section, and a second outer section extending around the back surface of the end section and with an adhesive surface releasably attached to the sheet. 10.8.77 as 823259 (6pp1358)

KIMB ★ D22 05244C/03 ★US 4182-334
Perineal shield and discharge containment device - comprises sheet folded along longitudinal central and rearwardly diverging lines for shaped fit

KIMBERLY CLARK CORP 05.12.77-US-857530 (27.09.76-US-726964)

P32 (08.01.80) A61f-13/16

A flexible elongate sheet prefolded along a central full-length longitudinal line and two pairs of rearwardly diverging lines extending from a common point on the central line spaced from the front end, with the pairs diverging at different angles.

The sheet is inwardly folded on the central and one pair of diverging lines, and is folded outwardly on the other pair of diverging lines. In particular the sheet may be for use as a sanitary napkin, a diaper or an adult incontinence device, and may be single- or multi-layer. The arrangement provides an upstanding front part to cover the pubic

area, a tapering central part and a diverging rear part. 5.12.77 as 857530 C.i.p. 4067336; (c.f. 07998A/04)(10

MATR/ D22 10451B/06 =US 4182-
Undergarment soiling prevention anal filter - held in place solely fluffy nonwoven fibrous layer on pervious flexible base

MATRULLO C J 27.07.77-US-819542

F07 P32 (08.01.80) *GB2001-535 + A61f-05/44

An anal filter permitting passage of gases only comprises a fluffy nonwoven fibrous layer attached to a porous flexible base, extends transversely over the anus and adjacent region of the buttocks, and can be bent inwardly under finger pressure so that the fluffy layer contacts the anus.

The fluffiness provides the sole adherence without adhesives or insertion into the anus. The fibrous layer is formed by individual fibres and is initially covered by an adhesively attached covering layer which is pulled off before use so that the fibres are pulled outwardly and the surface made fluffy. 27.7.77 as 819542 (6pp1358)

BLAC/ ★ D22 05245C/03 ★US 4182-335
Sanitary napkin with attached disposal sack - of moisture-proof sheet with flaps to enclose once folded inserted napkin

BLACK CA 10.07.78-US-923409 (27.05.77-US-800625)

P32 (08.01.80) A61f-13/16

A napkin has a sack of foldable moisture-proof material and generally triangular when open and in side elevation. A sack rear wall extension flap at the open end extends beyond the end and is secured to the napkin outer side between the napkin end and a folding zone so that the sack can be opened by unfolding.

The napkin is folded once on itself and inserted directly into the sack with its free ends adjacent the sack bottom. The sack is closed by a second flap on the front wall adjacent and reaching across the open end and securable to the rear wall. The sack is e.g. of thin plastics. 10.7.78 as 823409 (4pp1358)

HARD/ ★ D22 05247C/03 ★US 4182-339
Intestine ends surgical joining sleeve - comprises knit catgut cylinder with ends rolled outwardly back and wax coated for rigidity

HARDY T G 17.05.78-US-906835

P31 (08.01.80) A61b-17/11

A sleeve comprises a pliable unitary cylinder of knit fabric with the ends rolled outwardly on themselves to form spaced firm rings which are coated to promote rigidity, pref. with 62% carnauba wax - .38% stearic acid. The fabric is at least partly of dissolvable material, pref. catgut.

The inturned free ends of intestine extend over the rings and are held in abutment by purse string sutures so that they can grow together. 17.5.78 as 906835 (4pp1358)

AMCY ★ D22 05249C/03 ★US 4182-341
Surgical needle - with polymer strand loop ends secured in butt end hole to form large threading eye

AMERICAN CYANAMID CO 05.10.77-US-839689

A96 F01 P31 (08.01.80) A61b-17/06

The needle has a hole or channel bored into its butt end along the length, and a loop of flexible, polymer strand with its ends secured in the hole to form a large threading target.

The strand is pref. of nylon, polyester, polyethylene, or polypropylene or of catgut, collagen or polyglycolic acid, and its ends are secured by a crimp. A suture strand of silk, cotton, nylon, polyester, polyethylene, polypropylene, steel catgut, collagen or polyglycolic acid is inserted through the loop. 5.10.77 as 839689 (5pp1358)

VASE/ ★ D22 05308C/03 ★US 4182-663
Ozone prepn. from oxygen - by UV irradiation of oxygen dissolved in inert dielectric liq. solvent

VASEN V A 13.03.78-US-885956

E36 J01 P34 (08.01.80) A61f-01 B01j-01/10

O₃ is produced by (a) injecting a dissolving vessel with an inert dielectric liq. having an affinity for O₂ dissolution, (b) mixing gaseous O₂ with the liq. before introdn. into, or in, the vessel, (c) passing O₂-contg. liq. through an ultraviolet light source and either (d) stripping O₃ from the liq. for use or (d') mixing liq. pregnant with O₃ with another liq. contg. chemicals reacting with O₃, and (e) recycling O₃-stripped liq. for multiple use.

A specific use comprises (i) dissolving contaminant gases of SO_2 and NO_x with retained O_2 , e.g. from stack gases, in the absorber liq., (ii) radiating the liq., oxidising dissolved O_2 to O_3 , which reacts with SO_2 and NO_x to produce SO_3 and NO_2 , (iii) mixing radiated liq. with water to react with dissolved SO_3 and NO_2 to form H_2SO_4 and HNO_3 , (iv) gravity sepg. the non-miscible acids and carrier liq., (v) salvaging or disposing of prod acid(s) and (vi) recycling the liq. carrier.

O_3 is produced in a compact, closed system and may be retained dissolved in liq. until required for use. In the specific embodiment, irradiation may produce the desired amt. O_3 only for reaction. O_3 is useful as a disinfectant and sterilant. 13.3.78 as 885956 (6pp91)

USRU ★ D22 05336C/03 ★ US 4182-716
5,6-dihydro-2-methyl-N-phenyl-1,4-oxathiin-3-carboxamide prepn. - from oxathiolane-acetamide deriv. by catalytically treating with hydrogen peroxide, adding quat. ammonium salt and heating
UNIROYAL LTD 05.09.78-CA-310616
C02 E13 (08.01.80) C07d-327/06

Prepn. of 5,6-dihydro-2-methyl-N-phenyl-1,4-oxathiin-3-carboxamide (I) involves treating 2-methyl-N-phenyl-1,3-oxathiolane-2-acetamide (II) with H_2O_2 in presence of a heavy metal cpd. as catalyst and in water opt. contg. (a) aromatic hydrocarbon of b.pt. $<145^\circ\text{C}$., (b) chlorinated hydrocarbon of b.pt. $<130^\circ\text{C}$. or (c) alkyl aliphatic-carboxylate. The mixt. is agitated at $0-25^\circ\text{C}$. to form the 3-oxide of (II).

The 3-oxide is then contacted with a catalytic amount of quat. ammonium salt under acidic conditions in a non-protic organic solvent as defined in (a)-(c). The mixt. is heated at $45-80^\circ\text{C}$. with removal of the water formed.

The process is simpler and more economic than prior processes, and ecological problems associated with the waste liquids in such processes are avoided. (I) is a known bactericide and fungicide. 8.11.78 as 958909 (8pp1248)

STER D22 87592B/49 = US 4182-759
Aralkyl and aryloxy-alkyl di:alkyl phosphonate(s) - antiviral agents used topically and as disinfectants

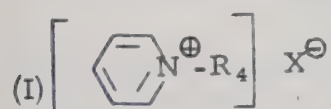
STERLING DRUG INC 05.06.78-US-912502
B05 C01 + P34 (08.01.80) *BE-876-680 A01n-09/36 C07f-09/40
Novel phosphonates are of formula $\text{Ar}-\text{Y}-\text{P}(\text{O})(\text{OR})_2$ (I) where Ar is phenyl opt. subst. by 1 or 2 of halo, 1-4C alkoxy, OH, 1-4C alkanoyloxy, 2-4C carbo-lower alkoxy, CONH_2 , and COOH . Y is $(\text{CH}_2)_n$ or $\text{O}(\text{CH}_2)_n$ where n is 6-8. R is 1-6C alkyl.

Specifically claimed cpds. include diethyl [6-(2-chloro-4-methoxyphenoxy)hexyl]-phosphonate (II); diethyl [6-(4-acetoxyphenyl)hexyl]-phosphonate; and diethyl [6-(4-carbethoxyphenoxy)hexyl]-phosphonate.

The cpds. are antiviral agents, (II) being esp. pref. for this purpose. They may be used in topical treatment of humans and animals and for disinfection of surfaces. 5.6.78 as 912502 (7pp963)

NIOC D22 07651V/05 #US 4182-765
Quat ammonium fungicides - which are oil-soluble
NIPPON OIL KK 05.07.72-JA-066651 (29.06.73-US-375025)
C03 E19 H07 P33 (08.01.80) *DT2334-260 A01n-09/22 C07d-213/04

New oil-soluble quat. ammonium sulphonate fungicide is obtd. by reacting an aq. soln. of ≥ 1 quat. ammonium salt of formula $[\text{R}_1\text{R}_2\text{R}_3\text{R}_4\text{N}^+]\text{X}^-$ or formula (I) with an alkyl benzene sulphonic acid in which the alkyl moiety contains 10-14C. In the formulae, R_1 is benzyl; R_2 and R_3 are each 1-8C aliphatic hydrocarbon gp.; R_4 is 8-20C aliphatic hydrocarbon gp.; and X^- is an anion derived from a salt-forming acid.



The fungicide is suitable for protecting oil prods. e.g. fuel oil and lubricating oil, and high molecular materials such as plastics, rubbers, paints and fibres from the harmful effects of fungi. Pref. oil prods. contain 10-10000 ppm. of the fungicide. An example of the fungicide is the dodecylbenzene sulphonic acid complex of acetyl pyridinium. 6.5.76 as 683932 (5pp927)

UNIC ★ D22 05384C/03 ★ US 4182-827
Improving wetting rate of polyurethane hydrogel - by treatment with ketone, alkanol, amine, aromatic hydrocarbon, cyclic oxide or aq. alkali

UNION CARBIDE CORP 31.08.78-US-938702
A25 (A96) (08.01.80) C08g-18/10

The wetting rate of a water-swellaable lightly crosslinked polyurethane hydrogel polymer is improved by contacting the polymer with a surface treating cpd. (I) and 0-5 wt.% based on (I) of a surfactant. (I) is a liq. ketone RCOR' (where R is 1-6C alkyl and R' is 1-6C alkyl or phenyl), 1-6C alkanol, a 1-12C aliphatic cycloaliphatic or aromatic amine, a 6-10C aromatic hydrocarbon, a cyclic oxide having 2-4 ring C or an aq. soln. of an alkali metal hydroxide.

The polymer is an isocyanate terminated prepolymer of a poly(alkyleneoxy)polyol and an organic diisocyanate crosslinked with an equiv. amt. of water or a prim. or sec. diamine or triamine. The polyol is a mixt. of 6-40 moles of poly(ethyleneoxy)diol of mol. wt. 4000-25000 with 1 mole of a poly(alkyleneoxy) triol or tetrol of m.wt. 92-5000 or a polyol of the formula $\text{C}_n\text{H}_{2n+2}\text{-(OH)}_m$ where n is 3-6 and m is 3 or 4. The NCO/OH ratio is 1.2-1.6:1.

The prod. is used in surgical dressings, diapers, bed pads and catamenials showing irreversible absorption. 31.8.78 as 938702 (6pp1302)

DOWC ★ D22 05397C/03 ★ US 4182-849
Copolymers giving quat. prods. effective against microorganisms - are prepd. from a di:vinyl-aromatic cpd. and an amine
DOW CHEMICAL CO 19.06.78-US-917047
A12 J01 (08.01.80) C08f-12/34

A copolymer is prepd. by reacting an amine having ≥ 2 active hydrogens attached to N with a divinyl-aromatic cpd. in the presence of a non-hydroxyl base, the ratio of amine to vinyl gps. being 0.25-1:1, based on prim. amine equivs. in the case of prim. amines and on N equivs. in the case of di-sec. amines.

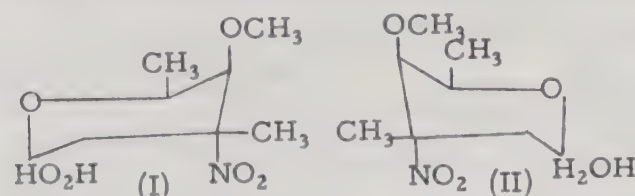
Copolymers of the formula $\text{R}'''-\text{[-(NR}'-\text{[-(CH}_2\text{)}_p\text{-CHRN}''\text{)]}_m\text{[-CH}_2\text{CH}_2\text{ArCH}_2\text{CH}_2\text{)]}_n\text{-R}'''$ where m is 0-1; n is 1-6; p is 0-4; R is H, Me, Et or Pr; R' and R'' are H, Ph, benzyl, phenethyl, $-\text{CH}_2\text{CH}_2\text{ArC}_2\text{H}_5$, $-(\text{CH}_2)_x\text{CH}_3$ or $-(\text{CH}_2)_y\text{N}[\text{-(CH}_2\text{)}_z\text{CH}_3]_2$ in which x is 0-21; y is 2-6; and z is 0-4; R''' is H, $-\text{CH}_2\text{CH}_2\text{ArC}_2\text{H}_5$ or $-\text{CH}_2\text{CH}_2\text{ArCH=CH}_2$; R''' is H, $-(\text{NR}'-\text{[-(CH}_2\text{)}_p\text{-CHRN}''\text{)]}_m\text{-H}$ or $-\text{[-NR}'-\text{[-(CH}_2\text{)}_p\text{-CHRN}''\text{)]}_m\text{-[-CH}_2\text{CH}_2\text{ArCH=CH}_2\text{]}_n\text{-H}$; Ar is an aromatic derived radical; and a is 4-50, are novel cpds.

The copolymers may be quaternised with alkyl and aralkyl halides. They can also be used in inhibitor compsns. for gas scrubbing systems. 19.6.78 as 917047 (5pp558)

UPJO D22 84365A/47 = US 4182-855
Decomposition prods. of rubradirin antibiotics - useful as antibacterials, UV stabilisers for polyolefin and pharmaceutical intermediates

UPJOHN CO 06.02.78-US-874767 (05.05.77-US-793785)
A60 B02 E13 + P34 (08.01.80) *DT2816-052 C07h-05/04

L and D-rubranitrose of formulae (I) and (II) are new:



Also new are their acetates where the acyl gp. consists of a 2-18C hydrocarbon carboxylic acid acyl opt.

subst. by halo, nitro, hydroxy, amino, cyano, thiocyno or lower alkoxy.

The isomers are intermediates in the prepn. of the corresponding amino sugars. The NO_2 gp. can be reduced to an amino gp. using Rany Ni or 10% Pd on charcoal, to give intermediates to antibiotics. Rubranitrose is obtd. by acid hydrolysis of rubradirin and extn. into chloroform. 31.8.78 as 938606 (7pp945)

NIRO ★ D22 05405C/03 ★US 4182-871
Stable, free-flowing sodium di:chloro-isocyanurate - by spray drying, then specific stabilisation and cooling on fluidised beds
NIRO ATOMIZER A/S 27.02.78-US-881820
E12 (08.01.80) C07d-251/28

Na dichloroisocyanurate (I) dihydrate is prepd. as follows:
(a) particulate (I) of H₂O content 12-13.5 wt.% by wt. and at 60-80° is prepd. by spraying an aq. soln. or slurry of (I) with a heated, drying gas flowing through the chamber; (b) the particulate prod. is stabilised by stirring in a

confined zone for 1-30 min. at a temp. below which further redn. of the H₂O-content of the prod. will occur (the contained H₂O of hydration becomes uniformly distributed and firmly bound); (c) the prod. is cooled to <40° in one or more fluidised or pref. vibrating-fluidised beds; and (d) (I).2H₂O is recovered.

(I) is a known source of Cl₂ in sanitising and bleaching operations. 27.2.78 as 881820 (5pp478)

See Also

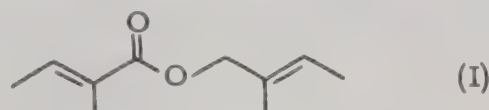
D13 US 4181573

D23: OILS; FATS; WAXES

GIVA ★ D23 03843C/03 ★EP ---6-616
Methyl:butenyl tiglic acid ester - used as perfume or flavour, prepd. by esterifying tiglic acid with methyl-butenol
GIVAUDAN L & CIE SA 28.06.78-CH-007037
E17 (D13 D21 D25) (09.01.80) A23I-01/22 A61k-07/46 C07c-69/52

D/S: E(CH, DT, FR, GB, NL)

2-Methyl-2-buten-1-yl tiglate of formula (I) is new:



(I) is used as perfume- and/or flavouring material or component, e.g. for cosmetics, detergents, foods, beverages, e.g. herbal teas, and is used esp. to modify the smell of perfume compsns. (I) has a moist forest soil, mushroom-like, light aniseed, flowery, soft odour with a hint of young leaf buds, and is completely free from fruitiness.

27.6.79 as 102139 (18pp200)

(G) ISR: 6 Journal References.

KYOG ★ D23 04465C/03 ★J5 4154-527
Granular, fragrance-generating compsn. - with fine, porous coating of synthetic resin

KYOWA LEATHER CLOTH 23.05.78-JA-061312

A97 P34 (05.12.79) A61k-07/46 A61I-09/* C08j-03/12

Compsn. comprises porous granules (e.g., activated C, silica gel) contg. adsorbed perfume and coated with synthetic resin film having fine connecting pores. Compsn. is prepd. by dispersing porous granules contg. adsorbed perfume in hydrophilic organic solvent soln. of synthetic resin, and treating the resulting dispersion with a liquid which is inert to the resin and is miscible with the organic solvent. Alternatively adsorption of perfume may be effected after coating with resin.

Compsn. generates a fragrance for a long period. Pref. synthetic resins include vinyl resins, polyamide, polyester, polycarbonate, polyurethane, and polyurea. Pref. hydrophilic organic solvents include DMF, dimethylacetamide, THF, cyclohexanone and methylethylketone. Pref. liquids which are inert to the resin and miscible with the organic solvent include water, (m)ethanol and glycol. 23.5.78. as 061312 (4pp108)

TSUC/ D23 66155U/44 = J7 9043-002
Antioxidant purification - from rice bran oil
TSUCHIYAT (TSU /) 05.11.71-JA-088059
(18.12.79) *J48052-804 + C09k-15/04 C11b-05

Dark oil from alkali treated rice bran oil, rice bran oil fatty acid, or their ester of lower monoalcs. is distilled, the residue extd. with alkali soln. of water-sol. organic solvent, neutralised to remove ppt., and acidified to give a viscous antioxidant.

Thus, from 250g of the distn. residue, ~3g. prodt. was obtd. When linseed oil with iodine no. 180.1 contg. 0.1% of the prodt. was spread thinly on a glass plate, the mixt. did not dry during 45 days, cf. <2.5 days without the antioxidant. 5.11.71 as 088059 C09k-15/04, C11b-5/00 (18.12.79) TSUCHIYA, T. (2pp) (J4 8052804)

FIRM D23 52777W/32 = J7 9043-061
Organoleptic oxygenated alicyclic derivs - giving galbanum or juniper oil-like odours to perfume compsns. soaps etc.

FIRMENICH & CIE 29.01.74-CH-001147

B03 C02 E15 (18.12.79) *DT2502-767 A61k-07/46 C07c-49/61 C07c-69/74

Cpds. of formula (I) (with a satd. ring or an isolated double bond in the 1-, 4- or 6-posn. or two double bonds in the 1- and 4-, 1- and 5- or 4- and 6-posns. of the ring as indicated by the dotted lines, in which n

(I) is 0-2, Z is bonded at the 1- or 6-posns. of the ring to a C atom and may be -CO, -SOR8 or -C-OR9 where R8 is an acyl gp. and R9 are, singly, 1-6C alkyl, or, together 2-6C alkenyl groups, Y is O or CH2 and R1-5

are each H or one is methyl and all the others are H and R6 and R7 are each 1-3C alkyl or one is H and the other alkyl) have organoleptic props.

Cpds. (I) may have fruity, green, woody and oily notes reminiscent of galbanum or juniper oil and are very powerful, pref. 0.01-2 wt.% achieving desired effects.

29.1.75 as 012298 (clg. 29.1.74-CH-001147) A61k-7/46 C07c49/61, 69/74, 69/96 (18.12.79) FIRMENICH & CIE (26pp) (J5 0105841)

PERF= ★ D23 04860C/03 ★SU -660-969
Wool fat alcohol emulsifiers for cosmetics and drugs prepn. - by hydrogenation of ester gps. of wool fat waxes using mixt. of magnesium and copper hydroxide(s) as catalyst

PERFUME RES INST 19.08.77-SU-522332

B07 (D21) (05.05.79) C07c-29

Wool fat alcohols (I) are obtd. by the catalytic redn. of the ester gps. of wool fat waxes, using a mixt. of magnesium and copper hydroxides (wt. ratio equal 20-80:80-20 respectively) as a catalyst in the process.

The latter is carried out at the temp. of 200-225°C. and the pressure of 145-300 atmos. The proposed modification offers the advantages of increasing the selectivity of the catalytic redn. (hydrogenation) and simplifying the process (milder conditions). They may be used directly after the sepn. from the catalyst (hydroxy value = 140-180).

Shutikova, L.A., Cherkaev, V.G., Tsvirkun, R.R. et al. Bul. 17/5.5.79. 19.8.77 as 522332 (2pp48)

POWE= ★ D23 04889C/03 ★SU -661-001
Detergent for cleaning metal surfaces - comprises orthophosphoric acid, starch and polyoxyethylated synthetic fatty alcohol
POWERENG KRASNYI K 18.07.77-SU-508069
A97 G04 M12 (A25) (05.05.79) C11d-03/38

Washing agents for removal of oil and fat and mazut deposits on stainless steel surfaces are based on aq. H₃PO₄ and polyoxyethylated synthetic 10-18C fatty alcohol (I). Starch is added to assist the cleaning. The washing reagent comprises (g/l): H₃PO₄ 100-150, (I) 5-10, starch 100-120, and water to 1 l.

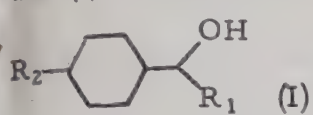
Zeitman, G.I., Sergienko, V.A. Bul. 17/5.5.79. 18.7.77 as 508069 (2pp835)

GIVA D23 57185A/32 = US 4181-631
Alpha-hydroxyethyl-4-tert-alkyl-cyclohexane perfume components - having sandalwood note and prepd. from alkylbenzene- or alkyl-cyclohexane derivs.

GIVAUDAN L & CIE SA 01.02.77-US-764668 (12.02.75-US-541027)

E15 (01.01.80) *DT2804-075 C11b-09

Novel α -hydroxyalkyl-4-t-alkylcyclohexanes are of formula (I):



(where R_1 is 1-3C alkyl; R_2 is 4-8C tert. alkyl; the C of R_2 bonded to the cyclohexyl ring is the tert. C and the number of C's in R_1+R_2 is ≥ 10).

Specific cpds. include 1-(α -hydroxyethyl)-4(1-methylcyclohex-1-yl)cyclohexane and cis-1-(α -hydroxyethyl)-4-t-butylcyclohexane.

(I) possess sandelwood note and may be used in perfumes, soaps and other toilet goods. They are esp. useful as (partial) replacements for natural sandelwood oil. 1.2.77 as 764668 (9pp393).

YOUD/ ★ D23 05148C/03 ★ US 4181-757
Coating low-melting gold alloy onto metallic substrate - by applying as powder slurry with flux in organic medium and firing
YOUDELIS W V 27.10.77-CA-289645
M13 P42 (01.01.80) B05d-03/02

A substrate of metal less noble than gold is coated with a slurry comprising an organic medium in which is dispersed an oxide-dissolving flux which becomes fully active at 550-600°C and a powdered gold alloy melting at $< 600^\circ\text{C}$. The coating is then fired at $< 540^\circ\text{C}$ to melt the alloy and cause it to flow over the substrate.

Pref. alloys are binary compsns. contg. 8-16% Ge, 3-9% Si or 15-25% Sn. Pref. solvents are ethylene glycol, cyclohexanol and (m)ethanol. Pref. flux is alkali

metal borate, carbonate, fluoride or chloride.

The coating is used to impart corrosion resistance approaching that of pure gold to the substrate metal, typically a dental crown, bridge, inlay or other prostheses. The coating also provides good surface hardness and accurate reproduction of surface detail. 17.1.78 as 870232 (5pp461).

GIVA D23 42697B/23 = US 4182-730
Substd. di:hydro-cinnamaldehyde perfume prepn. - by reacting arylalkyl ketone with Vilsmeier reagent and hydrogenating alpha-alkyl-beta-chloro cinnamaldehyde obtd. (NL 29.5.79)

GIVAUDAN CORP 25.11.77-US-854927

E14 (08.01.80) *DT2851-024 C07c-45

Prod'n. of substd. α -alkyldihydrocinnamaldehyde of formula (I) comprises (a) reacting a ketone of formula (II)



with a Vilsmeier agent prepd. by reacting DMF with P oxychloride or phosgene; and (b) hydrogenating the intermediate α -alkyl- β -chlorocinnamaldehyde in the presence of catalyst comprising Pd, water and a base.

In the formula, R_1 is H, methoxy, or ≥ 1 alkyl gps., the number of C atoms in R_1 being ≤ 7 ; R is 1-8C alkyl, the number of C atoms in the sum of R and R_1 being ≥ 2 and ≤ 8 . Pref. R is methyl. Pref. R_1 is in the para position.

(I) are odiferous cpds. used in perfume mfr. 25.11.77 as 854927 (5pp936)

D24: SOAP; SOAP DETERGENTS

MERK/ ★ D24 05320C/03 ★ US 4182-685
Prepn. of metal-contg. soaps - by treatment of fatty acid with multimetal amide contg. complexes
MERKLG G 10.01.77-US-758346 (23.12.74-US-534084)
A97 E12 (D25) (08.01.80) C11d-09/38 C11d-13

Metal-contg. soaps (I) are prepd. by mixing an aq. soln. of an H_2O -soluble, multi-metal, inorganic, amide gp.-contg. (i.e. NH_2) monomeric or polymeric complex (II)

with a fatty acid (III) at $< 105^\circ\text{F}$. In turn, the aq. (II) soln. is prepd. by reacting ≥ 1 non-alkaline metals (IV), NH_3 , and an alkali metal hydroxide in an aq. medium in such a manner as to form amide gps.

The process affords a variety of industrial and detergent metal-contg. soaps. 10.1.77 as 758346 (13pp478)

D25: OTHER DETERGENTS

MORA/ ★ D25 C/03 ★ CS 7706-608
Mixed surfactant - based on alkenyl and alkyl-polyglycol-ether sulphates
MORAK M 12.10.77-CS-006608
A97 (31.08.79) C11d-01/29

EBRI/ ★ D25 C/03 ★ CS 7803-799
Sulpho-alkyl-polysaccharides prepn. - for sizing, finishing and washing agents mfr.
EBRINGEROVA A 12.06.78-CS-003799
A11 (31.08.79) C07h-05/08

ROTC ★ D25 03666C/03 ★ DT 2827-291
Skin cleaning compsn. for removing lead - contains alkali sulphate and phosphate, filler, wool fat and Vaseline (RTM)
FA CARL ROTH 21.06.78-DT-827291
(D21) (10.01.80) C11d-03/48

Compsn. comprises 20-30wt. % alkali sulphate (esp. Glauber salt); 20-30wt. % prim., sec. or tert. alkali phosphate (esp. Na_3PO_4), 15-25wt. % scouring filler (esp. ground quartz); 5-15wt. % wool fat (esp. 9% lanolin); 2-8(5)wt. % vaseline; 2-8(5)wt. % water and 0-2wt. % other additives. The other additives include skin-oil replacements; skin protectants; antioxidants; perfume; oils and/or a dye.

Synergistic combination of ingredients gives rapid and complete removal of Pb as metal and as (in)organic cpds.

21.6.78 as 827291 (11pp1251)

PROC ★ D25 03862C/03 ★ EP ---6-655
Particulate detergent additive - with matrix of organic peroxy bleach activator and water soluble ethoxylated non-ionic cpd.
PROCTER & GAMBLE CO 26.06.78-GB-027855 (26.06.78-GB-027854)
A97 (09.01.80) C11d-03/39 C11d-17 D06l-03/02

D/S: E(BE, DT, FR, GB, IT, NL).

Detergent additive comprises a container enclosing a solid particulate organic matrix consisting of (a) 15-70 wt. % of a powdered organic peroxy bleach activator and (b) 30-85 wt. % water soluble 10-24C alcohol ethoxylates, 8-18C alkyl phenol ethoxylates and/or polyethylene glycols of mol. wt. > 4000 . The matrix has a penetrometer indentation at 32°C of < 1.0 mm, a wicking value of < 10 measured in a closed container at 32°C and a rate of dispersion in an aq. laundry detergent medium such that the matrix will generate $\geq 50\%$ of the peroxy bleach theoretically available within 8 mins. of addition to the soln. (as measured by titration of I_2 released from acidified I_2/KI mixt). The container material has a moisture vapour permeability such that when a closed container contg. the matrix is held for 42 days at $32^\circ\text{C}/80\%$ R.H., the matrix absorbs > 2 wt. % water.

The prods. can be used alone or in conjunction with conventional heavy duty detergents to give washing agent solns. with enhanced removal of oxidisable and oily stains from textiles.

13.6.79 as 200303 (35pp513)

(E) ISR: DT2741680; DT2657042; GB1441416; US4136052; DT2741671; FR2331612; DT2653329; DT2644289.

TOHR ★ D25 04394C/03 ★ J5 4154-410
Detergent compsn. - contg. surfactant and particles of hard porous polyurethane foam to improve soil removal

TOHO CHEM IND LTD 27.05.78-JA-062862

A97 E17 (A25 E14) (05.12.79) C11d-03/37

A detergent compsn. contg. coarse particles of porous hard polyurethane resin and surface active agent as effective components is suitable to remove dirt from plastics, glass, tile, and painted surfaces caused by fats or oils. Porous hard polyurethane resin may be produced from scrapped heat-insulating material of porous hard polyurethane resin etc. which has been crushed to <10 mesh. As the surface active agent alkyl sulphate, alkylbenzene sulphonate, dialkylsuccinic acid sulphonate, sulphuric ester salt of aliphatic alcohol, polyoxyethylene alkyl ether can be used.

When an appropriate amt. of the detergent compsn. of this invention is applied to the soiled surface, the soil is first swelled by the effect of the surface active agent. Particles of the porous hard polyurethane resin scrapes off the soil mechanically, whereby the soil is adsorbed in the porous structure, thus preventing recontamination. It is preferred to finally wash with water. The soft polishing effect of polyurethane resin, prevents generation of scratches on the surface of plastics, glass, etc.

In an example, 250 kg of powdered hard polyurethane resin having 60-80 Shore hardness by a D type Shore hardness tester, and 0.02-0.05 bulk density is mixed with 290 kg Dodecylbenzene sulphonate (40 wt. % paste), 0.5 kg propyl p-oxybenzoate (antiseptics) 0.5 kg Chapping preventing agent ('Soipon SC(RTM)'), and 500 kg water. The mixture was stirred in a ribbon mixer for 20 min. to obtain the product of this invention. 27.5.78. as 062862 (2pp126)

HENK D25 76862V/44 = J7 9042-006
Solid pourable washing and cleaning agents - contg. mixed boron- or aluminium silicates as calcium binding cpd

HENKEL & CIE GMBH 25.09.73-OE-008237 (20.06.73-OE-005458) (12.12.79) *NL7403-383 +C11d-11

Solid pourable washing- and cleaning agents contg. a finely -divided water-insoluble material with a Ca-binding capacity of ≥ 50 mg CaO/g anhydrous active material, of general formula $(Cat_2/nO)_x \cdot Me_2O_3 \cdot (SiO_2)_y$ (in which Cat is a cation which can be exchanged for Ca, with a valency of n, x is 0.7-1.5, Me is B or Al, and y is 0.8-6, esp. 1.3-4) are made by mixing the wet components with at least part of the remaining components of the washing- and cleaning agent and forming the mixt. into a solid pourable product in the known way.

Preferred Ca-bonding materials are Al silicates of formula $0.7-1.1 Na_2O \cdot Al_2O_3 \cdot 1.3-3.3 SiO_2$ with a particle size of 10-0.01 μ . The silicates are used to replace condensed phosphates such as tripolyphosphates usually found in cleaning agents. The silicates are less harmful ecologically in waste waters. 20.6.74 as 070777 (clg. 20.6.73; 25.9.73-OE-005458, 008237) C11d-11/00 (12.12.79)

HENKEL & CIE GMBH (15pp) (J5 0037804)

VOLG= ★ D25 04834C/03 ★ SU-660-943
Aliphatic tert. amine(s) removal from aq. surfactant mfr. waste - by extraction with primary aliphatic amine(s) and separation of the organic layer

VOLGODONSK SURFACTA 17.03.76-SU-334629

E16 (15.05.79) C02c-05/02

In surfactant prodn., aliphatic tert. amines are removed from effluent by solvent extn. The process is rendered less costly as follows: extraction is conducted with 17-20C primary aliphatic amines at 50-95°C, pref. 60-90°C, and the organic layer is sepd.

Gushchina, L.I., Romanova, G.D., Grishchenko, A.S. Bul. 17/5.5.79. 17.3.76 as 334629 (2pp835)

MOGU ★ D25 04870C/03 ★ SU-660-980
Ethylene oligomer intermediate for detergents etc. mfr. - sepd. from polymerisate contg. alkylaluminium catalyst by treating with phenol or alkylphenol, useful in petrochemical industry

MOSCOW GUBKIN PETROCHEM 15.11.77-SU-543801

A17 E17 (05.05.79) C08f-06/08 C08f-110/02

Ethylene oligomers, used in prodn. of soaps, surfactants etc., are sepd. from a polymerisate contg. alkyl Al catalyst by treating with phenol or a 4-22C alkyl phenol in an amt. 1-3 mols per mol. of catalyst.

The method is quick and avoids contaminated effluents. After adding the phenol(s) the mixt. is heated to 40-140°C the low mol. wt. prods. are recovered overhead and the reactionprods. of the phenol and trialkyl Al are extracted from the residue with a polar solvent, e.g. a 1-4C alcohol. Belov, P.S., Tsvetkov, O.N., Gulyaev, I.A. et al. Bul. 17/5.5.79. 15.11.77 as 543601 (2pp314)

COLG D25 42523A/24 = US 4181-632
Elastic washing agent in piece form - contains anionic or amphoteric surfactant, gelatin, water and or polyhydric alcohol

COLGATE PALMOLIVE CO 02.12.76-US-746999

E19 (01.01.80) *DT2753-850 C11d-01/50 C11d-17

Hand squeezable, elastic, solid moulded detergent prod. comprises 10-80% synthetic organic detergent (I), 5-30% gelatin and 1-5% crosslinking and/or denaturing agents for the gelatin when (I) is anionic.

(I) is water sol. and is selected from alkali metal, triethanolamine and ammonium linear higher alkylbenzene sulphonates, paraffin sulphonates, olefin sulphonates, higher fatty alcohol sulphonates, monohydrate sulphonates and higher fatty alcohol polyethylene glycol sulphonates and their mixts.; or is ketaminopropionates, ketaminodipropionates and/or imidazolium salts.

The prod. is sufficiently squeezable and elastic so that a 2cm. thickness can be pressed between a thumb and forefinger to a 1cm. thickness and upon release of the pressure returns within 5 seconds to within 1mm. of 2cm. thickness. 2.12.76 as 746999 (7pp593).

COLG ★ D25 05086C/03 ★ US 4181-633
Liquid scouring cream contg. calcium metasilicate as abrasive - giving good cleaning and reduced abrasion

COLGATE PALMOLIVE CO 01.12.76-US-746446

E33 G04 (01.01.80) C09g-01/02 C11d-03/08

A pourable liquid scouring compsn. contains 45-55 wt. % of an abrasive system including ≥ 20 wt. % of calcium metasilicate of mean particle dia. 5.5-16 microns and Mohs hardness about 5, suspended in an aq. vehicle contg. 2-15 wt. % of anionic or nonionic detergent surfactant(s).

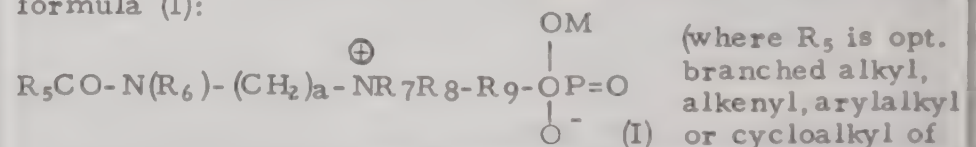
The compsn. is stable, and has good cleansing power but causes reduced abrasion of softer surfaces e.g. Al. 1.12.76 as 746446 (6pp955).

JOHJ D25 91499A/51 = US 4181-634
Mild cosmetic detergent compsn. esp. for shampoos and baths - contg. anionic or amphoteric detergent and bis quat. ammonium cpd.

JOHNSON & JOHNSON 05.05.78-US-902121 (17.06.77-US-807768)

A96 E16 (01.01.80) *BE-868-215 C11d-01/94

Cosmetic cleansing compsn. comprises a detergent component (A) in admixt. with an alkylene-oxylated bis quat. ammonium cpd. (B). (A) is amphoteric and is typically of formula (I):



(B) contains ≥ 1 cpd. of formula (II): $[R_1R_2N(CH_2)-(C_nH_{2n}O)_x-C_nH_{2n}-N(CH_3)R_2R_1]^{++}2X^-$ (where R_1 is 10-26C aliphatic gp.; R_2 is (m)ethyl propyl, etc.; X is anion and x is 1-30). (A) is present in amt. 4-40 wt. % and the wt. ratio of (B) to (A) is 0.1:1-0.3:1.

(B) reduces the irritant properties of the detergents.
5.5.78 as 902121 C.i.p. 4110263 (15pp393).

CONN- D25 49069B/27 #US 4182-683
Agglomerated dishwashing detergent prepn. - comprising uniformly distributing an aq. alkaline detergent salt soln. on to other constituents

CONN CHEM LTD 08.04.76-CA-249812 (17.05.76-US-687037)
E34 (08.01.80) *CA1056-687 +C11d-07/56 C11d-11

Free flowing granular dishwasher detergent is mfd. in a single mixing vessel from components including hydrated Na tripolyphosphate (I), Na and/or K silicate (II) having a wt. ratio of SiO₂ to Na₂O or K₂O of 2.4-3.25:1, chlorinated trisodium phosphate (III) and nonionic surfactant (IV). Method comprises first mixing in the ventilated vessel a dry mixt. of 30-45 wt.% of (I) and 20-30 wt.% of (III), the ratio of the vol. of the dry mixt. to the vol. of the vessel being 1:25-1:8.

15-30 wt.% of an aq. soln. of (II) is sprayed at ambient temp. onto the dry mixt., while continuing mixing, to form an agglomerate during hydration of (I). 1.5-6 wt.% of (IV) is then sprayed onto the agglomerate at ambient temp., while continuing mixing. The agglomerate is then coated by spraying onto it a further 10-25 wt.% of aq. soln. of (II) at ambient temp. to make up a total of 25-40 wt.% of (II) used. The coated agglomerate is then discharged from the vessel while continuing mixing to ventilate it to the air in the vessel.

The ratio of vols. and the ventilation of the vessel keeps the mixt. at a temp. at which (II) is relatively stable to retain available chlorine in the agglomerate. The silicate coating inhibits chlorine loss from the detergent during prolonged storage. 17.4.78 as 897199 (7pp927)

MONS ★ D25 05319C/03 ★US 4182-684
Machine dishwashing compsns. - contg. poly:carboxylic acid salts, surfactant, chlorine - producing agent, and sodium silicate
MONSANTO CO 17.11.78-US-961594 (17.05.74-US-471088)
E19 (08.01.80) C11d-07/54

Compsn. consists of: (a) 5-90 wt.% polycarboxylic acid deriv. (I) $R-\text{OC}-(\text{CO}_2\text{M})_2-\text{OCH}_2\text{CO}_2\text{M}$ as builder; (b) 0-5% of a low foaming anionic and/or nonionic surfactant (II); (c) a Cl₂-providing material (III) (to give 0.5-2 wt.% available Cl₂); and (d) 5-30 wt.% soluble Na silicate (IV) (SiO₂:Na₂O mol. ratio 1-3.2:1).

M = alkali metal or NH₄; n = 1-3; R = $\geq 20\text{C}$ alkyl, alkenyl, or alkynyl, 3-20C cycloalkyl, 2-20C alkanol, $\leq 3\text{C}$ ether radical, $\leq 6\text{C}$ aryl (opt. substd. by halo, NO₂, amide, or carboxyalkyl), or $\leq 7\text{C}$ aralkyl or arylother. (III) is K or Na dichlorocyanurate, (monotrichloro)-tetra-(mono-K dichloro) penta-isocyanurate, (monotrichloro) (mono-K dichloro)di-isocyanurate, or chlorinated Na₃PO₄.

(I) are complexing agents for alkali(ne earth) metal ions (partic. Mg and Ca, etc.), and are useful as detergent builders for a variety of detergent formulations. Various (I) are also emulsifiers and foaming agents, etc., while some of the cpds. are readily biodegradable. 17.11.78 as 961594 Div.ex. 4118420 (16pp478)

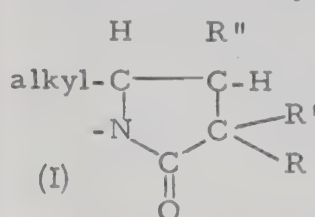
LAKS/ ★ D25 05321C/03 ★US 4182-686
Non-wax cleaning and polishing compsn. for plastic surfaces - comprising stearic acid and abrasive agent based oil phase and alkanolamine based aq. phase with minor amt. of acrylic filler
LAKS S 17.05.78-US-906733
A82 E19 G02 (08.01.80) C11d-09/30

A non-wax cleaning and polishing compsn. for plastic surfaces comprises (a) oil phase comprising a mixt. based on stearic acid and an abrasive agent containing minor amts. of a glycerylmonostearate and cetyl alcohol as thickener and (b) aq. phase based on water with a minor amt. of an alkanol amine selected from di- and triethanolamine and a minor amt. of an acrylic filler. The oil and aq. phase form an emulsion with the abrasive and filler in suspension.

The compsn. cleans as it polishes translucent and opaque plastic surfaces by removing foreign matter and filling minute surface scratches in a one step operation. Separation of the constituents does not occur on storage of the compsn. 17.5.78 as 906733 (4pp966)

MOBI ★ D25 05335C/03 ★US 4182-715
Amine derivs. of gamma-alkyl-gamma-butyrolactone(s) - useful as detergents and antioxidants for lubricants, fuels and greases
MOBIL OIL CORP 02.02.78-US-874310 (20.03.68-US-714447)
A97 E13 H07 (A95 H06) (08.01.80) C07d-207/26

Parent patent (US 4081456) claimed new bis-lactams and disclosed γ -butyrolactones and γ -butyrolactams. This division claims cpds. of formula (I):

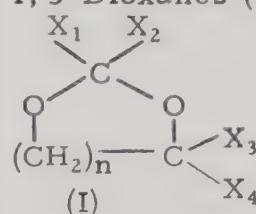


(where the alkyl gp. has 16-100C atoms; R, R' and R'' are H, methyl, or ethyl; and -N represents one of the two terminal amino N atoms of a polyalkylenepolyamine H₂N(C₂H₄NH)_mH, where m is 3 or 4). (I) are e.g. prepd. by reacting (I):

where -N is replaced by O, with the polyalkylene polyamine. 2.2.78 as 874310 Div.ex. 4081456; C.i.p. 3734865 (+17.2.69; 30.8.71; 28.2.73; 20.2.76-US-799939; 176267; 336564; 659803) (5pp959)

MONS ★ D25 05337C/03 ★US 4182-718
1,3-dioxan-poly:carboxylic acid salts - useful as detergency builders, threshold agents, metal chelants, and water softeners
MONSANTO CO 25.10.77-US-844569
E13 (D15 E12) (08.01.80) C07d-319/04

1, 3-Dioxanes (I) are new:



(where X₁-X₄ = H, or CO₂M; M = alkali metal, NH₄, or trialkanolammonium, n = 2; provided ≥ 1 of X₁-X₄ is H).

(I) are useful as detergency builders and/or thresholding agents, metal chelates, and water softeners. In addn., (I) are biodegraded more readily than the

corresp. dicarboxylate cpds. 25.10.77 as 844569 (8pp478)

SOLV D25 76317A/43 =US 4182-807
Reducing the molecular weight of hydroxy-carboxy polymers - esp. hydroxy-acrylate(s), using oxidising agent in a solvent
SOLVAY & CIE 25.04.77-LU-077196
A97 (08.01.80) *BE-866-224 C08f-08/66

Prod. of a salt of a hydroxycarboxylated polymer of reduced mol. wt. which has repeating units of formula $-\text{C}(\text{R}_1)(\text{R}_2)-\text{C}(\text{OH})(\text{COOM})-$ (I), comprises reacting a polymer salt of higher mol. wt. with an oxidising agent in the presence of a solvent.

In (I), R₁ and R₂ are each H or 1-3C alkyl opt. substd. by OH or halo; and M is alkali metal atom or ammonium gp. Pref. the hydroxycarboxylated polymer is Na poly- α -hydroxyacrylate. Pref. the reaction is at 30-120°C., esp. at pressure 0.01-3 kg./cm.²

Prods. have an identical chemical nature to the starting polymer salts and a reduced mol. wt., and are white in colour. They are useful as active adjuvants in detergent compsns. 18.4.78 as 897648 (4pp936)

SOLV D25 76318A/43 =US 4182-806
Poly- α -hydroxyacrylic acid salts prepn. - from corresp. polylactone and base in presence of an oxidising agent
SOLVAY & CIE 25.04.77-LU-077195
A97 (08.01.80) *BE-866-225 C08f-08/06

Prod. of a salt of a poly α -hydroxyacrylic acid, which salt contains monomeric units of formula $-\text{C}(\text{R}_1)(\text{R}_2)-\text{C}(\text{OH})(\text{COOM})-$ (I) (where R₁ and R₂ are each H or 1-3C alkyl and M represents the cationic radical resulting from the dissociation of a base), is described.

Process comprises reacting, with the base in the presence of water, a solid polylactone derived from the corresp. poly α -hydroxyacrylic acid. Reaction is effected in liq. medium contg. water and a diluent. Diluent is one which does not dissolve or cause to dissolve the polylactone and the salt produced. Oxidising agent (II) is added to the reaction medium.

Pref. (II) is added to the medium before the base. (II) is pref. added as H₂O₂. (II) is esp. added as 0.01-15 mol. % relative to the number of hydroxyacrylic units present in the starting polylactone.

Prods. can be used directly as active adjuvants in detergent compsns. 18.4.78 as 897647 (5pp936)

MONS ★ D25 05416C/03 ★ US 4182-905
 Aromatic poly:carboxylic acids, salts and ester cpds. - useful as
 metal complexing agents, detergency builders and surfactants
 MONSANTO CO 02.09.77-US-830252 (17.05.74-US-471088)
 A97 E19 (08.01.80) C07c-65/02

Polycarboxylic acid salts (I) of formula $R-\left[O-C(CO_2M)_2-O-CH_2CO_2M\right]_n$, and the corresp. acids and esters, are
 new. M is alkali metal or NH_4 ; n is 1-3; R is an aralkyl,
 alkoxyaryl or arylpoly(alkyleneoxide) alkylene gp. having
 $\geq 7C$, or a $\geq 6C$ aryl gp. opt. substd. by halogen, nitro,
 amide or carboxyalkyl substituents.

(I) are complexing agents for various metal ions, e.g.
 Mg or Ca ions, and are also useful as detergency builders
 and/or surfactants, e.g. in machine dishwashing compsns.
 The Parent Patent claimed salts of formula (I), and the
 corresp. acids and esters, in which R is $\leq 3C$ ether radi-
 cal or $\geq 20C$ alkyl, alkenyl or alkynyl, or 2-20C alkanol.
 2.9.77 as 830252 Div.ex. 4118420 (+25.3.76-US-670336)
 (16pp927)

MONS ★ D25 05418C/03 ★ US 4182-908
 Ketal poly:carboxylate cpds. prepn. - for use as detergent builders,
 chelating agents, water softeners, etc.
 MONSANTO CO 15.08.77-US-824458 (29.10.76-US-736962)
 E19 (08.01.80) C07c-59/23

Prepn. of ketal polycarboxylates of formula (I) comprises

$$R-O-\overset{\overset{CO_2M}{|}}{\underset{\underset{CO_2M}{|}}{C}}-O-\overset{\overset{CO_2M}{|}}{\underset{\underset{CO_2M}{|}}{C}}-R_1$$
 reacting a dialkyl halodiglycolate
 with an alkali metal alkoxide; (b) re-
 acting the prod. with Li isopropyl
 amide; (c) reacting the prod. of (b)
 with CO_2 and (d) converting the prod. of (c) alternatively
 to (i) the half ester-half acid form by H^+ ion exchange of
 the Li, (ii) the tetraester form by esterification of the
 half ester-half acid of (i), or (iii) the tetraalkali metal
 salt form by hydrolysis of the tetraester form with alkali
 metal hydroxide.

In (I), M is H, CH_3 , C_2H_5 , NH_4 , Na, K or combinations
 of these; R is $\leq 20C$ alkyl, $-CH(CO_2M)_2$ or $-CH_2CO_2M$; and
 R_1 is $\leq 20C$ alkyl, H or OR. The Parent Patent claimed
 cpds. (I), which are useful as detergent builders, metal
 chelating agents, thresholding agents and water treatment
 (e.g. softening) agents. Cpds. (I) are readily biodegraded.
 15.8.77 as 824458 Div.ex. 4100358 (7pp927)

See Also

D15 US 4182900
 D24 US 4182685

D16 EP --6638

D23 EP --6616

CPI INDEXES

ALERTING PATENTEE INDEX (II)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

In Country Alerting Bulletin only

M22

*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502-292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or ≠ sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U* A97D15M14
*645 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
*654 49862X A88H01Q4
*655 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A-M cumulations of from a quarter up to 5 years are available as COM.

CALI

Nitrile rubber smooth rolled sleeve for well impression packer - also contg natural rubber, hydrated 49862X/26 *US 3963-654
CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01

Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying earth in dams 49433X/26 *DT 2554-327

CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02

CANA

Emulsifying agents of microbial origin - used esp. for oil spills, are made by cultivating a species of 48076X/26 *CA -990-668
CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180
Europe	150
France	740
Germany, W. unexamined	1050
Japan unexamined	845*
Netherlands unexamined	240
PCT	40
Research Disclosure	20
South Africa	100
Sweden	260
United Kingdom unexamined	600
	<u>3325</u>

Slow publishing

Canada	450
Germany, E.	100
Germany, W. examined	465
Japan examined	340*
Netherlands examined	60
Soviet Union	1200
Switzerland	260
United Kingdom examined	300
United States	1200
	<u>4375</u>

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140
Denmark	120
Finland	60
Norway	80
Portugal	30
	<u>430</u>

Slow publishing

Austria	125
Czechoslovakia	180
Hungary	35
Israel	40
Italy	155
Rumania	25
	<u>560</u>

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MW
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

- ABBO 01.07.76 ABBOTT LABORATORIES B04 D16 = CA 1068-586
Alpha-amylase enzymatic determination - 10637A/06
- ABBO 24.09.76 ABBOTT LABORATORIES A96 B04 D16 J04 (A26) #CA 1068-600
Reactive, stable metal and organic cpd. compsns. - 10829A/06
- ABBO 21.11.77 ABBOTT LABORATORIES A96 B04 D17 = US 4182-756
Glucose polymer mixed soln. - 40906B/22
- ABBO 11.06.79 ABBOTT LABORATORIES B04 D16 #BE-876-910
Reverse passive haemagglutination test for *Neisseria gonorrhoeae* - 84708B/47
- ACEC- 19.05.76 ACECOOK CO LTD D11 = US 4182-230
Macaroni frying method - 86869Y/49
- *AGBI= 20.04.77 AS GEOR BIOCHEM PLA D16 (D11) *SU -659-617
Acid-resistant alpha-amylase and glucoamylase - 04626C/03
- AGRO- 15.06.78 AGROTECHNIKA NP D15 = GB 2024-794
Biological sewage treatment with sludge sepn. by fluid filtration - 00256C/01
- AJIN 03.03.75 AJINOMOTO KK D16 = J7 9043-073
Easily digestible yeast bodies prodn. - 80125X/43
- AJIN 10.07.75 AJINOMOTO KK C04 D16 J04 = J7 9042-834
Neutral dried pellet prodn. from acidic soln. or slurry - 15591Y/09
- AJIN 11.03.77 AJINOMOTO C03 D16 = US 4181-714
Fungicide contg. Bacileucine-A or -B or its complex - 80900A/45
- *AJIN 28.03.78 AJINOMOTO KK A89 B05 D16 J04 *FR 2421-380
L-aminoacid and carbon source determ. in fermentation broths - 03977C/03
- ALFA 06.04.77 ALFA-LAVAL AB A92 D16 J04 = FR 2420-993
Reaction vessel for continuous processes - 86413A/48
- ALFA 16.05.77 ALFA-LAVAL AB D17 = US 4181-535
Starch and by-products prepn. from corn - 82169A/46
- ALMA- 03.08.76 ALMAG CHEM CORP D15 J01 = US 4182-676
Mineral contaminated water purification - 81012X/43
- *ALMI= 12.10.76 AS LATV MICROBIOLOG D16 *SU -659-620
Nutrient medium for microorganisms producing L-lysine - 04629C/03
- AMCY 21.08.75 AMERICAN CYANAMID CO B03 D16 = J7 9042-981
Broad-spectrum antibacterials from nocardia sp. NRRL 5646 - 12591Y/07
- *AMCY 05.10.77 AMERICAN CYANAMID CO A96 D22 F01 *US 4182-341
Surgical needle - 05249C/03
- *AMLM= 16.12.70 AS MOLD MICROBIOL D13 E24 (D16) *SU -660-993
Food grade red dye prodn. - 04882C/03
- *ANIM= 02.03.77 ANIMAL FARMS MECHN D14 *SU -660-632
Animal feedstuffs mixing and spreading equipment - 04724C/03
- AQUA/ 27.06.78 AQUARIUS CH D13 = DT 2925-735
Individual packaging of confectionery esp. lollies - 78406A/44
- AQUA/ 27.06.78 AQUARIUS CH D13 = GB 2024-764
Individual packaging of confectionery esp. lollies - 78406A/44
- ASAH 22.12.72 ASAH CHEMICAL IND KK C03 D16 = J7 9043-078
Secalonic acid microbial prodn. - 02661W/02
- ASAH 20.07.76 ASAH KASEI KOGYO D15 = US 4182-267
Preservation and transport of live fish and shell fish - 20467A/11
- *ASAH 23.05.78 ASAH CHEMICAL IND KK A88 D15 J01 *J5 4152-680
Selective treatment of waste liq. contg. oil - 04184C/03
- ASAK 13.04.77 ASAH BREWERIES KK D16 = US 4181-742
Beer prepn. - 90438A/50
- *ASBI= 17.03.76 AS USSR BIOCHEM PHY D16 *SU -659-610
Trypsin inhibiting agent prodn. - 04620C/03
- *ASBI= 11.04.77 AS USSR BIOCHEM PHY A97 D16 (A11) *SU -659-614
Polynucleotide-ligase enzyme prodn. in *Escherichia coli* cells - 04624C/03
- *ASBI= 03.05.77 AS USSR BIOL INSTR D16 *SU -661-004
Microbiological culture growing fermenter - 04892C/03
- *ASFA= 10.03.77 AS USSR FAR EAST A97 D16 J01 (A11) *SU -660-975
N-benzoyl-amido-heptyl-amino hydroxy sym triazinyl-agarose - 04866C/03
- *ASGI- 24.05.78 ASIA GIJUTSU CONSUL D15 *J5 4154-152
Purifying waste warm water for reuse in power plants, etc. - 04367C/03
- *ASMI= 12.05.77 AS USSR MICROBIOL D16 F06 *SU -661-014
Thermophilic *Bacillus diastaticus* strain - 04902C/03
- ATLS 05.05.75 ATLANTIC RESEARCH CORP D16 E14 = CA 1068-725
Synthetic humulones from phloroglucinol with higher yields - 72204X/39
- AUSC- 21.07.75 AUSCOTENG PTY LTD D15 #US 4181-577
Water distillation esp. desalination with constant brine extraction - 11334Y/07
- *AUZC= 25.04.77 AS UZB CHEM INST A91 D15 (A11) *SU -659-575
Cellulosic flocculant for surface water clarification - 04594C/03
- *AUZM= 19.05.77 AS UZB MICROBIOL D16 *SU -661-015
Saccharomyces vini yeast strain - 04903C/03
- *AUZM= 19.05.77 AS UZB MICROBIOL D16 *SU -661-016
Saccharomyces vini yeast strain - 04904C/03
- *AVRU/ 12.03.75 AVRUTSKII PI D15 *SU -660-940
Biological filter for effluents - 04831C/03
- *AXHO- 28.07.75 AXHOLME ENT TD D14 *GB 1559-475
Vegetable topping machine - 04005C/03
- *AXHO- 28.07.75 AXHOLME ENT TD D14 *GB 1559-476
Vegetable topping machine - 04006C/03
- BADI 00.00.77 BASF AG D22 = DT 2827-827
Aq. iodophor solns. for disinfectant use - 02145C/02
- BADI 19.04.78 BASF AG D18 E21 F06 = GB 2024-835
Reactive mono:azo dyes of aromatic series - 79257B/44
- BAHR/ 05.08.76 BAHR A D15 = US 4181-616
Continuous dewatering filter plant for waste water sludge - 86658Y/49
- *BAJA/ 28.10.77 BAJAK K D18 *CS 7707-017
Cyclic dehydration of flat fibrous materials - C/03
- BAMA- 26.05.78 BAMACH BV D14 = DK 7902-160
Conveyor forming of meat olive, tortilla etc. - 71762B/40
- *BARD= 16.12.70 BARDARSK WINE WKS D13 E24 (D16) *SU -660-993
Food grade red dye prodn. - 04882C/03
- BARH/ 19.05.78 BARHAM H N C03 D13 = J5 4154-545
Cereal and seed grain modification - 86240B/48
- BARH/ 19.05.78 BARHAM H N C03 D13 = SW 7904-283
Cereal and seed grain modification - 86240B/48
- *BAXT 14.03.77 BAXTER TRAVENOL LAB D22 *US 4181-232
Plastic bottle with sealed closure - 05006C/03
- BECK- 11.03.76 NATURIN WERK BECKER A97 D12 = GB 1559-215
Packaging food portion with liq. in plastic dish - 48842Y/28
- *BECT 26.08.74 BECTON DICKINSON CO B07 D22 *US 4181-511
Anaesthesiology and respiratory system bacterial filter - 05032C/03
- *BECT 23.03.76 BECTON DICKINSON CO B07 D22 *US 4181-512
Anaesthesiology and respiratory system bacterial filter - 05033C/03
- BEEC 28.03.74 BEECHAM GROUP LTD B04 D16 = US 4181-716
Beta-lactamase inhibitor MM 4550 - 67721W/41
- BEIG/ 06.08.76 BEIGE G D22 = US 4182-318
Epicondylitis treatment bandage - 12504A/07
- *BELI/ 14.07.77 BELIK E B05 D16 *CS 7704-695
Tylosine antibiotic isolation - C/03
- *BENC 22.06.78 BENCKISER-KNAPSACK D13 E17 (D17) *EP ---6-592
Poly:alcohol esp. xylitol prepn. - 03828C/03
- BIBB/ 01.06.78 BIBB M J B04 D16 = EP ---6-692
Streptomyces plasmid useful as DNA vector - 01732C/01
- BIOG 01.12.76 BIOGALGYOGYSZERGYA B04 D16 = HU T017-515
Large volume fermenter for antibiotic mfr. - 51838A/29
- BIOT- 31.03.78 GES BIOTECH FORSCH B04 D16 = FR 2421-214
Forming hybrid bacteria - 73965B/41
- *BIOT= 24.09.76 BIOTECH RES INST D16 *SU -659-613
Stable pectolytic enzyme complex prodn. - 04623C/03
- *BIOT= 03.01.77 BIOTECH RES INST D16 *SU -661-002
Cultivating microorganisms producing enzymes e.g. pectinase - 04890C/03
- *BIOT= 12.04.77 BIOTECH RES INST D16 *SU -659-615
Alkaline protease microbiological prodn. - 04625C/03
- *BIOT= 22.11.77 BIOTECH RES INST D16 *SU -661-005
Microbial culture growing unit - 04893C/03
- BIPR- 23.12.74 BIPROK WAS PRZEM NIE D15 E34 = DS 2552-899
Purifying waste liquor - 39989X/22
- *BLAC/ 27.05.77 BLACK CA D22 *US 4182-336
Sanitary napkin with attached disposal sack - 05245C/03
- BLEN 31.01.74 BLENDAX WERKE SCHNEIDER D21 E16 #US 4181-621
Dentrifice cleaning compsn in tablet/powder form - 55806W/34
- BOEF 29.10.76 BOEHRINGER MANNHEIM GMBH B04 D16 J04 = US 4181-575
Total or bound cholesterol determination - 35060A/20
- BOEF 24.02.77 BOEHRINGER MANNHEIM GMBH A96 B04 D16 (A23) = US 4182-695
Protein, esp. enzyme, fixed to polyamide - 63398A/36
- *BOEF 03.07.78 BOEHRINGER MANNHEIM GMBH D15 *DT 2829-142
Increasing biological breakdown of toxic waste water - 03746C/03
- BOEH 12.08.76 BOEHRINGER INGELHEIM B04 D16 = US 4182-655
Immobilised enzyme on hardened porous protein support - 12290A/07
- *BOEH/ 10.08.78 BOEHLING DE D15 *US 4181-451
Animal excrement microbiological disposal system - 05020C/03
- BOEK/ 28.04.78 BOEKE J D15 J04 = US 4181-951
Acidity and ion concn. control process streams - 89369B/49
- BOLI 25.05.76 BOLIDEN AB C03 D13 = US 4182-780
Alkali treatment of lignocellulosic materials - 63339Y/36
- BOLS/ 12.05.75 BOLSING F D15 H03 = DT 2560-182
Disposal of mineral oil by bio-degradation - 89024X/48
- *BRAS/ 24.06.76 BRASWELL J W D15 *US 4181-605
Water softener with regeneration controlled by plunger valve - 05074C/03
- BRAT/ 30.09.67 BRATLAND A O T D13 = DS 1792-620
Whipping cream contg not more than 25% fatty materials - 28165R/17
- BRIM 13.07.77 BRISTOL MYERS CO B02 D16 = US 4181-574
Antibiotics Bu-2313A and Bu-2313B - 09321B/05
- *BROV 29.06.78 BBC AG BROWN BOVERI CIE D15 *DT 2830-755
Sewage sludge sanitising process - 03752C/03
- BRPE 17.06.76 BRITISH PETROLEUM LTD D15 = US 4181-614
Gas flotation to raise and remove sludge from treatment tanks - 90070Y/51
- *BRTA 02.12.75 BRIT AMER TOBACCO LTD C03 D18 *GB 1559-177
Treatment of tobacco esp. 1,1-ethylene-2,2' di:pyridylum di:bromide, - 03991C/03
- BRTA 06.09.77 BRIT AMER TOBACCO LTD D18 J01 = US 4182-348
Eliminating nitric or carbon mon:oxide(s) from tobacco smoke - 04112B/03
- *BRUN/ 15.09.76 BRUMBLICK G C D13 *US 4181-743
Food flavouring, esp. salt substitute - 05137C/03

BUCH-

- * BUCH- 20.06.78 BUCHI LAB TECHNIK A D21 M23 *DT 2827-020
Electric welding of metal dental prostheses in patients mouth - 03656C/03
- * BUCY 16.06.78 BUCKEYE CELLULOSE CORP A96 D22 F04 *EP ---6-647
Disposable absorbent nonwoven laminate - 03859C/03
- * BUDA 08.08.77 BUDAPESTI MUSZAKI EGYETE D15 *HU T017-552
Determining the hydrocarbon content of aq. solns. - *C/03

- * CABL- 05.07.78 CABLESTRAND D21 F07 *US 4182-106
Dental brace wire comprising five strands - 05204C/03
- CARB- 31.03.76 CARBOS AG B05 D17 E13 (E17) = CA 1068-687
Lactose conversion to galactose and gluconic acid - 72801Y/41
- CARG/ 14.09.76 CARGILL J M D17 J04 = US 4182-632
Multistage diffusion (extrn.) plant - 23601A/13
- * CARR- 10.01.79 CARROLL PROD INC D21 E13 *US 4181-804
Complexes of allantoin with urocanic acid (and salts) - 05170C/03
- * CDCC- 31.05.77 CDC CHEM CORP A97 D22 J01 *US 4181-255
Odour filtering device - 05009C/03
- CHAL- 23.06.77 CHALLENGE-COOK BROS D18 = CA 1068-504
Tumbler drum for treating hides - 75993A/42
- * CHET 30.01.78 CHEMETRON CORP D14 *US 4182-207
Loading packages with food slice stack - 05218C/03
- CHRI/ 14.06.78 CHRIST C D13 (D15) = BE -876-935
Treatment of sauerkraut mfr. effluent - 00348C/01
- * CHUB/ 15.06.77 CHUBATYUK I F D12 *SU -660-650
Cleaning, degreasing and cutting of poultry stomachs - 04728C/03
- CHUS 29.05.78 CHUGAI SEIYAKU KK B04 D16 = GB 2024-857
Antitumour compsns. contg. bacterial cells - 89657B/50
- * CHUS 29.06.78 CHUGAI SEIYAKU KK B04 D16 *DT 2926-406
Product with anticancer activity - 03824C/03
- CIBA 26.05.70 CIBA GEIGY AG B05 C03 D22 E14 = DS 2125-893
Anti microbial compositions - 88275R/47
- CIBA 12.06.78 CIBA GEIGY AG C03 D22 E14 F06 = GB 2024-625
Protection of keratin-contg. materials against attack by insects - 91412B/51
- * CIBA 26.06.78 CIBA GEIGY AG C03 D22 E14 F06 *DT 2925-290
Insecticidal cyclopropane carboxylic acid thiol ester derivs. - 03790C/03
- CIBA 26.06.78 CIBA GEIGY AG C03 D22 E14 F06 = NL 7904-792
Insecticidal cyclopropane carboxylic acid thiol ester derivs. - 03790C/03
- CIBA 26.06.78 CIBA GEIGY AG C03 D22 E14 F06 = NL 7904-833
Insecticidal isopropyl-phenyl:acetic acid thiol ester derivs. - 03798C/03
- * CIBA 27.06.78 CIBA GEIGY AG C03 D22 E14 F06 *EP ---6-600
Phenoxy:benzyl tetra:haloethyl-cyclopropane carboxylate cpds. - 03833C/03
- * CIBA 29.06.78 CIBA GEIGY AG A91 D15 (A11) *DT 2925-689
Removing cationic substances from waste water - 03805C/03
- * CIBA 03.07.78 CIBA GEIGY AG C03 D22 E14 F06 *EP ---6-630
Phenoxy:benzyl alpha-phenyl-alpha-cyclopropyl acetate derivs. - 03850C/03
- * CIBA 11.05.79 CIBA GEIGY AG C03 D22 E14 F06 *DT 2925-337
Insecticidal isopropyl-phenyl:acetic acid thiol ester derivs. - 03798C/03
- CIGA 08.05.68 CIGARETTE COMPONENT LTD A97 D18 = CS 6903-239
Cigarette filter with a wall composed of cellulose - 40079Q/00
- CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 = DK 7902-100
Supply system for anaerobic biological treatment tank - 85963B/48
- CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 = DK 7902-101
Anaerobic effluent treatment tank with reaction and settlement zones - 85962B/48
- CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 = SW 7904-490
Anaerobic effluent treatment tank with reaction and settlement zones - 85962B/48
- CNSM 23.05.78 CENTRALE SUIKER MIJ NV D15 = SW 7904-491
Supply system for anaerobic biological treatment tank - 85963B/48
- COLG 08.08.75 COLGATE PALMOLIVE CO D22 F04 = GB 1559-294
Disposable absorbent pad - 68442X/36
- COLG 08.08.75 COLGATE PALMOLIVE CO D22 F04 = GB 1559-295
Disposable absorbent pad - 68442X/36
- COLG 08.08.75 COLGATE PALMOLIVE CO D22 F04 = GB 1559-296
Disposable absorbent pad - 68442X/36
- COLG 08.08.75 COLGATE PALMOLIVE CO D22 F04 = GB 1559-297
Disposable absorbent pad - 68442X/36
- * COLG 01.12.76 COLGATE PALMOLIVE CO D25 E33 G04 *US 4181-633
Liquid scouring cream contg. calcium metasilicate as abrasive - 05086C/03
- COLG 02.12.76 COLGATE PALMOLIVE CO D25 E19 = US 4181-632
Elastic washing agent in piece form - 42523A/24
- COLG 01.07.77 COLGATE PALMOLIVE CO D22 F07 = US 4180-869
Full length therapeutic elastic stockings - 78453A/44
- COLG 10.08.77 COLGATE PALMOLIVE CO D22 = US 4182-333
Baby's disposable napkin with adhesive securing straps - 87884A/49

- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 F07 = FR 2420-965
Disposable tampon or towel - 56316B/31
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 = FR 2420-966
Mfg. absorbent pad for sanitary towel, disposable napkin, etc. - 69952B/39
- COLG 27.03.78 COLGATE PALMOLIVE CO A96 D22 = FR 2420-967
Absorbent pad for sanitary towel, disposable napkin, etc. - 69951B/39
- COLG 19.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25) = J5 4154-536
Transparent gel dentifrice of specified compsn. - 71735B/40
- COLG 19.05.78 COLGATE PALMOLIVE CO D21 E37 (E24) = J5 4154-537
Dentifrice of specified compsn. contg. fluoride and colourant - 71736B/40
- COLG 19.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25) = SW 7903-381
Transparent gel dentifrice of specified compsn. - 71735B/40
- COLG 19.05.78 COLGATE PALMOLIVE CO D21 E37 (E24) = SW 7903-848
Dentifrice of specified compsn. contg. fluoride and colourant - 71736B/40
- COLG 25.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25 E33) = SW 7902-993
Dentifrice paste compsn. contg. calcium carbonate - 71767B/40
- COLG 25.05.78 COLGATE PALMOLIVE CO D25 E19 F06 = SW 7904-249
Liq. bleach and fabric softening compsn. - 68037B/37
- COLG 25.05.78 COLGATE PALMOLIVE CO A84 D25 E16 F06 (A25 E13) = SW 7904-296
Polyurethane foam dispenser - 71792B/40
- COMP 10.10.73 SAINT-GOBAIN INDUSTRIES D22 F04 L01 = HU T017-466
Mineral fibre panel mfg plant with wet scrubber - 27483W/17
- CONN- 17.05.76 CONN CHEM LTD D25 E34 #US 4182-683
Agglomerated dishwashing detergent prepn. - 49069B/27
- * CORP 12.09.77 CPC INTERNATIONAL INC C03 D13 *US 4181-534
Clean pentosan enriched pericarp prodn. - 05041C/03
- * CORP 11.05.78 CPC INTERNATIONAL INC C03 D13 *US 4181-748
Wet and dry milling of corn kernels - 05141C/03
- COUL/ 28.03.78 COULTHARD J L A97 D15 = FR 2421-146
Biological filter substrate - 72267B/40
- * CRGI 04.01.74 CARGILL INC C03 D13 *US 4182-755
Feed for self feeding animals and poultry - 05357C/03
- * CSPK- 25.05.78 CSP KK D13 (D16) *J5 4154-571
Food seasoning and preserving agent - 04478C/03

- * DAIL 24.05.78 DAICEL KK D22 E17 (E33) *J5 4154-528
Solid granular deodorant - 04466C/03
- * DAIL 24.05.78 DAICEL KK D22 E16 *J5 4154-529
Deodorant, used as granules or aq. soln. - 04467C/03
- * DAIR= 29.04.77 DAIRY IND RES INST D16 (D13) *SU -659-618
Bacteriophages killing thermophilic lactic flora streptococci - 04627C/03
- * DAIR= 31.06.77 DAIRY FND RES INST D13 *SU -660-651
Butter type product mfr. - 04729C/03
- DAND- 17.11.76 DANDY J CO D12 #CA 1068-545
Impregnating meat with tenderising liquid - 12704A/07
- DEGS 26.07.75 DEUTSCHE GOLD AND SILBER D25 E33 J04 M12 (J01) = CA 1068-669
Alkali zeolite prodn. in presence of sulphate ions - 07562Y/05
- DEGS 31.03.78 DEUTSCHE GOLD & SILBER D21 M26 = FR 2421-218
Low gold content alloy for baking on dental porcelain - 06146B/04
- * DELA/ 03.07.78 DELAVEYNE J A A D13 (D16) *EP ---6-821
Preserved mushroom prods. - 03935C/03
- DERO- 01.09.77 DEUT ROTEN KREUZES D15 = DS 2739-335
High purity sterile water production - 20194B/11
- DNIN 07.03.77 DAINIPPON INK CHEM KK A88 D15 J01 (A14) = J7 9043-223
Separation of oil from water by filtration - 77625A/43
- * DOHN/ 05.04.78 DOHNALEK R C03 D13 *CS 7802-214
Straw treatment with soda lye - *C/03
- * DOPP/ 28.03.78 DOPPLER R A97 D13 *FR 2420-924
Film linings for slit centrifugal casting moulds e.g. for chocolate - 03946C/03
- DORO 24.05.78 DORR OLIVER INC D15 J04 = DK 7902-126
Flow distributor for fluid bed reactor - 86324B/48
- * DOUC/ 14.06.78 DOUCHA J D16 K08 *CS 7803-886
Cultivation of algae for intense synthesis of radioactive saccharides - C/03
- DOUW 23.06.78 DOUWE EGBERTS KON D15 = DT 2923-854
Recovering ice crystals from aq. slurry - 00420C/01
- DOUW 23.06.78 DOUWE EGBERTS KON D15 = NL 7904-919
Recovering ice crystals from aq. slurry - 00420C/01
- DOWC 08.06.78 DOW CHEMICAL CO D15 E37 J04 M11 (J03) = GB 2025-060
Determin. of acid or basic cpds. in aq. soln. of salts - 91403B/51
- * DOWC 19.06.78 DOW CHEMICAL CO A12 D22 J01 *US 4182-849
Copolymers giving quat. prods. effective against microorganisms - 05397C/03
- DRAG- 26.06.78 DRAGOCO GERBERDING D23 E15 = DT 2827-957
2,2,3-tri:methyl-cyclopent-3-ene(s) - 02270C/02
- DRAG- 26.06.78 DRAGOCO GERBERDING D23 E15 = NL 7904-830
2,2,3-tri:methyl-cyclopent-3-ene(s) - 02270C/02
- DRAV- 12.03.76 DRAVA CORP D15 = CA 1068-833
Waste water clarification using vortex flow - 46752Y/26

DUCH/ 27.06.78 DUCHSTEIN S C03 D13 = DT 2924-416
Non-digestible expanded perlite granules as pig feed additive - 79135B/44

*DUNN/ 07.06.76 DUNNILL P B01 D16 *CA 1068-627
Enzymatic conversion of hydroxy-substd. steroid material - 03636C/03

DYNL 17.12.76 DYNAPOL A97 B07 D13 E22 (A96 D21) = US 4182-885
Red anthraquinone dyes - 30266A/17

DYNN 20.06.70 DYNAMIT NOBEL AG A96 B07 D13 (A11) = J7 9043-063
Pharm coating comps - 02098T/02

DYNN 08.09.77 DYNAMIT NOBEL AG B04 D16 = US 4182-904
Racemisation of optically active N-acyl-aminoacid(s) - 04131B/03

EAST 08.12.78 EASTMAN KODAK CO A23 D18 F01 = US 4181-640
Non-crystalline polyester fibres prodn. from terephthalic acid - 42517A/24

*EBAI 25.05.78 EBARA INFILCO KK A97 D15 E17 J01 *J5 4153-777
Sepn. of liq. from foams using permeable membrane - 04279C/03

*EBAI 25.05.78 EBARA INFILCO KK D15 J01 *J5 4153-778
Protein-contg. liq. treatment - 04280C/03

*EBAI 26.05.78 EBARA INFILCO KK A88 D15 *J5 4154-159
Treating domestic waste water - 04371C/03

*EBRI/ 12.06.78 EBRINGEROVA A A11 D25 *CS 7803-799
Sulpho-alkyl-polysaccharides prepn. - C/03

*ECOL- 12.07.74 ECOLOTROL INC D15 *US 4182-675
Waste water treatment process to remove bod - 05315C/03

EGER/ 29.03.78 EGER G D16 = FR 2420-914
Mono:karyons prodn. from di:karyotic Basidiomycetes strains - 71712B/40

ELLC- 12.02.76 ELLCO PROTEIN AB D13 = CS 7700-922
Savoury flavouring agents prodn. - 41784Y/24

ELLE/ 05.08.77 ELLENBERGER W C03 D13 = US 4181-651
Hydrolysing casein with aq. acid avoiding darkening - 87876A/49

ELPA 19.05.78 EL PASO PRODUCTS CO D13 E15 = NO 7901-672
2-Hydroxy-2-cyclopentene-1-one synthesis from glutarate di:ester - 71627B/39

*EMBU- 31.03.78 EMBUDEC D15 *FR 2421-145
Drinking water etc. disinfected with corona discharge negative ions - 03962C/03

*ESSO 22.06.78 ESSO FRANCAISE SA D15 *EP ---6-746
Detecting pollution in aq. effluent - 03906C/03

ESSO 22.06.78 ESSO FRANCAISE SA D15 = GB 2025-035
Detecting pollution in aq. effluent - 03906C/03

EURO- 27.06.78 EUROCOM EST A96 D22 = DT 2828-084
Joint immobilising bandage - 03836C/03

*EURO- 27.06.78 EUROCOM EST A96 D22 F07 *DT 2828-098
Composite splint for positioning patient's lower leg and ankle - 03692C/03

*EURO- 27.06.78 EUROCOM EST A96 D22 F07 *DT 2828-099
Surgical appliance for immobilising a joint - 03693C/03

*EURO- 27.06.78 EUROCOM ESTAB A96 D22 *EP ---6-607
Joint immobilising bandage - 03836C/03

*EXPE= 20.12.76 EXP METEOROLOG Y INS D15 J04 *SU -659-928
Impurity sampler for monitoring deep sea pollution - 04701C/03

FARB 24.06.75 BAYER AG A60 B02 C02 D13 (D22) = HU T017-501
Oxoimidazolidinyl carbonylamino substd. acetamido beta lactam prepn. - 03903Y/03

FARB 24.09.76 BAYER AG A88 D15 J01 (A23) = GB 1559-449
Semipermeable membranes comprising aromatic polyamide - 23336A/13

FARB 30.09.76 BAYER AG A26 D21 (A60 A96) = CS 7706-254
Crosslinking paste for organo-polysiloxane - 27121A/15

FARB 28.05.77 BAYER AG A25 D21 (A96) = US 4182-829
Prod. of polyurethane with vinyl gps. for dental impressions - 86157A/48

*FARB 27.06.78 BAYER AG D18 E21 F06 *DT 2828-132
Black tris:azo acid dyes of aromatic series - 03697C/03

FARH 28.05.76 HOECHST AG A88 D18 F04 (A17) = US 4182-350
Cigarette filter contg. polyolefin fibres - 88426Y/50

FARH 22.05.78 HOECHST AG D25 E36 = GB 2024-845
Granular compsn. used as detergent auxiliary - 85940B/48

FARH 22.05.78 HOECHST AG D25 E36 = J5 4153-807
Granular compsn. used as detergent auxiliary - 85940B/48

FARH 22.05.78 HOECHST AG D25 E36 = SW 7904-435
Granular compsn. used as detergent auxiliary - 85940B/48

*FARH 03.07.78 HOECHST AG A11 D12 (A35 A97) *EP ---6-601
Continuous mfr. of fibre-reinforced, cellulose hydrate-based hose - 03834C/03

FARM- 18.02.76 FAR-MAR-CO INC D15 = DS 2703-143
Gluten washing and dewatering - 75467X/40

*FENC/ 24.05.78 FENCLP D16 *CS 7803-378
Fixing of beer stream changer to tank - C/03

*FERM= 12.05.77 FERMENTATION PROD D16 F06 *SU -661-014
Thermophilic Bacillus diastaticus strain - 04902C/03

FIRM 29.01.74 FIRMENICH & CIE B03 C02 D23 E15 = J7 9043-061
Organoleptic oxygenated alicyclic derivs - 52777W/32

FIRM 31.05.76 FIRMENICH SA B05 D13 E15 = J7 9043-066
(2,6,6)-Trimethyl (3)-oxo cyclohex-(1)-ene carbaldehyde - 90478Y/51

FIRM 15.06.78 FIRMENICH SA B05 D13 E15 (B07) = GB 2024-600
Alpha-di:hydro-ionone used as aroma for foods and pharmaceuticals - 00240C/01

FLET- 30.06.78 W & R FLETCHER NZ L D12 = DT 2925-754
Method and apparatus for washing animal bungs - 02229C/02

*FMCC 06.06.77 FMC CORP D14 *US 4181-072
Continuous pressure cooking unit for particulate foods - 04987C/03

*FMCC 11.09.78 FMC CORP A88 D15 E12 *US 4181-702
Appts. for chlorination of water - 05116C/03

*FOOD= 22.08.74 FOOD MECH ENG RES D13 *SU -661-209
Egg white drying in inert bodies fluidised bed - 04956C/03

*FORM- 28.02.78 FORMAX INC D12 *US 4182-003
Patty moulding in reciprocating plate - 05191C/03

FRAN/ 07.04.77 FRANZ B C03 D15 (C04 D13) = CS 7802-255
Biological treatment of liquid manure - 76467A/43

*FRES- 01.07.78 DRE FRESSENIUS CHEM D13 *DT 2829-036
Liq. feed mixt. contg. protein and carbohydrate components - 03740C/03

*FRES- 01.07.78 DRE FRESSENIUS CHEM A96 D21 (A11) *DT 2829-037
Germicidal mouth- and throat-care compsns. - 03741C/03

FUJI 20.07.72 FUJISAWA PHARM KK B02 D16 = J7 9043-080
Antibiotics WS 3442 A,B,C,D and E - 04971V/03

FUJI 27.07.76 FUJISAWA PHARM KK B05 D16 = US 4182-758
Hydroxyamino-alk(en)yl-phosphonic acid (derivs.) - 84781Y/48

FUJI- 28.03.78 FUJIYA CONFECTION D11 = FR 2420-923
Instant yoghurt prepn. - 75536B/42

*FUJI/ 24.05.78 FUJINAKA Y D13 *J5 4154-556
Processing wakame seaweed - 04475C/03

*GARC/ 08.06.78 GARCIA R I D15 E36 K08 *WP 8000-009
Ozone production in chemo-nuclear generator - 05441C/03

GCSH- 15.12.75 G-C SHIKA KOGY KK A96 D21 E14 (A14 A25) = GB 1559-308
Resinous compsns. for repair or construction of dental crowns - 50642Y/29

GENA 03.09.74 GAF CORP D25 E16 = CA 1068-720
Tert amide amphoteric surface active agent - 20637X/11

*GENO 17.05.78 GENERAL FOODS CORP A97 D13 (A11) *US 4182-778
Microencapsulated malleable nutrient prods - 05363C/03

*GETP- 31.03.78 GETPLAST REP D12 *FR 2420-926
Food moulding machine partic. for beefburger etc. - 03948C/03

*GILL 31.01.77 GILLETTE CO A96 D21 E24 (A26) *US 4182-612
Cationic polymeric dyes - 05284C/03

GIVA 12.02.75 GIVAUDAN L & CIE SA D23 E15 = US 4181-631
Alpha-hydroxyethyl-4-tert- alkyl-cyclohexane perfume components - 57185A/32

GIVA 11.08.77 GIVAUDAN CORP D13 E13 = US 4181-666
4-Cyano-tetra:hydro-furan-3-one(s) and 4-hydroxy derivs. - 14604B/08

GIVA 25.11.77 GIVAUDAN CORP D23 E14 = US 4182-730
Substd. di:hydro-cinnamaldehyde perfume prepn. - 42697B/23

*GIVA 28.06.78 GIVAUDAN L & CIE SA D23 E17 (D13 D21 D25) *EP ---6-616
Methyl:butenyl tiglic acid ester - 03843C/03

*GOCI= 24.02.78 GORKI CIVIL ENG D15 E36 *SU -659-841
Gas dryer for ozonisation units - 04662C/03

GOLD 03.07.78 GOLDSCHMIDT TH AG B03 C02 D22 = GB 2024-805
1,3-Di-n-decyl-2-methyl-imidazolium chloride and bromide - 27893B/15

*GONZ/ 28.10.74 DEL SER GONZALEZ C D13 *US 4182-233
Appts. for stuffing olive with pimento strip - 05224C/03

*GOUP/ 04.04.77 GOUPIL J J D13 *FR 2420-970
Anticariogenic chewing gum compsn. - 03951C/03

*GOWA= 24.02.78 GORKI WATER TRANSP D15 E36 *SU -659-841
Gas dryer for ozonisation units - 04662C/03

*GPOL/ 27.05.74 GEOR POLY D14 *SU -661-007
Fruit e.g. grape juice extractor - 04895C/03

*GPOL/ 10.02.77 GEOR POLY D16 *SU -661-008
Wine and other materials blender - 04896C/03

GREA- 23.06.75 GREAT WESTERN SUGAR D17 = CA 1068-474
Precipitation of solids, esp. sugar, from soln. - 03231Y/02

*GREB/ 25.05.77 GREBENNIKOV N I D13 *SU -660-644
Butter granule former - 04726C/03

*GROW/ 03.01.78 GROWE G H D13 *US 4181-745
Decorating shells of eggs - 05138C/03

GUIL/ 28.03.78 GUILLOT J A96 B07 D21 = FR 2420-979
Mouldable cutaneous electrode - 72191B/40

*GYOG 07.07.76 GYOGYSZERKUTATO INT B05 D22 E14 *HU T017-484
1,6-Bis-Chloro:phenyl:biguanido-hexane prodn. - C/03

*HADJ/ 24.06.78 HADJERIL D15 *DT 2830-705
Sea water desalination - 03751C/03

*HANU/ 14.06.77 HANULIK L D15 J01 *CS 7703-916
Oil products mechanical separator - C/03

HARD/

- *HARD/ 17.05.78 HARDY T G D22 *US 4182-339
Intestine ends surgical joining sleeve - 05247C/03
- *HARI/ 27.02.78 HARING S S JR A88 D12 *US 4182-004
Thermoplastics meat hook - 05192C/03
- HARV- 08.06.78 HARVARD COLLEGE B04 D16 = EP ---6-694
Protein prodn. from bacterium contg. recombinated gene - 05454C/03
- *HARV- 08.06.78 HARVARD COLLEGE B04 D16 *WP 8000-030
Protein prodn. from bacterium contg. recombinated gene - 05454C/03
- HASH/ 17.05.76 HASHIMOTO S D15 = J5 2139-269
Control of activated sludge process for waste water treatment - 04513C/03
- *HASH/ 17.05.76 SHO HASHIMOTO D15 *J7 9042-748
Control of activated sludge process for waste water treatment - 04513C/03
- *HEAT= 06.12.77 HEAT MASS TRANSF D14 J08 (D17) *SU -659-861
Free-flowing material dryer - 04675C/03
- HEIN/ 29.04.78 HEIN L D17 = GB 2024-639
Continuous sugar centrifuge - 82709B/46
- HENK 20.06.73 HENKEL & CIE GMBH D25 = J7 9042-006
Solid pourable washing and cleaning agents - 76862V/44
- HENK 26.07.75 HENKEL KG AUF AKTIEN D25 E33 J04 M12 (J01) = CA 1068-669
Alkali zeolite prodn. in presence of sulphate ions - 07562Y/05
- HENK 23.07.76 HENKEL KG AUF AKTIEN B05 C03 D13 (B04 C01 D16) = CS 7704-874
Growth promoting animal feed - 08537A/05
- HENK 20.05.78 HENKEL KG AUF AKTIEN D18 E17 (E33) = J5 4154-501
Replacing waste water polluting auxiliaries in leather mfr. - 86279B/48
- *HENK 23.06.78 HENKEL CORP D21 E19 *EP ---6-741
Self-emulsifying cosmetic base - 03903C/03
- *HENK 03.07.78 HENKEL KG AUF AKTIEN D15 E33 *EP ---6-618
Aluminosilicate granulate water softener prepn. - 03845C/03
- HENZ 18.04.75 HEINZ H J LTD A92 D16 = HU T017-436
Sterilisable bag for prodn of mushroom spawn - 79411X/43
- *HERV/ 31.03.78 HERVEY D13 *FR 2421-114
Cheese mould adaptor enabling full moulds to be stacked - 03959C/03
- *HETO 19.05.77 HETEROORG CPDS AS USSR D13 *SU -660-652
Fruit jelly, marmalade etc. prodn. - 04730C/03
- *HITG 23.05.78 BABCOCK-HITACHI KK D15 *J5 4152-664
Multistage evaporator for producing fresh water from sea water - 04173C/03
- *HITG 23.05.78 BABCOCK-HITACHI KK D15 *J5 4152-665
Multistage evaporator for producing fresh water from sea water - 04174C/03
- *HITG 23.05.78 BABCOCK-HITACHI KK D15 *J5 4152-666
Multistage evaporator for fresh water prodn. - 04175C/03
- *HITK 25.05.78 HITACHI METAL KK D15 E31 *J5 4154-155
Incineration of chromium-contg. sludge from aq. waste - 04368C/03
- HOBA- 05.05.76 HOBART CORP D15 = GB 1559-253
Waste material handling system - 48616Y/27
- HOFF 24.02.70 HOFFMANN-LA ROCHE AG B02 D16 = J7 9043-079
Iodine prodn by bacterial fermentation - 59310S/37
- HOFF 20.04.78 HOFFMANN-LA ROCHE INC B03 C02 D13 (D22) = US 4181-573
Antibiotic obtd. by culturing Streptomyces strain - 10289A/06
- HOKA 21.04.77 HOKKAIDO SUGAR KK D17 E13 = US 4182-634
Maltose liq. purificn. - 92127A/51
- *HOLE/ 01.03.76 HOLECL D12 *US 4182-002
Meat tenderiser injection syringe - 05190C/03
- *IACO/ 22.11.78 IACONELLI W B D13 *US T990-005
Electrodialysis of liq. whey - 04964C/03
- ICIL 19.05.78 IMPERIAL CHEM INDS LTD C03 D15 (C04 D13) = J5 4154-162
Nitrogen-rich solids recovery from dairy waste waters - 86219B/48
- INFL 05.02.69 INT FLAVORS & FRAGR INC D13 E13 = NL 7905-420
Furan derivs useful as meat, roast meat and roasted - 55372R/31
- *INMI= 30.09.76 IND MICROORG GENETI B05 D16 E16 *SU -661-013
Corynebacterium glutamicum bacterial strain - 04901C/03
- INMR 04.06.76 INST MERIEUX A97 B04 C03 D16 = US 4182-751
Immunostimulant compsn. prepn. - 86595Y/49
- INPL 17.05.78 INT PLAYTEX CORP A11 D22 (A96) = NO 7901-534
Particulate water-insoluble CMC prepn. - 84161B/47
- INSP 08.06.78 INST PASTEUR D16 = BE -876-881
Plasmid(s) contg. DNA fragment attached to operon - 91414B/51
- INTE- 21.11.74 INTERCHEMIE AG B05 C01 D13 = CA 1068-536
Animal feed additive contg cupric methionate - 16908X/10
- *JANO/ 14.02.78 JANOTA J D15 *CS 7800-936
Aq. effluent purificn. appts. - C/03
- *JAPC 23.05.78 NIPPON SHOKUBAI KAGAKU A96 D22 (A14) *J5 4152-392
Prodn. of absorbent material for water or body fluids - 04127C/03
- *JILE/ 08.02.77 JILEK R D16 M25 *CS 7700-828
Uranium recovery from carbonate rock - C/03
- *JOFF/ 02.08.78 JOFFE E J A88 D12 *US 4180-889
Hamburger patty mould - 04969C/03
- JOHJ 17.06.77 JOHNSON & JOHNSON A96 D25 E16 = US 4181-634
Mild cosmetic detergent compsn. esp. for shampoos and baths - 91499A/51
- JOHJ 29.03.78 JOHNSON & JOHNSON A94 D22 F04 (A96) #FR 2421-232
Water absorbent and retentive matted fibre material - 75430B/42
- JOHJ 21.06.78 JOHNSON & JOHNSON A94 D22 F07 (A96) = DT 2925-090
One way absorbent laminate - 00406C/01
- JOHJ 21.06.78 JOHNSON & JOHNSON A94 D22 F07 (A96) = NL 7904-832
One way absorbent laminate - 00406C/01
- JOHJ 29.06.78 JOHNSON & JOHNSON A96 D22 = EP ---6-714
Non-occlusive, non-adherent wound dressing - 04990C/03
- *JOHJ 29.06.78 JOHNSON & JOHNSON A96 D22 *US 4181-127
Non-occlusive, non-adherent wound dressing - 04990C/03
- *JOHN- 10.09.76 JOHNSTON LAB INC D16 K08 *US 4182-656
Detection of biologically active agents - 05303C/03
- KABI 05.12.74 KABI AB B04 D16 = DS 2552-570
Polypeptide chromogenic substrates for serine proteases - 31921X/18
- *KADL/ 10.03.78 KADLECK D13 *CS 7801-530
Fermentation processing of acid whey - C/03
- *KALL 03.07.78 KALLE AG A11 D12 (A35 A97) *EP ---6-601
Continuous mfr. of fibre-reinforced, cellulose hydrate-based hose - 03834C/03
- *KARE/ 02.03.78 KARELV D16 *CS 7801-327
Beer prodn. using tannin in mashing stage - C/03
- *KATS/ 26.05.78 KATSUKAWA H A81 D15 J01 M12 *J5 4154-158
Treatment of heavy metals-contg. effluent - 04370C/03
- *KAWI 24.05.78 KAWASAKI STEEL KK D15 E36 M24 *J5 4154-157
Treatment of effluent contg. thiosulphate, etc. - 04369C/03
- *KAYI/ 27.07.77 KAY I A92 D21 *US 4182-447
Capsule for storing and mixing reactive ingredients - 05269C/03
- *KEIT/ 13.02.78 KEITH MFG D14 *US 4182-604
Appts. for forming loose hay into blocks - 05281C/03
- KEND 03.07.78 KENDALL CO A96 D22 F04 (A11 A23) = GB 2024-709
Light, absorbent, disposable surgical dressing - 80855B/45
- KERJ 28.06.78 KERNFORSCHUNGS JULICH B04 D16 = DT 2828-232
Determin. of dielectric breakdown and size - 02312C/02
- *KIFO= 05.04.76 KIEV FOOD IND D17 J03 *SU -659-621
Sugar prodn. diffusion juice purificn. - 04630C/03
- *KIFO= 01.12.77 KIEV FOOD IND TECHN D16 *SU -661-003
Microorganisms culture control system - 04891C/03
- KIHA- 31.03.78 KIHARA SANGYO KK A83 C03 D22 F07 = FR 2420-933
Multilayer inner sole for shoes - 75572B/42
- KIKA- 11.03.77 KIKAGAKU KENKYUSHO C03 D16 = US 4181-714
Fungicide contg. Bacileucine-A or -B or its complex - 80900A/45
- *KIKU- 25.05.78 KIKUMASAMUNE SHUZO D16 *J5 4154-549
Dissolving alpha-lysed rice used in brewing sake - 04473C/03
- *KIMB 27.09.76 KIMBERLY CLARK CORP D22 *US 4182-334
Perineal shield and discharge containment device - 05244C/03
- KIMB 04.11.77 KIMBERLY CLARK CORP D18 = US 4182-349
Reconstituted tobacco mfr. from whole plants - 37435B/20
- *KIME= 21.04.72 KIEV MEDICINE INST A97 D16 (A14) *SU -659-619
Dense media for cultivation of microorganisms - 04628C/03
- KIMI- 21.12.70 KIMITSU KAGAKU KENK B04 C03 D16 = J7 9042-909
Fucoidin and alginate compsn - 60436V/34
- KING/ 10.08.76 KING A S D14 J01 = US 4181-591
Suspended solids removal from e.g. dairy fluid - 72456A/40
- *KISE/ 22.08.77 KISELEVA L A A25 D22 *SU -660-977
Prodn. of high water solubility para-formaldehyde - 04868C/03
- *KLEI/ 07.07.78 KLEIN M A97 D15 F09 J01 (A13 A17 A25 A88) *GB 2024-886
Absorption and filtration mat for waste liquids - 04079C/03
- *KOKE 26.05.78 KOKEN KK A96 D21 *J5 4154-683
Cosmetic foundation cream compsn. - 04490C/03
- KONN 03.07.74 GIST-BROCADES NV B05 C02 D13 = J7 9043-057
Fungicidal compsn contg a polyene antibiotic - 05872X/04
- *KONZ- 19.11.77 KONZERV-PAPRIKAIPAR D13 *HU T017-550
Determining the degree of contamination of foodstuffs - C/03
- *KORH/ 22.06.78 KORHONEN K J D12 *DT 2925-325
Meat holding tool for carving operations - 03796C/03
- *KOSF/ 18.07.78 KOSTALOVA N D13 *CS 7804-780
Vegetables dicing appts. - C/03
- KOZE- 31.03.78 VU KOZEDELNY D18 = FR 2421-215
Thermal treatment of leather - 73808B/41
- *KRIE/ 21.06.78 KRIEGER H D15 *DT 2827-116
Granulation of sewage sludge - 03659C/03
- *KRIV/ 14.05.75 KRIVOPISHIN I P D22 J01 *SU -659-842
Ventilation air purification by scrubbing - 04663C/03
- *KRKO/ 28.07.78 KRKOSKOVA B D13 *CS 7805-004
Butter freezing - C/03
- *KRUG- 22.06.78 KRUGER I A/S D15 *DT 2925-055
Heat recovery system on effluent discharge - 03782C/03
- *KRYM= 15.06.77 KRYMSK WINE-MAKING D16 *SU -661-009
Wine or juice blender control circuit - 04897C/03
- *KSWI= 04.01.76 KISH WINE-MAKING D16 *SU -661-011
Liquid prod. e.g. wine sulphitation unit - 04899C/03

- KUCK/ 29.03.78 KUCKENS A D13 = FR 2420-950
Domestic prepn. of coffee infusion from ground coffee - 56329B/31
- *KUCZ/ 30.03.78 KUCZEWSKI DE PORAY A81 C05 D16 F09 (D13) *FR 2421-039
Conditioning fragmented cellulosic materials esp. wood - 03957C/03
- *KULK/ 29.08.77 KULKARNI R K A96 D22 *US 4181-983
Assimilable porous hydrophilic implantable prosthesis - 05187C/03
- KUMA/ 22.10.77 KUMAK D15 = J7 9042-750
Water improving agent for aeration type purifying vessel outflow - 47720B/26
- KURE 31.03.78 KUREHA KAGAKA KOGYO A83 C03 D22 F07 = FR 2420-933
Multilayer inner sole for shoes - 75572B/42
- KURS 31.08.76 KURARAY KK A96 D21 E19 = US 4182-035
Adhesives for teeth and bone - 18156A/10
- KURS 25.05.78 KURARAY KK A88 D15 J01 (A14) = GB 2024-827
Microporous PVA (ultra) filtration membrane - 00179C/01
- KURS 25.05.78 KURARAY KK A88 D15 J01 (A14) = J5 4153-779
Microporous PVA (ultra) filtration membrane - 00179C/01
- *KYOG 23.05.78 KYOWA LEATHER CLOTH A97 D23 *J5 4154-527
Granular, fragrance-generating compsn. - 04465C/03
- KYOT- 17.05.75 KYOTO DAIICHI KAGAK D16 = DS 2621-015
Double mixing flask for enzyme activity observation - 90941X/49
- KYOW 19.11.76 KYOWA HAKKO KOGYO B04 D16 = J7 9043-075
Choline oxidase enzyme prodn. - 38838A/22
- LAFO 07.10.75 LAB LAFON L A97 B07 D13 E24 = GB 1559-275
Prepn. of stable red dyestuff from beetroot - 49152Y/28
- *LAKS/ 17.05.78 LAKS S A82 D25 E19 G02 *US 4182-686
Non-wax cleaning and polishing compsn. for plastic surfaces - 05321C/03
- LEAN= 21.08.75 LENGD ANTIBIOTICS B04 C03 D16 #HU T017-505
Recovering the antimycotic mycoheptin from mycelia - 20169Y/12
- *LEAN= 06.05.76 LENGD ANTIBIOTIC A88 D16 (A11) *SU -659-612
Prodn. of beta-galactosidase for medical purposes - 04622C/03
- *LEFO= 09.03.77 LENGD FOOD IND RES D16 E17 *SU -659-609
Food grade citric acid microbiological prodn - 04619C/03
- LEIF- 07.10.76 LEIFHEIT INT G GMBH D14 = US 4181-163
Domestic mincing machine with flat cover for projecting outlet - 10347A/06
- LEIT 17.01.75 LEITZ E GMBH A96 D21 L02 = J7 9042-384
Composite prosthetic matl. - 59928X/32
- LEPE 05.03.75 GRUPPO LEPETIT SPA B04 D16 = CS 7601-393
Teichomycins A, and A2 prepn. from Actinoplanes teichomyceticus - 72165X/39
- LICL- 31.03.78 LIC LANDSTINGEN INKOP A96 D21 (D22) = FR 2420-971
Disinfecting skin ointment based on alcohol - 14251B/08
- *LICN 07.07.78 LICENTIA PATENT GMBH D15 *DT 2829-903
Sea water desalination - 03750C/03
- LIOC 13.11.76 LION HAMIGAKI KK A96 D21 (A14) = US 4180-913
Coloured, teeth filling compsn. - 50248A/28
- *LIOY 23.05.78 LION FAT & OIL KK A96 D21 E17 (A11) *J5 4153-808
Shampoo stable at low temps. - 04294C/03
- *LKBP 29.06.78 LKB PRODUKTER AB B04 D16 *DT 2828-658
Creatine kinase sub-unit M determ. by emission photometry - 03721C/03
- *LOHR- 28.06.78 LOHR SA C03 D13 *EP ---6-803
Fractionation process and machinery for green plants e.g. lucerne - 03928C/03
- LOMS 26.05.78 LAB OM SA B04 D16 = J5 4154-509
Prevention and treatment of respiratory tract infections - 75331B/42
- *LOTT 20.05.78 LOTTE KK D13 *J5 4154-569
Chewing gum for sportsman - 04477C/03
- *LUKE/ 31.03.78 LUKES E A11 D12 *CS 7802-063
Fine collagen casing prodn. - C/03
- LUWA 30.03.77 LUWA AG D15 J01 (J08) = US 4181-608
Condensing vapours from dryer - 74665A/42
- *MANN/ 20.06.78 MANNCHEN W D15 *DT 2826-922
Municipal sewage treatment - 03652C/03
- *MARG/ 27.06.78 MARGERIN R D15 *DT 2925-084
Oxygen treatment of contaminated surface water - 03785C/03
- *MASI 28.11.75 MASSACHUSETTS INST TECH B04 D16 *US 4181-128
Inactivation of microorganisms and cells, esp. Herpes virus - 04991C/03
- *MATE/ 20.06.78 MATEJKA Z D15 *CS 7804-068
Nitrates elimination from potable water - C/03
- MATR/ 27.07.77 MATRULLO C J D22 F07 = US 4182-335
Undergarment soiling prevention anal filter - 10451B/06
- *MATU 19.05.78 MATSUSHITA ELEC IND KK A81 D22 J01 *J5 4152-340
Ventilating fan including gas removing agent - 04120C/03
- *MATU 19.05.78 MATSUSHITA ELEC IND KK D22 J01 *J5 4152-374
Lamp with air cleaning unit - 04125C/03
- MAYR 10.03.78 MARYLAND CUP CORP D13 = J5 4152-586
Baked ice cream cone with conforming sanitary jacket - 68448B/38
- MCCO/ 20.04.78 MCCOLLESTER D L B04 D16 = J5 4154-506
Antitumour vaccine - 86122A/48
- *MECS- 04.02.77 MECSEKI ERCBANYASZA D15 J01 *HU T017-448
Countercurrent contact of granules and liquids - C/03
- *MEDI= 04.07.77 MEDICAL PARASITOLOG C03 D16 *SU -660-638
Cultivating malaria mosquito larvae for experimental purposes - 04725C/03
- *MEGG 21.06.78 MEGGLE MILCHIND GMB D13 *DT 2923-788
High protein cheese prodn. - 03767C/03
- MEIJ 29.12.75 MEIJI SEIKA KAISHA B04 C03 D16 = US 4181-715
Antibacterial and antifungal antibiotic SF-1540 - 49100Y/28
- MERI 13.03.70 MERCK & CO INC B02 D16 = CS 7101-682
7-methoxy-cephalosporins - 61445S/38
- MERI 13.03.70 MERCK & CO INC B02 D16 = CS 7805-062
7-methoxy-cephalosporins - 61445S/38
- MERI 19.12.74 MERCK & CO INC A96 B02 C02 D16 (A91 D22) = HU T017-495
Purification of antibiotic thienamycin - 53458X/28
- MERI 21.11.75 MERCK & CO INC B02 C02 D16 (D13 D22) = HU T017-496
(N)-Acetyl-thienamycin broad spectrum antibiotic - 34505Y/20
- MERI 24.11.75 MERCK & CO INC B03 C02 D13 G02 (D16 D22) = HU T017-497
Antibiotics deacetyl 890A1 and 890A3 - 34507Y/20
- *MERK/ 23.12.74 MERKL G G A97 D24 E12 (D25) *US 4182-685
Prepn. of metal-contg. soaps - 05320C/03
- MESG 21.06.78 MESSER GRIESHEIM GMBH D15 = NL 7904-607
Treating water for drinking using ozone and oxygen - 77237B/43
- *METE- 25.05.78 METERU KK A94 D22 (A96) *J5 4153-886
Water-absorbing sheets used as diapers etc. - 04343C/03
- METG 08.04.71 METALLGESELLSCHAFT AG D15 H04 = DS 2117-234
Sulphur removal - 69949T/44
- MILE 27.03.78 MILES LABORATORIES INC A91 D16 (A26) = FR 2421-213
Preparing aggregate of bacterial cells esp. streptomyces olivaceus - 54547B/30
- MILE 22.05.78 MILES LABORATORIES INC D16 (D13) = DK 7900-953
Reducing thermal stability of microbial Mucor rennin - 87909B/49
- MILE 22.05.78 MILES LABORATORIES INC D16 (D13) = GB 2024-828
Reducing thermal stability of microbial Mucor rennin - 87909B/49
- MILE 22.06.78 MILES LABORATORIES INC B04 D16 J04 = NL 7904-879
Specific binding assay esp. for thyroid hormones - 77212B/43
- MITK 27.01.75 MITSUI TOATSU CHEM INC D15 J01 = J7 9042-675
Purifn of oil contg waste water - 69456X/37
- MITO 30.03.74 MITSUBISHI HEAVY IND KK D15 = J5 0129-479
Biological nitrogen removal from polluted water - 04538C/03
- *MITO 30.03.74 MITSUBISHI HEAVY IND KK D15 *J7 9043-303
Biological nitrogen removal from polluted water - 04538C/03
- MITO 04.04.74 MITSUBISHI HEAVY IND KK D15 = J5 0131-353
Nitrification by activated sludge process - 04539C/03
- *MITO 04.04.74 MITSUBISHI HEAVY IND KK D15 *J7 9043-304
Nitrification by activated sludge process - 04539C/03
- *MITO 22.05.78 MITSUBISHI HEAVY IND KK D16 E17 H09 *J5 4154-597
Methane-producing fermentation of organic waste - 04481C/03
- MITR 13.04.77 MITSUBISHI RAYON KK A88 D15 (A17) = US 4181-604
Biological waste water purification - 78617A/44
- MITU 21.12.76 MITSUBISHI CHEM IND KK D17 J04 = US 4182-633
Simulated moving bed operation - 50030A/28
- MITU 30.04.77 MITSUBISHI CHEM IND KK D15 = J7 9042-749
Waste water treatment using acclimatised activated sludge - 02745B/02
- *MOBI 20.03.68 MOBIL OIL CORP A97 D25 E13 H07 (A95 H06) *US 4182-715
Amine derivs. of gamma-alkyl-gamma-butyrolactone(s) - 05335C/03
- MOCH/ 19.02.71 MOCHIDA N B07 D22 = J7 9043-053
Disinfecting/skin protecting liquid - 66098T/41
- *MOGE= 22.07.77 MOSC GELATIN WKS C03 D12 *SU -660-654
Animal feed prodn. from meat processing waste - 04732C/03
- *MOGI= 12.12.77 MOGILEV TECH D14 J01 *SU -659-879
Centrifugal film evaporator - 04692C/03
- *MOGU 15.11.77 MOSCOW GUBKIN PETROCHEM A17 D25 E17 *SU -660-980
Ethylene oligomer intermediate for detergents etc. mfr. - 04870C/03
- *MONS 17.05.74 MONSANTO CO D25 E19 *US 4182-684
Machine dishwashing compsns. - 05319C/03
- *MONS 17.05.74 MONSANTO CO A97 D25 E19 *US 4182-905
Aromatic poly:carboxylic acids, salts and ester cpds. - 05416C/03
- *MONS 29.10.76 MONSANTO CO D25 E19 *US 4182-908
Ketal poly:carboxylate cpds. prepn. - 05418C/03
- *MONS 25.10.77 MONSANTO CO D25 E13 (D15 E12) *US 4182-718
1,3-dioxan-poly:carboxylic acid salts - 05337C/03
- *MONS 26.09.78 MONSANTO CO D15 E19 (D25) *US 4182-900
Poly:ether-di:carboxylic acid salts - 05414C/03
- MOOR/ 28.04.71 MOORE A G D18 = CS 7200-165
Tobacco treatment process - 48509T/30
- *MORA/ 12.10.77 MORAK M A97 D25 *CS 7706-608
Mixed surfactant - C/03
- *MORO/ 29.12.76 MOROZOV V V D15 *SU -659-929
Reservoir water quality control appts. - 04702C/03
- *MOSU 09.02.77 MOSCOW LOMONOSOV UNIV A97 B05 D16 E16 (A14) *SU -659-611
L-aspartic acid prodn. for use in food or medicine - 04621C/03
- *MOVE= 22.07.77 MOSC VETERINARY ACA C03 D12 *SU -660-654
Animal feed prodn. from meat processing waste - 04732C/03

MRSC

- MRSC 17.06.75 MARS LTD C03 D13 = CA 1068-537
Storing stable foodstuff contg. protein pieces - 00011Y/01
- MUAG 24.10.77 HUNGARIA MUANY AGFELDOL A97 D15 #CS 7706-912
Packing unit for process column or sewage purification - 82239A/46
- *MUDD/ 21.06.78 MUDDER H D12 *DT 2827-158
Sausage skin hose clamp - 03660C/03
- MULL/ 20.06.78 MULLER A D16 = NL 7904-793
Extracting hops with carbon dioxide under specified conditions - 77230B/43
- *MULL/ 03.07.78 MULLER H D16 *EP ---6-671
Living microorganism preservation - 03868C/03
- MUND 12.05.71 MUNDIPHARMA AG B07 D22 E17 #DS 2123-551
Solid iodine-contg germicidal detergents - 75039S/47
- MUNK/ 22.03.77 MUNK W G D13 = DS 2712-560
Dried fruit esp. apple chips prepn. by freeze-drying - 70972A/40
- MUZZ/ 14.06.78 MUZZARELLI R A11 B04 D16 F06 (B07 D13 D22 F09) = BE -876-990
Chitosan-glucan complex from fungal mycelium - 00225C/01
- NASL/ 10.11.75 NASLUND L A A97 B04 D16 H01 (A11 D13) = US 4182-860
Modified polysaccharide bio:polymers for flooding oil-bearing strata - 86400A/48
- NATR 06.09.77 NATIONAL RES DEV CORP C03 D13 = NO 7803-047
Treating fish to produce auto-immune response - 22497B/12
- *NCAU= 03.10.77 N CAUCASUS VET RES B04 C03 D16 *SU -661-017
Prophylactic anti-chlamydiosis vaccines for farm animals and poultry - 04905C/03
- NEST 05.03.74 SOC PROD NESTLE SA D13 E16 (E14) = SU -660-567
Treatment of foodstuff poor in lysine by addn. of L-lysine - 50941W/31
- NEST 31.07.75 SOC PROD NESTLE SA D13 #GB 1559-064
Butter prepn. by mixing fat and viscous aq. phase - 45843A/26
- NICA 08.04.74 NIPPON CARBIDE KOGY KK A91 D15 = J7 9043-305
Removing acid dyes from waste liquids - 69330W/42
- *NIDE 22.05.78 NIPPON ELECTRIC KK D15 E31 M25 (E36) *J5 4152-613
Metals recovery from waste water - 04148C/03
- *NIDE 26.05.78 NIPPON ELECTRIC KK D15 *J5 4154-160
Treatment of heavy metals-contg. waste water - 04372C/03
- *NIDE 26.05.78 NIPPON ELECTRIC KK D15 *J5 4154-161
Removing heavy metal ions from waste water - 04373C/03
- NIOC 29.06.73 NIPPON OIL KK C03 D22 E19 H07 #US 4182-765
Quat ammonium fungicides - 07651V/05
- NIRA 11.06.74 UNITIKA KK A41 D15 E13 = J5 0157-386
Concn. of waste water obtd. from purificn. of caprolactam - 04525C/03
- *NIRA 11.06.74 UNITIKA KK A41 D15 E13 *J7 9042-992
Concn. of waste water obtd. from purificn. of caprolactam - 04525C/03
- *NIRA 22.05.78 UNITIKA KK A96 B04 D16 *J5 4154-595
Carrier for fixing physiologically active substance - 04480C/03
- *NIRA 24.05.78 UNITIKA KK D22 J01 *J5 4152-687
Absorbent for removal of obnoxious fumes - 04190C/03
- *NIRO 27.02.78 NIRO ATOMIZER A/S D22 E12 *US 4182-871
Stable, free-flowing sodium di:chloro-isocyanurate - 05405C/03
- NISH- 21.06.74 NIPPON SHOJI KK B07 D13 J04 = J5 1002-056
Mfg. dry powder from viscous liq. - 04505C/03
- *NISH- 21.06.74 NIPPON SHOJI KK B07 D13 J04 *J7 9042-357
Mfg. dry powder from viscous liq. - 04505C/03
- *NISH/ 24.05.78 NISHIKAWA J D22 *J5 4154-530
Quick-acting, non-toxic deodorant prodn. for drains etc. - 04468C/03
- NISS 21.01.75 NISSHIN FLOUR MILL KK D13 (D12) = CA 1068-538
Artificial meat prodn - 69443X/37
- NISS 03.06.75 NISSHIN FLOUR MILL KK D13 E17 = CA 1068-539
Bleached, plant protein foodstuff with good texture - 11754Y/07
- NITL 04.03.77 NITTO ELECTRIC IND KK A97 C03 D22 F01 (A14) = US 4181-786
Bactericidal and fungicidal materials contg. metal ions - 69189A/39
- NITT 29.03.78 NITTO CHEM IND KK A41 D16 E16 = FR 2421-212
(Meth)acrylamide prepn. by (meth)acrylonitrile hydrolysis - 75565B/42
- *NIUS 17.01.78 NIPPON SUISEN KK D12 *US 4181-739
Processing of loose Atlantic herring roe - 05135C/03
- NMHB 18.05.78 NORDISCH MASCH R BAADER D12 #NO 7801-735
Fish processing machine conveyor - 59939B/33
- *NOGA- 20.05.78 NOGAWA CHEMICAL KK A81 D18 G03 (A14) *J5 4154-502
Repairing leather prods. - 04453C/03
- *NORD/ 21.06.78 NORDFLEISCH AG D12 *NL 7904-841
Mechanical application of classification stamp to slaughtered carcass - 04556C/03
- *NOVO 04.07.78 NOVO INDUSTRIAS D16 (D25) *EP ---6-638
Protease concentrate for use in washing compsns. - 03854C/03
- NOVO 03.07.79 NOVO INDUSTRIAS D16 (D25) = GB 2024-830
Protease concentrate for use in washing compsns. - 03854C/03
- *ODVI= 22.03.73 ODESS VIROLOGY B04 C03 D16 *SU -661-018
Antigenically modified influenza virus strain - 04906C/03
- *OIK/ 30.03.78 OIKAWA S D15 E34 *J5 4152-348
Liq. sewage treatment using a small amount of hypochlorite - 04122C/03
- *OKAD- 24.05.78 OKADA FUSENZAI KAGA D22 E17 (E33) *J5 4154-528
Solid granular deodorant - 04466C/03
- *OKAD- 24.05.78 OKADA FUSEN KAGA D22 E16 *J5 4154-529
Deodorant, used as granules or aq. soln. - 04467C/03
- OLIN 29.06.78 OLIN CORP A26 D25 E11 (A25 A60 A97) = DT 2926-133
Alkoxy-bis (trialkoxysiloxy)-silane surfactant - 56220B/30
- OPTR- 20.06.74 OPTREX LTD D22 = CA 1068-571
Sterile eye lotion container - 03127X/02
- OPTR- 20.06.74 OPTREX LTD D22 = GB 1460-064
Sterile eye lotion container - 03127X/02
- OREA 15.06.78 L'OREAL SA A96 D21 = BE -876-985
Hair cosmetics for dyeing, bleaching or permanent waving - 00261C/01
- OREA 15.06.78 L'OREAL SA A96 D21 = GB 2024-873
Hair cosmetics for dyeing, bleaching or permanent waving - 00261C/01
- OREA 16.06.78 L'OREAL SA A96 D21 E19 = BE -876-986
Cosmetics for greasy hair and skin - 00260C/01
- OREA 23.06.78 L'OREAL SA A96 D21 = NL 7904-864
Cosmetic compsn. contg. tetra:polymer - 01949C/02
- *OSUL/ 26.06.78 O'SULLIVAN D J D21 *EP ---6-757
Tool for mixing catalysed dental filling compsns. - 03909C/03
- *OTSU- 26.05.78 OTSUKA EIYO KENKYUS D13 (D16) *J5 4154-554
Dry vegetable or fruit juice compsn. - 04474C/03
- PAPI- 22.05.78 VU PAPIERU A CELULO C03 D16 F09 (D13) #SW 7805-802
Conversion of waste paper by enzymatic hydrolysis - 87877B/49
- PARC- 22.06.78 PARCOR B05 C03 D21 = EP ---6-784
Mucolytic S-benzyl-L-cysteine derivs. - 00431C/01
- *PERF= 19.08.77 PERFUME RES INST B07 D23 (D21) *SU -660-969
Wool fat alcohol emulsifiers for cosmetics and drugs prepn. - 04860C/03
- PERR/ 19.01.76 PERRY J A D15 J04 = CA 1068-513
Periodic sample removal from waste water conduit - 39511Y/22
- PFAU 14.05.76 PFAUDLER-WERKE AG D22 = GB 1559-212
Surgical prosthetic fixing with selfcutting screw threads - 63088Y/36
- PFIZ 16.04.76 PFIZER INC B02 C02 D22 #CA 1068-681
(6)-Acylamino-(3)-tetrazolyl-penam useful as antibacterials - 14581Y/09
- PHEC 20.07.72 PHENOLCHEMIE GMBH A41 D15 E17 (E14) = CS 7305-162
Acetone recovery from waste water - 03483V/02
- *PHIM 10.11.75 PHILIP MORRIS INC A88 D18 E19 J01 *US 4182-743
Filter for selective removal of aldehyde(s) - 05350C/03
- PHIM 29.03.78 PHILIP MORRIS INC D18 = FR 2420-927
Expanding tobacco to increase its filling capacity - 56315B/31
- *PHIP 21.04.78 PHILLIPS PETROLEUM CO A35 D13 F07 K08 *US 4182-954
Measuring properties of materials by irradiation - 05433C/03
- PHIP 07.08.78 PHILLIPS PETROLEUM CO D16 = US 4181-576
Fermentation plant to reduce monocellular protein from methanol etc. - 02417B/02
- *PHYL- 16.11.77 PHYLAXIA OLTO ANYAG D17 E13 *HU T017-516
Sugars, e.g. maltose, fructose and glucose, prodn. - C/03
- *PIGF= 02.03.77 PIG FARMING MECH D14 *SU -660-632
Animal feedstuffs mixing and spreading equipment - 04724C/03
- POLA= 03.01.77 POLAR MARINE FISH D12 = DS 2700-068
Fish filleting machine - 49984A/28
- *POME= 28.06.77 POLT MEAT EQUIP WKS D14 *SU -660-685
Steriliser for milk churns - 04739C/03
- *POWE= 18.07.77 POWER ENG KRASNYI K A97 D23 G04 M12 (A25) *SU -661-001
Detergent for cleaning metal surfaces - 04889C/03
- *PRIB/ 12.07.76 PRIBIK I D12 *CS 7604-596
Appts. forming coatings on smoked products - C/03
- PRMH 27.03.75 PERMAHOP HOPFENPULV GMBH D16 = DS 2513-884
Hops cones deep freezing - 76045X/41
- PROC 23.09.77 PROCTER & GAMBLE CO A97 D25 E19 = NL 7815-036
Laundry detergent for removing oily dirt from hydrophobic fibres - 72508A/40
- *PROC 06.06.78 PROCTER & GAMBLE CO D21 E19 (E37) *GB 2024-623
Hair conditioning article - 04012C/03
- *PROC 22.06.78 PROCTER & GAMBLE CO D13 *EP ---6-646
Instant coffee type drink - 03858C/03
- *PROC 26.06.78 PROCTER & GAMBLE CO A97 D25 *EP ---6-655
Particulate detergent additive - 03862C/03
- *PROT= 27.12.74 PROTEIN BIOSYNTHESI A97 D16 H04 *SU -659-605
Microbial biomass, e.g. yeast, prodn. - 04618C/03
- PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 F09 = J5 4154-484
Solid or aq. solvent for extracting cellulose - 68397B/38
- *QPPP 26.05.78 Q.P. CORP D13 *J5 4154-541
Fried foods prepn. - 04471C/03
- RALS 24.06.74 RALSTON PURINA CO A92 D13 = CA 1068-540
Stabilized fruit drinks contg bisulphite and sulphur dioxide - 45936X/24
- RALS 26.08.74 RALSTON PURINA CO D12 = CA 1068-541
Enriching meat by injecting protein compsn - 44276X/24

- RAMP/ 31.03.78 RAMPIGNON J D15 = FR 2421-147
Solvent-laden waste water purification - 73802B/41
- * REED/ 03.01.78 REED W H D14 *US 4182-234
Tool for removing egg from shell - 05225C/03
- * REGU/ 01.04.78 REGULA S D15 *CS 7802-101
Chemical precleaning of waste water - C/03
- * REPH- 16.06.78 SOC RECH PHARM SA B07 D21 *EP ---6-724
Topical or rectal compsns. contg. medicament - 03897C/03
- RHEI- 01.07.78 RHEINTECHNIK WEILAN D15 = DT 2829-006
Water aeration system - 03830C/03
- * RHEI- 01.07.78 RHEINTECH WEILAND D15 *EP ---6-597
Water aeration system - 03830C/03
- * RHON 09.06.78 RHONE-POULENC INDUSTRIES A14 D15 *EP ---6-777
Organic, partic. acrylic polymer prepn. - 03914C/03
- * RIAL/ 14.02.77 RIALDIG D21 *US 4181-712
Tooth paste compsn. contg. no abrasive - 05122C/03
- * RICK/ 09.01.78 RICKERT G E D21 *US 4181-695
Embedding flat element in soap cake - 05112C/03
- RIKA 06.10.75 INST PHYS CHEM RES D15 J01 M25 = J7 9042-802
Dissolved metal recovery from soln. - 35413Y/20
- * ROHG 01.07.78 ROHM GMBH A97 D15 M14 (A14) *DT 2829-018
Stable aq. water-hardness stabiliser soln. - 03736C/03
- * ROHM 05.09.78 ROHM & HAAS CO D16 *US 4180-917
Prepn. of freeze dried enzymes - 04972C/03
- ROQF 21.06.78 ROQUETTE FRERES SA C03 D16 (D13) = DT 2925-076
Potato or manioc starch filter aid - 77207B/43
- ROQF 21.06.78 ROQUETTE FRERES SA C03 D16 (D13) = NL 7904-854
Potato or manioc starch filter aid - 77207B/43
- * ROTC 21.06.78 FA CARL ROTH D25 (D21) *DT 2827-291
Skin cleaning compsn. for removing lead - 03666C/03
- ROUS 31.03.78 ROUSSEL UCLAF B03 D21 E13 = FR 2420-972
Thenoyl peroxide used as pharmaceutical and cosmetic - 75745B/42
- RYOA/ 04.03.74 RYOAR D13 = J5 0117-956
Treating starting material for plant fibre products - 04529C/03
- * RYOA/ 04.03.74 RYOAR D13 *J7 9043-050
Treating starting material for plant fibre products - 04529C/03
- SAGA 29.04.74 SAGAMI CHEM RES CENTRE B04 D16 = J7 9043-076
Peptides enzymatic synthesis - 76091W/46
- SAKB 14.04.71 OTSUKA KAGAKU YAKUHIN A96 B04 D16 (A18) = J7 9043-074
Modified proteases as anti-inflammatories - 72986T/46
- SALA- 28.11.75 SALA INT AB D15 = GB 1559-384
Lifting and lowering mechanism for sludge scrapers - 40319Y/23
- * SALT/ 29.03.78 SALTARELLI C G B04 D16 *US 4182-753
Prodn. of tumour growth inhibitor effective against sarcoma-180 - 05355C/03
- * SANN 26.05.78 SANYO CHEM IND LTD A97 D15 F06 H01 (A18 A87 F09) *J5 4154-437
Water-soluble vinyl polymer-contg. liq. compsn. - 04409C/03
- SANO 04.04.74 SANDOZ PATENTS LTD C03 D13 = CA 1068-535
Dietetic animal foods based on meat and soya - 05900X/04
- SANO 08.06.78 SANDOZ SA B04 C03 D16 (D13) = BE -876-812
S 54832/A-type antibiotics produced by fermentation - 91346B/51
- * SANO/ 23.05.78 SANO Y D15 J03 *J5 4152-671
Water treatment appts. - 04180C/03
- SANY 18.12.73 SANKYO KK B02 C02 D13 = J7 9042-999
7-Beta-Acylamino-7 alpha-methoxy-cephalosporins - 38027W/23
- SAOC 30.11.76 SANRAKU OCEAN B02 C02 D22 E13 (D13) = J7 9043-060
Phenylacetyl-deacyl-deltamycin macrolide antibiotics - 50424Y/29
- * SAOC 27.05.78 SANRAKU OCEAN B02 C02 D16 *J5 4154-598
Antibiotics having heptemic acid skeleton - 04482C/03
- * SAOK 23.05.78 SANYO KOKUSAKU PULP A97 D15 (A11) *J5 4152-685
Dye adsorbing compsn. for treating waste water contg. dye - 04188C/03
- * SAVE/ 14.06.78 SAVEL J D16 *CS 7803-864
Semi-solid medium for beer contaminating microorganisms cultivation - C/03
- * SCCO- 16.09.77 APPLIED SCIENCE COR A96 D21 G03 (A14) *US 4180-911
Direct bonding of orthodontic appts. to teeth - 04971C/03
- * SCHE/ 16.01.78 SCHEINER A D11 *CS 7800-282
Oven inner walls hermetisation - C/03
- SCHE/ 30.03.78 SCHERZ K D14 = FR 2420-912
Straw cutting machine - 77627B/43
- * SCHI/ 13.05.78 SCHINDLER J B04 D16 *CS 7803-090
Diagnostic identification of bacteria - C/03
- SCHM/ 05.06.78 SCHMITZ H D16 (D13) = WP 8000-001
Softening tough parts of mushrooms - 89577B/50
- SCHU 17.04.75 SCHULKE & MAYR GMBH B05 C03 D22 E17 = DS 2516-922
Disinfectants contg. alpha, beta-unsatd. aldehydes - 83375X/45
- * SCHU 30.06.78 SCHULKE & MAYR GMBH D22 E19 *DT 2828-724
Disinfectant cloth contg. absorbent and disinfectant(s) - 03725C/03
- * SELB- 01.07.78 SELBECK CO D18 *DT 2829-048
Fur carding machine - 03743C/03
- SHAF 12.08.75 SHARP KK D15 = J5 2021-270
Distilling water with solar energy - 04515C/03
- * SHAF 12.08.75 SHARP KK D15 *J7 9042-833
Distilling water with solar energy - 04515C/03
- * SHIN/ 30.10.76 SHIN S H D11 *US 4181-746
Prepn. of steam-kneaded vermicelli prods. - 05139C/03
- * SHMI/ 08.06.76 SHMITE I A D16 *SU -661-006
Escherichia coli microbial strain - 04894C/03
- * SHOW 22.05.78 SHOWA DENKO KK D15 E34 *J5 4152-350
Treatment of waste liquor contg. sodium thiosulphate - 04123C/03
- SHOY 21.12.70 SHOWA YAKUHIN KAKO KK B04 C03 D16 = J7 9042-909
Fucoidin and alginate compsn - 60436V/34
- * SIGA/ 01.02.78 SIGAS C A D14 *US 4182-226
Domestic multiple nut-cracker - 05221C/03
- * SIMO- 14.06.78 SIMON-HEESEN BV D14 *GB 2024-695
Roller and ring pelletising press for animal feed - 04032C/03
- * SIMO/ 20.03.72 SIMONOV V F D15 *SU -660-698
Water-treatment plant for clarifying and dewatering - 04747C/03
- * SIMO/ 31.03.78 SIMON V C03 D13 *FR 2420-925
Animal feed from vegetable pulp e.g. grape pressings - 03947C/03
- * SMEL= 21.11.77 S MELIOR WATER SUPP D15 *SU -660-693
Thin-layer settling tank - 04742C/03
- SMHL 25.05.78 SIMON HARTLEY LTD D15 = DK 7901-641
Thickening activated sludge - 40664B/22
- SMHL 25.05.78 SIMON HARTLEY LTD D15 = SW 7900-478
Thickening activated sludge - 40664B/22
- SNAM 23.05.78 SNAMPROGETTI SPA B05 D16 E19 = DK 7901-983
Prepn. of D-aminoacids - 85938B/48
- SNAM 23.05.78 SNAMPROGETTI SPA B05 D16 E19 = NO 7901-662
Prepn. of D-aminoacids - 85938B/48
- SNAM 23.05.78 SNAMPROGETTI SPA B05 D16 E19 = SW 7904-548
Prepn. of D-aminoacids - 85938B/48
- SNAM 24.05.78 SNAMPROGETTI SPA D14 J01 (D23) = DK 7901-980
Continuous solid-liq. extn., esp. of vegetable material - 85965B/48
- SNAM 24.05.78 SNAMPROGETTI SPA D14 J01 (D23) = J5 4153-776
Continuous solid-liq. extn., esp. of vegetable material - 85965B/48
- SNAM 24.05.78 SNAMPROGETTI SPA D14 J01 (D23) = SW 7904-549
Continuous solid-liq. extn., esp. of vegetable material - 85965B/48
- * SNOE/ 05.06.78 SNOEYENBOS G H B04 C03 D16 *EP ---6-695
Compsn. for protecting poultry against Salmonella - 03880C/03
- SNOW 23.12.76 SNOW BRAND MILK PRODUCTS D13 J03 = DS 2757-496
demineralisation of milk by electrodialysis in two stages - 48161A/27
- SNOW 19.08.77 SNOW BRAND MILK PRODUCTS D12 = US 4181-749
Minced fish meat prodn. - 32361B/17
- SOLV 25.04.77 SOLVAY & CIE A97 D25 = US 4182-806
Poly-alpha-hydroxyacrylic acid salts prepn. - 76318A/43
- SOLV 25.04.77 SOLVAY & CIE A97 D25 = US 4182-807
Reducing the molecular weight of hydroxy-carboxy polymers - 76317A/43
- SQUI 08.07.74 SQUIBB E R & SONS INC B02 C02 D22 (D13) = CA 1068-679
1,2,4-Oxadiazolonyl-acetyl-cephalosporins - 03665X/02
- * STAD 01.03.77 STANDARD OIL CO (IND) D13 *US 4182-777
Co-dried yeast cream and whey prod. - 05362C/03
- STAH/ 22.05.78 STAHLER T D15 = NO 7901-685
Aerobic sewage treatment - 86284B/48
- * STAL 07.11.77 STALEY A E MFG CO D13 *US 4181-747
Pasteurised vegetable seed fibre for use in foods - 05140C/03
- * STAN/ 31.01.78 STANKOVIC L D17 E17 (D16) *CS 7807-365
L-Erythro-pentulose prepn. by biochemical dehydrogenation - C/03
- STAU 16.08.74 STAUFFER CHEMICAL CO C03 D13 = HU T017-440
2,6-Dialkyl-9-aryl-3-nonyl alkyl ethers - 16835X/10
- * STAU 05.12.77 STAUFFER CHEMICAL CO A97 D13 *US 4182-779
Soya-based egg yolk extender - 05364C/03
- STEI 30.08.77 STEINECKER A MASCH GMBH D16 = US 4182-228
Plant to mfr. beer wort by hydrating crushed malt - 74492A/42
- STER 24.02.75 STERLING DRUG INC D15 J04 (J01) = CA 1068-475
Run off tank for high pressure reactor - 67325X/36
- STER 05.06.78 STERLING DRUG INC B05 C01 D22 = US 4182-759
Aralkyl and aryloxy-alkyl di:alkyl phosphonate(s) - 87592B/49
- STRA- 20.05.76 GES STRAHLEN & UMWE D17 J04 = US 4181-442
Amino acid determ. in sugar beet products - 84980Y/48
- * SUBI/ 15.02.78 SUBIK J D16 *CS 7800-981
New mucidine resistant mutants - C/03
- SUGE/ 19.04.77 SUGETA M D13 = J5 3130-456
Pickling chayote to preserve flavour and taste - 04532C/03
- * SUGE/ 19.04.77 SUGETA M D13 *J7 9043-065
Pickling chayote to preserve flavour and taste - 04532C/03
- * SUKO/ 23.05.78 SUKOVATY J C03 D13 F09 *CS 7803-345
Wood waste continuous hydrolysis appts. - C/03
- SUME 17.07.75 SUMITOMO ELEC IND KK A88 D15 J01 L03 (A14 A85 A96 J03) = CA 1068-458
Vinylidene fluoride an tetrafluoroethylene copolymer membranes - 08023Y/05
- SUMO 30.03.78 SUMITOMO CHEMICAL KK D23 E14 = FR 2421-160
1,1,3,4,4,6-Hexa:methyl-1,2,3,4-tetra:hydro naphthalene prepn. - 75544B/42
- SUMO 25.05.78 SUMITOMO CHEMICAL KK D16 (D17) = J5 4154-594
Glucose isomerase extraction from cells - 87995B/49

SUNZ

- *SUNZ 25.05.78 SUN STAR HAMIGAKI K B02 D21 E13 (B03 D13) *J5 4154-535
Saccharine-free dentifrice compsn. - 04470C/03
- *SVRO= 27.01.77 SVERD ROSMYASOMOLPR D18 *SU -660-648
Hide bristles removal appts. - 04727C/03
- SWIL 02.06.77 SIG SCHWEIZERISCHE D11 = US 4181-213
Biscuit counting stacker - 91700A/51
- *TAKA- 20.05.78 TAKADA SHOTEN KK D13 *J5 4154-600
Meat seasoning and preserving agent - 04483C/03
- *TAMB= 17.06.77 TAMBOVKOLKHOZPROEKT D14 *SU -660-657
Feed root vegetables washing appts. - 04735C/03
- *TAVO- 23.05.78 TAVOLEK INC B04 C03 D16 *J5 4154-518
Production of fish-type vibriosis vaccine - C/03
- TAVO- 23.05.78 TAVOLEK INC B04 C03 D16 = NO 7901-690
Production of fish-type vibriosis vaccine - C/03
- *TBLI= 21.06.77 TBLISSI COGNAC COMB D16 *SU -661-010
Blended brandy-type spirit prodn. - 04898C/03
- *TEAR- 27.05.78 TEA RES ASSOC D13 *GB 2024-599
Continuous tea leaves rolling machine - 04009C/03
- TECD 14.03.78 TECHNICON INSTRUMEN A89 D16 J04 = J5 4154-596
Carbohydrate enzyme substrate immobilisation on carrier e.g. alumina - 72069B/40
- *TECH- 05.07.78 SOC GEN TECHN NOUV D15 *GB 2024-795
Treatment of liq. effluents - 04046C/03
- TECN- 15.06.73 TECNECO SPA B05 C03 D17 (D13 D15) = HU T017-464
Ion-exchange resin regenerant soln. reclaimed - 75867V/44
- TEIJ 16.11.76 TEIJIN KK A97 D15 = US 4182-690
Emulsion breaker with organic hydrophobic hydrophilic cpd. - 36934A/21
- *TEKH= 06.06.77 TEKHRYBPROM PRODN D14 *SU -660-656
Canned foodstuffs sterilisation autoclave - 04734C/03
- TEKH= 23.05.78 TEKHRYBPROM PRODN D12 #SW 7805-865
Filleting machine for fish of different sizes - 77267B/43
- TENS- 25.04.75 TENSEI SUISAN KK D12 = CA 1068-542
Protein extract prepn. from whole untreated fish - 13306Y/08
- *TEXR- 12.01.76 TEXAS RENDERING CO D12 *CA 1068-544
Appts. for rendering and dehydrating animal by/products - 03635C/03
- THOM 28.06.78 THOMAE K GMBH A60 B02 C02 D13 (D22) = DT 2828-261
Pyrimidyl:ureido:acetamido-penicillin and cephalosporin cpds. - 02133C/02
- *TILL/ 30.05.78 TILLIE E D15 H03 *EP ---6-776
Pollution control using binders - 03913C/03
- TISS/ 26.04.72 TISSOT O D18 = CS 7206-603
Leather/hide drier - 21531U/16
- *TOHR 27.05.78 TOHO CHEM IND LTD A97 D25 E17 (A25 E14) *J5 4154-410
Detergent compsn. - 04394C/03
- *TOKE 23.05.78 TOKYO SHIBAURA ELEC LTD D22 E36 J01 *J5 4152-659
Gas deodorising appts. - 04169C/03
- TOKU 23.12.76 TOKUYAMA SODA KK D13 J03 = DS 2757-496
demineralisation of milk by electrodialysis in two stages - 48161A/27
- *TOMA/ 31.07.78 TOMATIS S D13 *US 4182-232
Curd mixer for making cottage cheese - 05223C/03
- *TOPP 25.05.78 TOPPAN PRINTING KK D14 E13 (E37) *J5 4154-542
Preservation of perishables e.g. meat, fruit, vegetables - 04472C/03
- *TRAN- 22.06.78 TRANSFRESH CORP A92 D13 *DT 2924-914
Extending storage life of vegetables - 03778C/03
- TRAN- 22.06.78 TRANSFRESH CORP A92 D13 = NL 7904-897
Extending storage life of vegetables - 03778C/03
- TSUC/ 05.11.71 TSUCHIYA T D23 = J7 9043-002
Antioxidant purification - 66155U/44
- *TSVO= 25.04.77 TASHK VODGEO RES INST A91 D15 (A11) *SU -659-575
Cellulosic flocculant for surface water clarification - 04594C/03
- *TURE/ 18.09.78 TUREK S D17 *CS 7806-002
Aldose saccharides determ. agent - C/03
- TWEE- 14.01.72 TWEEDY OF BURNLEY D11 (D12) = DS 2301-807
Vacuum drying/cooling plant - 43260U/31
- *UENS 22.05.78 UENO SEIYAKU OYO KE D12 *J5 4154-560
Frozen minced fish prepn. - 04476C/03
- UNIC 24.02.78 UNION CARBIDE CORP A23 D22 (A96) = J5 4154-495
Thermoplastic crosslinkable copolymer - 64990B/36
- *UNIC 31.08.78 UNION CARBIDE CORP A25 D22 (A96) *US 4182-827
Improving wetting rate of polyurethane hydrogel - 05384C/03
- *UNIC- 20.05.78 UNI CHARM KK A96 D22 *J5 4152-545
Simple disposable diaper - 04142C/03
- UNIL 15.06.78 UNILEVER LTD B05 D21 E12 = EP ---6-708
Oral anti:calculus compsns. - 23892B/12
- UNIL 23.06.78 UNILEVER NV D21 E33 = DT 2925-087
Basic aluminium chloride, bromide or iodide antiperspirants - 03902C/03
- *UNIL 23.06.78 UNILEVER LTD D21 E33 *EP ---6-738
Aq. solns. of basic aluminium chloride, bromide, iodide and nitrate - 03901C/03
- *UNIL 23.06.78 UNILEVER LTD D21 E33 *EP ---6-739
Basic aluminium chloride, bromide or iodide antiperspirants - 03902C/03
- UNIL 23.06.78 UNILEVER NV D21 E33 = NL 7904-859
Basic aluminium chloride, bromide or iodide antiperspirants - 03902C/03
- *UNIL 26.06.78 UNILEVER NV C03 D13 *EP ---6-654
Detoxified rapeseed protein concentrate prodn. - 03861C/03
- UNVO 29.03.78 UOP INC C04 D15 = FR 2421-148
Mechanically dewatering fibrous organic waste - 56196B/30
- UPJO 05.05.77 UPJOHN CO A60 B02 D22 E13 = US 4182-855
Decomposition prods. of rubradirin antibiotics - 84365A/47
- UPJO 06.09.77 UPJOHN CO B03 D22 E13 F09 = GB 2024-825
Antibacterial deoxy-neamine derivs. and precursors - 22298B/12
- *UPOU= 04.04.77 UKR POULTRY RES INS C03 D16 (D13) *SU -660-653
Determining mycotoxins in feedstuffs - 04731C/03
- *USAS 06.03.79 NAT AERO & SPACE ADMIN A96 B04 D16 *US 4181-589
Segg. biological cells - 05066C/03
- USMC 07.04.76 USM CORP D18 = CS 7701-978
Humidification and warming of leather - 77055Y/43
- *USRU 05.09.78 UNIROYAL LTD C02 D22 E13 *US 4182-716
5,6-di:hydro-2-methyl-N-phenyl-1,4-oxathiin-3 carboxamide prepn. - 05336C/03
- *USSI 15.09.78 US SEC OF INTERIOR D15 J01 *US 4181-607
Removal of asbestos fibres from water - 05075C/03
- *UUKR= 04.04.77 UKR UKRGIPROMEZ D15 *SU -660-938
Automatically-filling hydraulic trap for protecting deaerators - 04829C/03
- *VAND/ 12.09.77 VANDEWALKER JR D13 *US 4182-229
Automatic popcorn popping machine - 05222C/03
- *VARI 10.12.76 VARIAN ASSOCIATES D13 J04 *US 4181-853
Liq. chromatography system for detecting aflatoxin - 05175C/03
- *VASE/ 13.03.78 VASEEN V A D22 E36 J01 *US 4182-663
Ozone prepn. from oxygen - 05308C/03
- *VECO- 27.06.78 VER COOP MELKIND CO D13 *DT 2925-568
Fresh cheese of high protein content prodn. - 03802C/03
- VEOS 18.02.75 VER OSTERR EISEN & STAHL D15 = HU T017-467
Effluent purification using electrolytic cell - 65247X/35
- *VIZG- 12.08.76 VIZGAZDALKODASITUD D15 *HU T017-465
Small prefabricated effluent purifying device - C/03
- *VOGT 07.07.78 VOGT KG D12 *DT 2829-882
Carcass skinning device - 03749C/03
- *VOLG= 17.03.76 VOLGODONSK SURFACTA D25 E16 *SU -660-943
Aliphatic tert. amine(s) removal from aq. surfactant mfr. waste - 04834C/03
- *VOST/ 01.12.76 VOSTROVIS A35 D16 *SU -661-012
Cladosporium gossipicola-1902 fungal strain - 04900C/03
- *VROL 26.06.78 VON ROLL AG A88 D15 *DT 2923-760
Sewage sludge pasteurising cylinder - 03766C/03
- VROL 26.06.78 VON ROLL AG A88 D15 = NL 7904-983
Sewage sludge pasteurising cylinder - 03766C/03
- *WAAH/ 23.06.78 WAAHLSTAM H A96 D21 *DT 2827-635
Dental cavity sealing compsn. - 03682C/03
- WAGB 19.05.78 WAAGNER BIRO AG D16 = SW 7904-261
Preserving yeast culture during continuous alcoholic fermentation - 71748B/40
- *WATE= 21.11.77 WATER SUPPLY HYDROTECH D15 *SU -660-693
Thin-layer settling tank - 04742C/03
- WEBE- 05.06.78 WEBER AG A96 D21 = GB 2024-630
Tooth-cleaning dental floss - 91397B/51
- WEIS- 23.12.75 WEISS GEBR KG D16 J01 = GB 1559-414
Filtering exhaust gases contg. organic cpds. - 48923Y/28
- *WEIS- 23.06.78 WEISERT LOSER & SOH D11 *DT 2827-522
Dough rolling machine control - 03676C/03
- WELL 26.05.78 WELLCOME FOUNDATION LTD B05 C03 D13 = J5 4154-533
Compsns. contg. eicosa:penta:enoic acid - 85978B/48
- *YAMA 23.05.78 YAMANOUCHI PHARM KK B02 D16 *J5 4154-592
Fixing D-aminoacid oxidase in yeast body - 04479C/03
- *YAMA/ 25.05.78 YAMADA T D15 *J5 4154-163
Aerobic and anaerobic treatment of waste water - 04374C/03
- *YARO= 25.05.77 YAROSLAVL POLY D15 *SU -660-939
Through-flow water deaerator - 04830C/03
- *YAWA 20.05.78 NIPPON STEEL CORP D15 *J5 4152-351
Nitrification suppression in aerophilic activated sludge treatment - 04124C/03
- *YOKO- 23.05.78 YOKOHAMA YUSHI KOGY C02 D13 E13 *J5 4154-514
Fine powdery coated L-ascorbic acid (salt) prepn. - 04457C/03
- YOTS/ 13.11.72 YOTSUYA J D15 = J4 9071-754
Agent for treating night soil and sewage - 04537C/03
- *YOTS/ 13.11.72 YOTSUYA J D15 *J7 9043-302
Agent for treating night soil and sewage - 04537C/03
- *YOUD/ 27.10.77 YOUDELIS W V D23 M13 *US 4181-757
Coating low-melting gold alloy onto metallic substrate - 05148C/03

40079-Q AD	SU -518-142 Y45	04971-V BD	J5 0083-385 W51	03127-X D	CS 7508-280 A29	PT --64-865 Y10	DK 7602-811 Y11
NL 6906-823 Q00	CS 7101-682 C03+	NL 7308-948 V03+	J5 0083-384 W51	NL 7507-420 X02	CA 1048-998 B10	ZA 7601-119 Y19	SW 7607-217 Y11
FR 2008-066 R13	CS 7805-062 C03+	DT 2332-065 V04+	ZA 7407-513 X13	DT 2527-614 X03	HU T016-637 B23	DL -124-606 Y23	SF 7601-806 Y12
US 3533-416 R40		FR 2190-420 V13+	J5 1023-286 X15	NO 7502-186 X08	IL --48-506 B29	OE 7601-597 Y35	FR 2317-302 Y16
DL --80-861 S23	75039-S BDE	J4 9025-193 V27	GB 1449-420 X38+	SW 7507-122 X08	US 4162-941 B33	HU T014-119 Y45	OE 7604-613 A26
CH -507-669 S32	BE -767-573 S47+	J4 9026-488 V27	HU T012-237 X43+	FR 2275-381 X15	J7 9031-397 B44	GB 1496-386 A01	DL -132-344 A46
GB 1263-154 T06	ZA 7103-553 T09	J4 9030-593 V31	US 4007-177 Y07+	DK 7502-770 X19	SU -579-902 A39	SU -579-902 A39	GB 1539-053 B04
DT 1920-700 T10	US 3687-855 T37	J4 9102-889 W09	CH -611-906 B29+	GB 1460-064 Y01	IL --49-094 B29	CH -611-931 B29	HU T017-501 C03
CA -921-790 U11	DT 2123-551 T48	GB 1425-081 X08+	J7 9017-755 B30	CH -602-101 A33	CS 7601-393 C03		
SU -383-243 V15	NL 7108-024 U01	CH -596-227 A15+	CA 1060-432 B35+	CA 1068-571 C03			
BE -732-696 Q01	FR 2138-295 U12	CH -596-308 A15+	J7 9042-999 C03	GB 1460-064 C03			
CS 6903-239 C03	GB 1315-461 U18	J7 9043-080 C03					
	CA -930-274 U31		50941-W DE	03665-X BCD	39989-X DE		07562-Y DEJM
	CH -582-001 X52+	07651-V CDEH	BE -824-485 W31	US 3929-782 X02+	BE -837-019 X22		BE -844-514 Y05
28165-R D	J4 7043-106 A29+	DT 2334-260 V05	DT 2423-089 W38	DT 2529-089 X05	DT 2552-899 X28	72204-X DE	DT 2533-614 Y06
FR 1582-743 R17	J7 8020-521 A29+	GB 1440-238 X26	NL 7501-245 W39	J5 1034-190 X19	FR 2295-931 X45	BE -841-471 X39	NL 7607-400 Y07
GB 1242-428 S31	DS 2123-551 C03	US 4182-765 C03+	FR 2262-923 W52	FR 2282-877 X24+	DS 2552-899 C03	DT 2519-990 X50	J5 2015-500 Y11
GB 1243-480 S32			J5 1007-303 X10	GB 1500-449 A06+		J5 1143-640 Y04	FR 2319-577 Y19
SU -287-649 S39	02098-T ABD	60436-V BCD	ZA 7500-379 X13	CA 1068-679 C03	44276-X D	DS 2519-990 Y40	US 4055-622 Y44
US 3607-301 S41	NL 7108-312 T02+	GB 1364-130 V34	PT --63-433 X25		FR 2282-814 X24	US 4053-517 Y42	CA 1068-669 C03
CA -906-825 T34	J4 7001-318 T05	US 3971-848 X32	US 3993-795 X49	05872-X BCD	GB 1462-329 Y04	GB 1551-354 B50	
CH -529-514 U04	DT 2064-373 T31	J7 9042-909 C03	GB 1477-687 Y25	DT 2529-532 X04+	CA 1068-541 C03	CA 1068-725 C03	08023-Y ADJL
DT 1792-754 V10	GB 1323-799 U29		OE 7501-644 Y35	NL 7507-860 X04+			DT 2632-185 Y05+
SW 7308-677 V51	US 3779-783 U52	75867-V BCD	CH -591-918 Y48	BE -830-929 X07+	45936-X AD	75467-X D	J5 2011-261 Y10
DS 1792-620 C03	DS 2064-373 V38+	BE -816-280 V44	NL -158-999 B06	SW 7507-606 X09+	US 3961-088 X24	US 3981-738 X40	FR 2333-825 Y37+
	CH -555-146 V46	NL 7408-021 W01	CA 1048-849 B10	NO 7502-411 X10+	CA 1068-540 C03	DT 2703-143 Y36	J5 2154-862 A06
55372-R DE	J7 9043-063 C03+	NO 7402-131 W06	IT 1029-709 B25	SF 7501-936 X15+	53458-X ABCD	SF 7700-252 Y46	J7 8015-949 A25
BE -745-401 R31+	48509-T D	SW 7407-907 W07	J7 9017-809 B30	DK 7502-998 X15+	NL 7514-165 X28+	GB 1537-940 B02	J7 8034-225 A41
DT 2003-525 R32	BE -777-252 T30	DK 7403-172 W11	SU -660-567 C03	J5 1026-240 X16+	SW 7513-570 X32+	DS 2703-143 C03	DS 2632-185 B02+
NL 7001-674 R33	ZA 7107-885 T36	FR 2233-288 W13		FR 2276-779 X17+	DK 7505-449 X41+		GB 1552-942 B38+
ZA 7000-234 R39	US 3693-631 T41	SF 7401-734 W16	52777-W BCDE	ZA 7504-234 X31	US 4000-161 Y02+	76045-X D	CA 1068-458 C03+
FR 2065-802 S42	DT 2203-105 T46	DL -112-422 W24	DT 2502-767 W32	PT --64-011 X33+	HU T017-495 C03+	DT 2513-884 X41	11334-Y D
GB 1256-462 S48	NL 7200-074 T47	PT --62-087 W25	NL 7500-838 W33	GB 1470-005 Y15+		US 4096-793 A35	DT 2533-150 Y07
US 3666-495 T24	FR 2119-789 T48	US 3962-077 X25	J5 0105-841 W42	IL --47-622 A14+	59928-X ADL	CS 7601-947 A51	J5 2019-170 Y13+
J7 3000-824 U03	GB 1356-065 V24	OE 7404-951 X28	FR 2259-091 W46	NL -156-309 A17+	DT 2501-683 X32	GB 1536-895 B01	FR 2320-264 Y20+
US 3723-475 U15	CA -955-490 V42	CS 7404-251 Y10	GB 1435-887 X21	US 4148-891 B17+	J5 1098-754 X42	DS 2513-884 C03	GB 1516-683 A27+
CH -535-545 U25	J7 6019-039 X28	GB 1466-730 Y10	CH -586-551 Y22	J7 9043-057 C03+	FR 2297-887 X47		CA 1053-602 B22+
J7 4011-697 V15+	CH -580-393 X47	IL --45-072 Y26	CH -590-193 Y34		GB 1505-815 A13	79411-X AD	US 4181-577 C03+
J7 4005-340 V08	NL -152-159 Y10	CA 1025-801 A08	CH -590-810 Y36	05900-X CD	US 4131-597 B02	BE -840-669 X43	
SW 7416-081 W21+	DS 2203-105 A11	OE 7600-780 A13	DS 2502-767 Y47	FR 2266-514 X04	DS 2501-683 B15	DT 2615-680 X44	11754-Y DE
J7 6036-345 X45+	CS 7200-165 C03	CH -605-419 A41	US 4147-672 B15+	GB 1497-211 A01	OE 7507-882 B40	NL 7604-037 X45	J5 1151-358 Y07
SW 7511-680 X47+		NO 7803-870 B06	J7 9043-061 C03	CA 1068-535 C03	J7 9042-384 C03	FR 2307-711 Y07	CA 1068-539 C03
SU -513-625 Y01	66098-T BD	NO 7803-869 B06	55806-W DE			ZA 7602-281 Y50	
DS 2003-525 Y21+	J4 7020-077 T41	HU T017-464 C03	DT 2404-494 W34	16835-X CD	65247-X D	US 4063-383 A01	12591-Y BD
CA 1038-877 A40+	J7 9043-053 C03		BE -829-424 W43	BE -832-492 X10+	DT 2555-175 X35	GB 1520-511 A32	US 4007-167 Y07+
NL 7805-250 A41+			NL 7506-808 X52+	NL 7509-640 X10+	OE 7501-213 X15	CH -603-793 A37	BE -845-336 Y08
NL 7905-420 C03+			SW 7505-885 Y02+	DT 2536-298 X11+	DL -124-969 Y23	CA 1060-819 B36	DT 2637-545 Y10
			J5 1144-743 Y05+	FR 2281-913 X22+	CH -598-144 A19	HU T017-436 C03	J5 2025-089 Y14
88275-R BCDE	69949-T DH	76862-V D	DK 7502-293 Y06+	DL -119-701 X28+	CS 7600-278 A50		FR 2321-296 Y21
BE -750-969 R47	DT 2117-234 T44	NL 7403-383 V44+	SF 7501-593 Y08+	BR 7505-234 X34+	DS 2555-175 B03	80125-X D	ZA 7604-338 Y35
NL 7106-933 S50	FR 2133-410 U08	BE -816-560 W01+	FR 2316-921 Y16+	ZA 7505-325 X37+	HU T017-467 C03	J5 1101-189 X43	DS 2637-545 B43
DT 2125-893 S50	DS 2117-234 C03	DT 2412-838 W04+	OE 7503-884 Y31+	J5 1125-734 X51+		J7 9043-073 C03	IL --50-162 C02+
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04032-C

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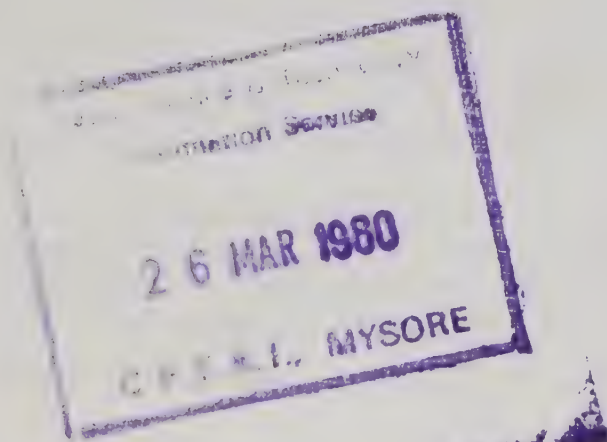
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London WC1X 8RP England



WEEK C04
12 MARCH 80
05457C - 07357C

ABSTRACTS

INDEXES

II - PATENTEE

V - BASIC NUMBER

VII - PATENT NUMBER

COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	18 DEC - 31 DEC 79	877,035 - 877,354
-Non Delayed	17 DEC 79	878,265 - 878,410
BRAZIL	8 JAN 80	—
CANADA	1 JAN 80	1,068,851 - 1,069,250
DENMARK	24 DEC 79	7,802,263 - 7,902,176
W. GERMANY		
-DAS	17 JAN 80	1,428,270 - 2,921,527
-OLS	17 JAN 80	2,109,849 - 2,928,045
EUROPE		
-Unexamined	23 JAN 80	6,842 - 7,317
FRANCE*	2 NOV 79 (BOPI 7 DEC 79)	2,421,539 - 2,422,314
UNITED KINGDOM	23 JAN 80	1,559,481 - 1,559,790 2,025,191 - 2,025,740
ITALY	20 OCT 79	1,035,001 - 1,035,500
JAPAN		
-Unexamined	— 6 DEC - 12 DEC 79	47,012,213 - 54,027,891 54,154,701 - 54,157,800
-Examined	20 DEC - 27 DEC 79	79,043,401 - 79,044,800
NETHERLANDS	31 DEC 79 - 6 JAN 80	7,806,868 - 7,905,130
NORWAY	27 DEC 79	7,801,801 - 7,901,808
RES. DISCLOSURE	JANUARY 80	189,001 - 189,058
FINLAND	31 DEC 79	7,801,037 - 7,902,864
SOVIET UNION	—	179,180 - 662,568
SWEDEN	14 JAN 80	7,801,534 - 7,909,824
UNITED STATES		
-Reissues	15 JAN 80	Re30,188 - Re30,195
-Patents	15 JAN 80	4,183,097 - 4,184,211

*Printed patents actually published late December, 1979 - early January, 1980

Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Main CPI Class for Section	Latest Priority	Earliest Priority	Patent No
	Other Classes		Earliest Disclosure Basic Patent		
	Publication Date		Accession No		IPC
MEDA-		A89	69369W/42	=US 3964-992	
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)					
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)					
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26					

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.



PATENTS ON MICROFILM

For a number of countries, we film every patent specification in numerical sequence using a flat bed camera at 24:1 reduction ratio. The 200 ft. polyester diazo negative 16mm reels are second generation from a negative silver master. They are despatched weekly by airmail, shortly after the specifications are published.

A list of the available films is shown below, giving number of reels per country per year, annual costs as from 1st January 1980, and the dates from which film is available. Backlog film can be made available at the same annual costs as for the current year.

Please address orders and enquiries to the PATENTS SUPPLY DIVISION.

This sheet may be used as an order form for both current and backlog orders.

PATENTS ON MICROFILM—AVAILABILITY AND PRICES AS FROM JANUARY 1980

COUNTRY	200' reels per year	ANNUAL COST			AVAILABLE from	PLEASE SUPPLY	
		£	\$	Yen 000's		From	To
CANADA	80	950	2,185	456	Jul 69		
EUROPE (EPO)	50	250	585	125	Jan 79		
FRANCE – new law	100	820	1,885	394	Dec 69		
EAST GERMANY	15	215	495	103	Oct 70		
WEST GERMANY OLS – new law	180	1,600	3,680	768	Mar 70		
DAS	30	240	550	115	Mar 70		
PS	27	210	485	100	Mar 70		
NETHERLANDS – new law	40	390	895	187	Mar 70		
PCT	25(100')	80	175	38	Jan 79		
SOVIET UNION	35	230	530	110	Jan 70		
SWITZERLAND	14	145	335	69	Mar 70		
UNITED KINGDOM New Law	30	250	575	125	Jan 79		
Old Law	30	340	780	163	Jul 69		

Cartridging 20% extra

To: Patents Supply Division
Derwent Publications Ltd
128 Theobalds Road
London WC1X 8RP

Film container to be:

Boxed open reel

3M Cartridge

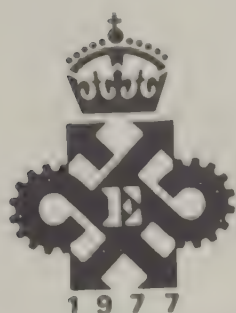
Kodak Cartridge

Please supply microfilm, as indicated on this sheet,
to the following delivery address:

Total value of order is

Signed

Invoice to be sent to delivery address unless stated
otherwise.



PATENTS COPY SERVICE

The Patents Supply Division has been organised to give an extremely rapid turnaround at low prices. The schedule of prices and turnaround times, together with the methods of ordering and payment, is given below.

SCHEDULE OF PRICES AND TURNROUND TIMES AS FROM JANUARY 1980

COUNTRY	DELAY from receipt of order within:	COST inclusive of (airmail) postage	SURCHARGE if applicable	NOTES
BELGIUM EUROPE PCT	1 day	per page £0.11, \$0.29 or Y84	—	Photocopies
FRANCE	2 weeks	per patent £1.55, \$3.60 or Y950	1p, 2c or 8Y per page if more than 20 pages	Printed copies. Delay reduced to 4 days for double the normal cost.
GREAT BRITAIN	2 days	per patent £1.65, \$3.75 or Y1000	—	Printed copies
JAPAN	4 days	per patent £1.10 or \$2.55	—	Photocopies
NETHERLANDS	1 week	per patent £1.50, \$3.45 or Y860	1p, 2c or 8Y per page if more than 20 pages	Printed copies
SOUTH AFRICA	3 weeks	per page £0.27, \$0.60 or Y170	Minimum charge equivalent to 5 pages	Photocopies
UNITED STATES	4 days	per patent £1.45, \$2.75 or Y880	13p, 25c or 80Y per page if more than 15 pages	Photocopies
WEST GERMANY	2 weeks	per patent £1.70, \$4.00 or Y1,040	1p, 2c or 8Y per page if more than 20 pages	Printed copies. Delay reduced to 4 days for double the normal cost.
CANADA SWITZERLAND EAST GERMANY SOVIET UNION	4 days	per page £0.19, \$0.50 or Y120	Minimum charge equivalent to 5 pages	Photocopies
 Copies of specifications can now be supplied for Austria, Brazil, Denmark, Finland, Hungary, Israel, Italy, Norway, Rumania and Sweden. Prices comprise actual costs plus a nominal handling fee. 				

METHOD OF ORDERING

- (i) By books of standard order forms available upon request, or
- (ii) By letter or
- (iii) By telex, to cut postal delay. French and West German patents ordered by telex are processed as rush orders at double normal cost (see NOTES above) unless normal service requested.

METHOD OF PAYMENT

- (i) On receipt of bi-monthly invoices, or
- (ii) By charges against deposit accounts. Subscribers are encouraged in their own interest to open deposit accounts with us so as to avoid the need for frequent payments.

Please address orders and enquiries to the Patents Supply Division.



DERWENT PUBLICATIONS LTD. Rochdale House 128 Theobalds Road London WC1X 8RP England

Central Patents Index NEWSLETTER

1980 No. 5

12th March 1980

1980 CPI SUBSCRIBER MEETINGS

IT IS IMPERATIVE THAT ANY CPI SUBSCRIBER WHO WISHES TO ATTEND AND HAS NOT YET RETURNED HIS OR HER REGISTRATION FORM SHOULD DO SO WITHOUT DELAY

1. CALL FOR PAPERS

Papers by subscribers will again form an important part of the programme at the CPI Subscriber Meetings. In addition to topics related to the use and development of Derwent services, there are many areas such as developing technology and information analysis which would be of considerable relevance to delegates.

* 2. ROOM RATES AT NEW YORK HILTON CPI MEETINGS

Derwent has been informed that the range of room rates quoted by the New York Hilton for subscribers attending the New York CPI Meetings was not after all correct. The correct quotation is Single \$75, Double \$92.

3. ELECTRICAL PATENTS INDEX MEETINGS

Special one day meetings to explain and discuss EPI have been arranged as follows:-

Tokyo	-	Okura Hotel	-	March 13th.
London	-	Royal Garden Hotel	-	March 28th.
New York	-	New York Hilton	-	April 8th.

Meeting booklets have been circulated to all CPI subscribers. While EPI will be discussed to a limited extent at the forthcoming CPI Subscriber Meetings, it is recommended that Subscribers with a special interest in EPI should attend one of the full day meetings detailed above.

A LARGE NUMBER OF DELEGATES HAVE ALREADY REGISTERED AND SINCE PLACES ARE LIMITED YOU ARE URGED TO INFORM DERWENT IMMEDIATELY IF YOU WISH TO ATTEND AND HAVE NOT SO FAR INDICATED YOUR INTENTIONS.

Correspondence should be directed to Mike Pope who is coordinating the various technical and physical arrangements involved.

* 4. INSTRUCTION CLASSES

Centralised classes for online and general instruction and in-house visits are being scheduled currently and requestors will be informed of arrangements by letters to be sent during the week of 16th-21st March.

The finalised itinerary of central classes will be given in the next Newsletter.

* 5. CATCH-UP FOLLOWING CHRISTMAS/NEW YEAR DELAY

Inclusion of countries in Derwent services will be restored to schedule by the insertion of two issues of French patents in Week C08, an extra issue of Dutch patents spread over Weeks C09 and C10, and two issues of Canadian patents in Week C11.

* 6. BELGIAN PATENTS

Delays in receipt of Belgian patents from the Belgian Patent Office are continuing and inclusion of Belgian patents is consequently about one week behind schedule.

7. INTERNATIONAL PATENT CLASSIFICATION

The 1979 (Third) Edition of the IPC has now been published in English, French and German versions by Carl Heymans Verlag. It can be purchased from them as individual volumes 1-8 containing IPC Sections A-H and volume 9 which is a Guide, Survey of Classes and Summary of Main Groups or as a Complete Set Volumes 1-9. The cost of the complete set is DM 537 and the cost of the single volumes varies from DM 35 - DM 124. Volume 9 costs DM 40.

IPC³ is already being applied to PCT patents published from 1.11.79. It is expected that several other countries will use the new IPC starting in January 1980. Exceptions to this already known are Switzerland where the new IPC will be used from 1.4.80. and West Germany where it will be used completely from 1.7.80. but may be applied as a special service from 1.1.80.

* 8. U.S. OFFICE

Mr. Brian Lafferty, Assistant Manager, Subscription Department will be at our Washington Office from Monday 17th until Friday 28th March. Subscribers are reminded that the telephone number of our Washington Office is (703) 521-7977.

* 9. EPO COMPLETE SPECIFICATIONS MICROFILM

All subscribers to European Patents Complete Specifications on microfilm received with Advice Note No. 9 (5th March 1980) a detailed description of changes in format for this film. This instruction sheet will be vital to all users to ensure rapid location of items and further copies are available from our Microfilm Department upon request.

* 10. MANUAL CODE INDEXES IN THE BAJIS AND IN PROFILE 21

There have been extended problems with these indexes since Week C01. The Indexes for Week C01 and C02 will be bound into Week C04 products. If Weeks C03 and C04 indexes are available in time then one or both will also be included in Week C04 products.

Since loose sheets are never satisfactory, it has been decided to bind late indexes into following products, which leaves a Subscriber free to photocopy and mount any index into its corresponding book, if desirable.

* 11. MAGNETIC TAPE PRODUCTS

There has been a delay in the production of the weekly 'Single Tape Product' with the result that no tapes have yet been sent out with C-series data.

The software problems causing the delay have now been solved by our bureau and we will be supplying all the delayed data on a single tape, due for despatch next week.

This tape will contain Bibliographic and Manual Code data for Weeks C01-C05 and Multipunch data for Weeks B45-B48. This is the quickest way for us to make up the backlog, and we trust that it will not cause any complications.

Following this catch-up the weekly 'Single Tape Product' will be despatched regularly and each file on the tape should carry a single week's data.

A tape covering the same ranges of delayed data will be sent next week to subscribers to the monthly tapes.

* 12. WPI ONLINE FILE POSITION

<u>InfoLine</u>	<u>Loaded to</u>	<u>Awaiting Loading</u>
Basics/Equivalents	B51 (7912)	C01-C05
Manual Codes	B51	-
Multipunch A + PKT	B48	-
Multipunch BCE	B48	-
<u>SDC (USA)</u>		
Basics/Equivalents	B51 (7912)	C01-C05
Manual Codes	B51	-
Multipunch A + PRT	B44	B45-B48
Multipunch BCE	B44	B45-B48

* 13. EUROPEAN/PCT DESIGNATED STATES/CITATIONS

InfoLine has added the Designated States (qualifier DS), Citations (qualifier SR) and Language Indicator (qualifier LA) for European and PCT Patents to their Online file. These have, at present, been updated to Week B33 but will be updated to be in line with the Basic/Equivalent bibliographic details within the next two weeks.

14. SEARCHES FOR SUBSCRIBERS AND NON-SUBSCRIBERS

A very useful ancillary service is provided by the Technical Services Division in performing searches on demand for both subscribers and non-subscribers.

Searches are performed by experienced technical staff against Derwent's extensive database of some one and three quarter million patent families, using whatever access points or coding are the most appropriate. Such searches will be extremely valuable, but we must emphasise that from a legal standpoint they can in no way be construed as novelty searches and cannot replace these.

The prices quoted below are minimum prices per search request and estimates will always be given on request before proceeding or where the actual cost considerably exceeds these figures.

Type of Search	Cost:Subscriber		Cost:Non-Subscriber	
	£	\$	£	\$
Bibliographic (concordance)	14	30	18	40
Subject (incl. patentee)	25	55	35	78
Offline Prints/ Citation	0.065	0.13	0.12	0.25

Searches are carried out within 24 hours of receiving written instruction (letter or telex) provided no further query or clarification is involved.

Requests should be directed to Technical Services Division, Derwent Publications Ltd. at our London address.

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Our Ref: CPI Advice Note No. 10

Telephone: 01-242 5823/6

Cables: DERWENTINF LONDON

Telex: 267487

12th March 1980

CENTRAL PATENTS INDEX

: ALERTING BULLETINS - COUNTRY ORDER

O7358C - O9190C C05

EXAMINED JAPANESE APPLICATIONS

The advanced version of the alerting abstracts which will appear as the current version in Week C10 Alerting Bulletin (Country Order) are included in this week's consignment.

: ALERTING BULLETINS - CLASSIFIED

O5457C - O7357C C04

: WEEKLY ALERTING BULLETIN INDEX BOOKLET

O7358C - O9190C C05

: BASIC ABSTRACTS JOURNALS

O3624C - O5456C C03

: COMPLETE SERIES BASIC ABSTRACTS ON MICROFILM

Reel No. 282 82501B - 85000B B45/B47

: PROFILE BOOKLETS

O1734C - O3623C C02

PROFILE MANUAL CODE CARDS

Profile 21A

Section H

15391 B51

Section J

22138 - 22141 B51

Section N

O3707 - O3729 B50

9: CS MICROFILM

A Reel 118	92346B - 92773B	B51
A Reel 1	00001C - 00332C	C01
A Reel 2	00337C - 01720C	C01
B Reel 56	89954B - 92746B	B51
B Reel 1	00035C - 01678C	C01
C Reel 32	90700B - 92749B	B51
D Reel 43	91385B - 92772B	B51
E Reel 71	90686B - 91127B	B51
E Reel 72	91523B - 92753B	B51
E Reel 1	00001C - 01163C	C01
F Reel 41	90956B - 92704B	B51
G Reel 30	89797B - 92724B	B51
H Reel 24	90976B - 92774B	B51
J Reel 41	90801B - 92768B	B51
L Reel 34	89643B - 91242B	B51



10: COMPLETE SPECIFICATION BOOKS

B No. 1198 O3624C - O3888C	CO3
B No. 1199 O3889C - O4554C	CO3
B No. 1200 O4555C - O5456C	CO3
C No. 739 O3624C - O3889C	CO3
C No. 740 O3890C - O5456C	CO3

13: COMPANY CODE CARDS

O1734C - O3623C	CO2
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14: SECTIONAL BASIC PATENTEE INDEXES
AS COM (FICHE) 1979

A, B, C, E, DFG, HJK, LM

17: MANUAL CODE CARDS

A 152779 - 153055	B51
B O1734C - O3623C	CO2
C O1734C - O3623C	CO2
D 25510 - 25589	B51
*E 66657 - 66847	B51
F 33366 - 33407	B51
G 22840 - 22891	B51
H 15372 - 15404	B51
J 22096 - 22145	B51
K O6807 - O6814	B51
L 30680 - 30763	B51
M 37360 - 37435	B51

*Indicates replacement card serial no.
66067

19: PUNCH CODE CARDS

B 91140B - 92746B (260 cards)	B51
C 91140B - 92749B (196 cards)	B51
E 89396B - 91127B	B50

Item 19 - The following reissued*/re-classified cards are included in this week's consignment:

Section B - NIL

Section C - NIL

Section E - O1837A(4)*, O2137A*, O3900A(4)*, O4776A*, O5860A(3)*, O6972A(2)*, O7026A(3)*, O7129A(2)*, O8046A(7)*, O9005A(3)* cont'd..

Section E (cont'd.) - 10151A*, 10514A(2)*, 11871A*, 11953A(4)*, 13012A(3)*, 13971A*, 14699A(12)*, 14796A*, 15339A(3)*, 15739A(2)*, 15780A(4)*, 16034A*, 16179A(2)*, 17145A(2)*, 17461A*, 17769A*, 18665A*, 21587A(3)*, 21928A(2)*, 22647A*, 22679A(2)*, 22680A(2)*, 22697A(4)*, 23213A*, 27755A*, 30880A(2)*, 35836A*, 38036A*, 39143A(2)*, 46571A(2)*, 53936A*, 57090A(2)*, 58589A(2)*, 65833A*, 69451A(2)*, 69452A*, 72135A*, 77896A*, 79001A*, 80975A*, 83856A(3)*, 86433A(2)*, 88366A(3)*

Correction to Advice Note No. 4 - Item 19 Reissued*/reclassified punch cards for we B44 Section C should be 70550B, 75502B*, 77062* not 66679B, 66680B(4), 68042B(5)

24: COM INDEXES AS MICROFICHE 1979

Basic Patentee Index A-M/Ch
Patent No. Family Index
Basic Priority Index Ch

25: RIN SERVICE

Screen Cards

B Nos. 001 - 032	B51
C Nos. 001 - 016	B51
E Nos. 001 - 050	B50

Weekly Indexes

Delayed

Sheets and Cards

Delayed

CS MICROFILM BY COUNTRY

EPO	EP35	OPI	23. 1.80
FR NEW LAW	2239 - 2240	OPI	14.12.79
DT OLS	3833 - 3838	OPI	21. 2.80
NL	1032 - 1033	OPI	7. 2.80
UK OLD LAW	1165 - 1166	OPI	27. 2.80
UK NEW LAW	GB91 - 92	OPI	20. 2.80
*DT OLS	3741 - 3742	OPI	25.10.79

*Delayed Reel now issued.

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Our Ref: WPA/WPI Advice Note No. 10

Telephone: 01-242 5823/6

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Telex: 267487

12th March 1980

WORLD PATENTS ABSTRACTS PUBLICATIONS

DESPATCHED THIS WEEK

Belgian Patents Abstracts		C06
British Patents Abstracts		C05
French Patents Abstracts		C05
German Patents Abstracts		C05
German Patents Gazette		C05
Japanese Patents Report	Despatched 10.3.80	C06
Japanese Patents Gazette		C05
Netherlands Patents Report		C05
Soviet Inventions Illustrated		C05
U.S. Patents Abstracts		C05
WPA Journals		C05
European Patents Report (Patent Nos. 7318 - 7920)	Issue No. 30	C06
PCT Patents Report		NIL

WORLD PATENTS INDEX

Gazettes Section P, Q, R and Ch	Despatched 6.3.80	C05
Priority Index	Despatched 6.3.80	C05
WPI Quarterly Priority Index VIII (Printed)		B27-B39
COM Index on Microfiche - Basic Patentee Index 1979	Ch, and R	
Patent No. Family Index		
Basic Priority Index Ch		

WORLD PATENTS ABSTRACTS ON MICROFILM

Section P	Supplementary Reel 2	35239B 19 - 64696B 35
Section R	Supplementary Reel 2	35240B 19 - 64698B 35



D1: FOOD; FERMENTATION

D11: BAKING

KEMP/ ★ D11 05515C/04 ★BE-878-375
Two-speed mixing or kneading machine partic. for bakery - has programming keyboard for integrated circuit controller with input memory

KEMPER K 23.08.78-DT-836757
R53 (17.12.79) A21c B01f H02p

An electrically powered bowl mixer or kneading machine with two or more operating speeds is described. The machine is of the type in which the mixing bowl is covered with a safety grill. Opening the grill for access to the bowl automatically isolates the machine from the electric supply. A time switch can be set to operate the machine at selected speeds for selected durations.

The machine is now furnished with a keyboard operated electronic controller with input memory. A digital display indicates preset and actual durations of operation at each speed. If the high speed operation period is interrupted by safety grill removal, replacement of the grill is used to initiate a brief operation at low speed followed by return to high speed for the remainder only of the preset duration.

The mixer is programmable from a single, accessible keyboard without mechanical alterations to the machine. If stopped during higher speed period, it can pick up where it left off after an automatic, slow pickup. 22. 8. 79 as 878375 (18pp448).

ZUGM- D11 30858R/18 =DS 1944-863
Domestic oven protects controls from fume attack and - cuts in and out depending on control panel position

METALLWARENFAB ZUG (MET-) 15.10.68-CH-015425
+Q74 (17.01.80) *DT1944-863 +F24c-15

A baking oven, esp. one of the built-in flush fitting type, has a door which is hinged at the bottom and above the door a box contg. the control fittings and control knobs. This box is the enclosed front part of a drawer for a duct contg. a fan to discharge steam and vapour to the chimney. When the drawer is pulled out, an opening in its bottom with a filter lies above the door opening so that any vapours from the baking space are extracted instead of contaminating the controls. The drawer also uncovers holes from the space surrounding the baking space so that the oven can be cooled quickly if desired.

The kitchen is thus kept free from vapours and the controls are well protected. 4. 9. 69 as 944863 (4pp39).

PAUL/ D11 76232Y/43 =DS 2716-163
Continuous electric baking oven - with interlinked charging doors on inner and outer muffle shells for spiral chute

PAULUCCI J F 12.04.76-US-676211
+Q77 (17.01.80) *DT2716-163 A21b-01

An oven for the baking of food such as pizzas, has between the outer shell and the insulation of the inner shell a space through which cool air is circulated by a built-in fan. The electrically heated inner shell houses an inclined spiral chute along which the pizza in its baking tin can slide, controlled by a slowly revolving cage with vertical bars. A charging door on the inner shell can swing outward, as it is hinged and coupled by a rod to an outer sliding door, when the latter is raised. A boss on the inside of the inner door pushes the pizza off the charging table to the chute.

This keeps the outer door always cool and protects the operator from excessive heat. Frozen pizzas are prepd. and baked in $3\frac{1}{2}$ mins. 12.4.77 as 716163 (7pp39).

MART/ ★ D11 05945C/04 ★FR 2422-151
Weighting-out machine for dough - incorporates prepn. of dough and transport of dough to weighing device ensuring true weighing of portions directed to the conveyor band

MARTINEZ R 08.04.78-ES-469434
R13 (07.12.79) A21c-05 G01g-17/06

Weighing machine for dough comprises an open dough

prepn. chamber communicating through a lower coaxial hopper with a piston and cylinder system which receives a specific amt. of dough and delivers it to a conveyor band. The coaxial hopper can be closed cyclically by an element designed, on one hand, to close the inlet of the communication hopper so as to prevent the passage of dough and, on the other hand, to allow the passage of the paste for the delivery of the specified quantity when it is open.

Dough level detector allows the periods of stoppage and operation of the chamber to be determined. The chamber can rotate about its own axis and the assembly carrying the cylinder and piston can be displaced longitudinally by a system of guide and rollers under the action of a bolt and nut system driven by a motor.

Machine itself possesses directly the means of prepn. of the dough and of transporting it to the weighing-out device ensuring the true weighing out of the portions which are directed on to a transporter band. 29.1.79 as 002232 (7pp1192).

GEME- ★ D11 05989C/04 ★GB 2025-306
Folding food-crepe along diagonal by dropping into shaped casing - feeding fold between pinch rollers removing crepe from casing

ETAB GEN MEC OUEST 04.07.78-FR-019944
(23.01.80) A21c-09/08

A circular crepe is discharged from the end of a conveyor belt and falls into a shaped casing which causes the crepe to fold back on itself along a diagonal. The fold tilts sideways and enters the bight between a pair of rollers one of which is pref. the end roll of a second conveyor. The rollers press the fold and the conveyor removes the folded crepe.

Pref. the upper roller includes a peripheral bead which forms a radial score line in the crepe to define the location of a second fold. A pref. moistened crepe is discharged into a casing by a first conveyor belt. 26.6.79 as 022183 (7pp295).

QUAL/ ★ D11 C/04 ★IT 1033-022
Twisted pastry prodn. appts. - with novel dough moulding system
QUALINO U 06.11.78-IT-069531
(10.07.79) A23g

MEIJ ★ D11 06731C/04 ★J7 9044-733
Instant bread mix - prepd. from flour sugar, oil, salt, yeast and yeast food by forming into dough, drying, grinding and mixing with baking powder

MEIJI SEIKA KAISHA 01.03.76-JA-021917
(27.12.79) A21d-10

Method comprises mixing flour, sugar, oil, salt, yeast and yeast food with water, fermenting the dough, drying the dough at a temp. below the alphasising temp. of starch (usually $<50^{\circ}\text{C}$), grinding the dried dough into powder, and mixing the powder with baking powder.

In use, the powder is mixed with water and baked. 1.3.76 as 021917 A21d-10/00 (27.12.79) MEIJI SEIKA KAISHA (5pp83) (J5 2105241)

FOOD= ★ D11 06867C/04 ★SU-661-251
Automatic controller of dough lump mass - has dough supply mechanism and rotating divider with piston and volume regulator

FOOD IND CORR INST 20.12.76-SU-432673
R13 (15.05.79) G01g-09

Automatic controller of dough lump weight has programmer connected through a comparator to an amplifier, providing signal to a regulator of a dough divider. Dough is supplied by motor driven screw feed to a pressure measuring section with tensometric gauges connected to multiplier of a controller.

Goroshenko, M.K., Zabolotskii, Yu.A., Kulakovskii, A. I. Bul. 17/5.5.79. 20.12.76. as 432673 (4pp23)

UPRO= ★ D11 06904C/04 ★SU-662-051
Dough dividing machine for bread-baking - has dough chamber with notched delivery rollers which move into the compression zone as the rollers revolve, to reduce pressure, etc.

UKR PROVISION EQUIP 29.06.73-SU-940477
(25.05.79) A21c-05/04

Dough-dividing machine is used in the baking industry. It comprises a receiving funnel, dough chamber with delivery rollers distributed inside it and rotating towards one another, dividing head, and drive motor. Mechanical influence on the dough is reduced, and the dividing accuracy is increased, by cutting notches on the working surface of at least one of the rollers. The notches are made segment-shaped.

Rakhimshtein, A.G., Tkachenko, I.P. Bul. 18/15.5.79.
29.6.73. as 940477 (2pp29)

INTT D11 94193X/50 =SU-662-052
High complete protein wheat bread compsn. - having acceptable eating quality, grain, texture and sliceability

INT TELEPH & TELEG CORP 04.09.75-US-610489
(20.05.79) *US3995-065 +A21d-08/02

A high complete protein wheat bread-producing compsn. comprises: 100 pts. wheat flour 0.5-3 wt. % wheat germ, 1-3 wt. % wheat gluten, 0.1-0.5 wt. % L-lystine hydrochloride, 2-6 wt. % casein, 1-7 wt. % soy protein isolate, 0.25-2.25 wt. % egg white solids and 2-13 wt. % lactalbumen. The bread has acceptable eating quality, grain, texture and sliceability while contg. 15% complete protein with a PER of 2.5. Titcombe, S.T., Dewers, A.A. Bul. 18/15.5.79. 3.9.76. as 393675 (2pp)

VOTE= ★ D11 06905C/04 ★SU-662-053
High viscosity dough from low-grade flour prepn. - includes introduction of molecular oxygen into flour-water mix. at specified temp. for use in bread, macaroni or cakes mfr.

VORON TECHN INST 11.05.75-SU-132844
(20.05.79) A21d-08/04

The low grade flour is mixed with water followed by addition of an oxidising agent, and mixing the dough.

Low-grade flour can be used without affecting the quality of the product by increasing the viscosity of the dough 2-3 times (the weight of the bread is increased by 2%) by introducing into the flour-water mixt. as an oxidising agent molecular O₂ to a concn. of 30-35 mg. O₂ per litre of the mixt. at 30-32°C for 1.5-2h. The fermentation is accelerated (by 20%).

Mazur, P.Ya., Karpenko, V.I., Noskov, E.N. Bul. 18/15.5.79. 11.5.75. as 132844 (2pp70)

PENN D11 75603B/42 =US 4183-97
Potassium bromate powder additive to flour and starch - contains phosphate salt and hydrated salt to reduce inflammability and explosion-hazard (NL 9.10.79)

PENNWALT CORP 05.04.78-US-893555

E34 (D17) (15.01.80) *DT2913-773 +A21d-10

Flour and dough improvement compsn. is prepd. comprising a powdery mixt. of potassium bromate plus 30-125 wt. pts. of an inert, edibly acceptable, flame retardant phosphate salt per 100 wt. pts. of bromate.

The compsn. further contains an inert, edibly acceptable hydrate salt which provides ≤ 50 wt. pts. of water per 100 wt. pts. of bromate. The hydrate salt is present in amt. sufficient to reduce the fire and/or explosion hazard of the compsn. when mixed with equal proportions of flour or starch.

Pref. the phosphate salt is also a hydrated salt and provides ≤ 50 wt. % of water per 100 wt. parts of bromate. The compsn. is esp. used in the milling and baking industry. 5.4.78 as 893555 (5pp931)

D12: MEAT; FISH PROCESSING

MEAT= D12 74440W/45 =DS 2516-995
Carcase skinning conveyors in meat prodn. line - having unhooking point of front legs dependent upon carcase length

MEAT IND RES INST 17.04.75-DT-516995 (17.04.74-SU-012229)
(17.01.80) *DT2516-995 A22b-05/16

A plant to skin animal carcasses in abattoirs, when suspended by the hind legs from rollers on a monorail, consists of an outer endless chain and an inner endless chain which move at different speeds. Hooks on the meat of the fore legs are engaged in cross bars of the outer chain and the skin at that end is moved into a hook on the inner chain.

The fore leg hooks on a skinned carcass are removed from the cross bars by two conical discs, with a one-sided slot and release stop between them. The rollers with the rear leg hook are stopped during this disengagement and are released by a rope pull so that the carcass can run clear on an inclined monorail section.

This mechanism disengages the hooks independent of the size of the carcass and prevents any contamination of the carcass. 17.4.75 as 516995 (11pp39).

MEAT= ★ D12 05678C/04 ★DT 2925-095
Flow line for sausage mfr. - with closed loop of stepping conveyors and roller tables for all prodn. stations

MEAT IND RES INST 21.06.78-SU-623634
(17.01.80) A22c-18

A flow line for the prodn. of sausage food is a closed loop, formed by two parallel step-by-step conveyors, with a step equal to the size of a mould. The line includes stations for the extrusion of sausage meat, filling/metering, treatment by heat and cold, mould discharging and mould rinsing. Inclined roller tables join the ends of the parallel conveyors.

This speeds up the mfr. of sausages and reduces the amt. of ancillary operations required. 21.6.79 as 925095 (57pp39)

BADI ★ D12 05731C/04 ★EP ---6-528
Polyamide used in forming meat and sausage casings - prepd. by condensing hexa:methylene di:amine and azelaic acid

BASF AG 22.06.78-DT-827384

A97 (A23) (09.01.80) A22c-13

D/S: E(BE, CH, DT, FR, GB, NL, OE, SW).

Polyamide 69 is used for the prodn. of casing tube for meat and sausage goods, and is partic. suitable for sausages which are boiled or scalded at 70-100°C as part of the manufacturing process.

The casing has high flexibility and strength. The sausages encased in the polyamide film have longer storage life than casings made of polyamide 12.

11.6.79. as 101895 (5pp004).

(G) ISR- FR 2343018; DE 2330774; DT-1939576.

FARH ★ D12 05732C/04 ★EP ---6-55
Cellulose hydrate tubular sheath esp. for sausage packaging internal coated with vegetable oil and/or tri:glyceride mixt. of saturated vegetable fatty acid based mixt.

HOECHST AG 24.06.78-DT-827862

A97 (A11) (09.01.80) A22c-13

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

A tubular sheath of cellulose hydrate is coated on the inner side with a mixt. of a major amt. (I) of vegetable oils and/or triglyceride mixts. of 4-14C satd. vegetable fatty acids and a minor amt. (II) of chemically modified starch, partially hydrolysed PVA and/or microcrystalline cellulose.

The sheath is used for packaging, esp. as sausage skins and does not adhere to the meat. Rolls of the sheath do not stick when stored which is important for taking-off. The sheath can be easily opened and are soft. (I) is a lubricating agent and (II) a separating agent and the mixt. is synergic.

15.6.79. as 101963 (20pp952)

(G) ISR: FR 2141324; FR 2027823; FR 2020999;
FR 1188399.

MALF/ ★ D12 05884C/04 ★FR 2421-559
Power driven hand tool to remove scales from fish - is fast and safe and facilitates collection of scales
MALFIONE J L 20.01.78-FR-002809
(07.12.79) A22c-25/02

The tool has a rotary shaft with rasp teeth on its circumference to remove fish scales by abrasion. The shaft projects from a handle which contains a drive motor and, pref., a battery as power source.

The tool can be used safely for the rapid removal of scales without damage to the surface or flesh of the fish. Displaced scales are all projected in a controlled direction. Rasp teeth are pref. incurved towards the shaft axis. The handle is pref. includes with a thumb switch for the drive motor. 20.1.78 as 002809(8pp448).

SOUS- ★ D12 05907C/04 ★FR 2421-726
Bonded fibrous sheet with gas permeability similar to gut - suitable for wrapping salted foods e.g. meat
SOUSSANA SA 04.04.78-FR-009930
A97 F09 (07.12.79) A22c-13 B29j-01/02

A wrapping material is made from a mixt. of 10-50% wt. short chopped polyester fibres, 20-40 wt.% cellulosic paper pulp and 20-70% of a synthetic fibrous pulp. A layer of the mixt. is calendered and/or microcorrugated at a temp. of 120-150°C to consolidate the composite sheet to the required degree of porosity.

Used for mfr. of sheet required to be permeable to both gas (air) and water vapour to a degree similar to natural hides, esp. the sort of hides used to enclose salted food, e.g. meat. Such sheets can now be made for less cost than natural hides, and also can be joined directly by welding. 4.4.78 as 009930(7pp515).

CHAM/ ★ D12 C/04 ★IT 1035-010
Vacuum packed sliced salami prepn.
CHAMBOST A 30.06.67-FR-048859
(20.10.79) A22c 26.6.68 as 037973

LOY ★ D12 06659C/04 ★J7 9043-592
Improving stickiness of marine prod. paste foodstuffs - by adding a small amt. of glycerine
LION FAT & OIL KK 19.09.72-JA-093219
E17 (20.12.79) A231-01/32

Crushed marine products are mixed with other additives and further mixed with 0.1-3 wt.% glycerine. By this method, the stickiness of the resulting paste foodstuff is improved. The additives include starch, table salt, sodium glutamate, colouring agent, sugar, antiseptic, etc.
9.9.72 as 093219 A231-1/325 (20.12.79) LION FAT & OIL KK (2pp22) (J4 9048868)

MOMD ★ D12 06786C/04 ★SU -511-740
Meat loaf prodn. from comminuted meat, lard, spices and water - includes baking and cooling at specified temp. and pressure in sealed vessel to flavour
MOSCOW MEAT DAIRY INST 12.10.72-SU-836164
(03.07.79) A23b-04/04

Meat loaf is produced by prepg. a mixt. of comminuted meat, spices, lard and water; moulding; preliminarily browning and then baking; and cooling.

The process is accelerated and the quality of the product is improved by carrying the heating in one stage at a constant temp. pref. 120-130°C, under hermetic conditions. The baking time is pref. 1h. 45 min.

Medvedev, A.M., Lykova, A.V., Peleev, A.I. et al. Bul. 23/25.6.79. 12.10.72. as 836164 (2pp70)

REFR= ★ D12 06795C/04 ★SU -587-775
Animal source food prods. quality control - includes animal, bird or fish muscle tissue lipid extn., fractional sepn. and densitometry
REFRIG IND RES INST 31.10.75-SU-190385
R16 (06.07.79) G01n-31/08

Animal source prod. quality control includes extn. of lipids from muscle tissue of killed animals, birds and fish, and subsequent analysis. More accurate results are obtd. if the lipid extract is fractionated, e.g. using thin

layer chromatography followed by the determination of amts. of cephalin, lecithin, sphingomyelin, serine-phosphatide, inosine-phosphatide and lysophosphatides by the densitometric method.

The quality of meat or fish is estimated by the percentage ratio of total amts. of sphingomyelin, serine-phosphatide, inosine-phosphatide and lysophosphatide to the joint content of cephalin and lecithin.

Yakubov, G.Z., Kargaltsev, I.I., Goslyannikov, V.V. et al. Bul. 24/30.6.79. 31.10.75. as 190385 (4pp938)

KIFO= ★ D12 06906C/04 ★SU -662-054
Knife for meat mincer - has blades to which cutting plates are fastened, both having notches through which the non-minced meat passes to the blade and plate behind
KIEV FOOD IND TECHN 15.12.77-SU-553963
(20.05.79) A22c-17

Knife for a meat mincer, has hub and blades to which the cutting plates are fastened. Mashing of the meat is prevented and operating effectiveness of the knife is increased by providing each blade and plate with notches, forming openings through which the unminced meat can pass.

Klimenko, M.N., Kulinich, V.V. Bul. 18/15.5.79. 15.12.77. as 553963 (2pp29)

MAMY/ ★ D12 06907C/04 ★SU -662-055
Sausage drying appts. - with openable, chain-connected holders moved through round high frequency and vacuum chambers
MAMYKIN V K 06.12.77-SU-551412
A97 Q76 (20.05.79) A23b-04/04 F26b-03/34

The appts. comprises a heating chamber formed as a round cross-section waveguide with a cylindrical guide along its axis to hold a conveyor, and a working chamber which is sealed and connected to a vacuum system. The conveyor pref. consists of elongate pivotally interconnected links each of two parts for opening to insert a sausage
Mamykin, V.K., Adamenko, V.Ya., Gorbato, A.V. et al. Bul. 18/15.5.79. 6.12.77. as 551412 (3pp1358)

MOMD ★ D12 06908C/04 ★SU -662-056
Children's meat products steriliser - has conical disc in chamber with scraping knives and rotating worm in outlet pipe
MOSCOW MEAT DAIRY INST 21.12.77-SU-557514
(20.05.79) A23c-03/02 A231-01/31

The appts. comprises a rotatable conical disc in a chamber with inlet and outlet pipes, a rotating worm in the outlet pipe, and a funnel carrying knives for scraping product from the chamber wall. The outlet pipe is concentrically within the chamber and is rotatable oppositely to the worm.

The funnel is secured to the outlet pipe and has the knives facing the conical disc. Meat mixture supplied to the chamber top is thrown by the disc onto the chamber wall to slide down as a film which is directly heated by saturated steam supplied to the chamber. The film is scraped off by the knives for removal by the worm together with the broth formed by the condensate and meat extract.

Brazhnikov, A.M., Filipenko, B.P., Nikolaev, N.S. Bul. 18/15.5.79. 21.12.77. as 557514 (3pp1358)

ROME= ★ D12 06917C/04 ★SU -662-099
Animal brain sub:commissure-organ removal - includes specified skull and brain cutting, used in animal carcass processing
ROST MEDICAL INST (MEAT=) 09.12.77-SU-553079
(15.05.79) A22b-05 A61k-35/30

Animal brain subcommissural organ is removed from animal brain during animal carcass processing in meat industry by sectioning animal skull and sepg. the subcommissural part of the brain to remove the above organ.

The process is simplified and the removal of the organ is accelerated if the animal skull is cut with guillotine type cutter, asymmetrically at angle to sagittal line. The brain is then sectioned in the above region along the aqueduct of Sylvius and the subcommissural organ is removed by section of the lamina quadrigemina region and sepn. from the posterior cerebral commissure and of the brain.

Sizy yakina, L.P., Gulyants, E.S., Mamonov, N.D. et al. Bul. 18/15.5.79. 9.12.77. as 553079 (2pp938)

MEYN/ D12 19713A/11 =US 4183-117
Machine for cleaning fowl stomachs when giblets are removed - aligns carcass accurately to knife and presses it open

MEYN P 28.11.76-NL-013251
(15.01.80) *BE-860-435 A22c-21

Poultry gizzards are split and skinned by appts. which includes an endless chain for transporting the gizzards to a vertical, circular, rotating knife, a spreader bar to open the gizzards; and a pair of rolls to skin the gizzards. The split gizzards are lifted to the rolls by a pair of pressure discs which are located on each side of one of the sprocket wheels of the chain. The discs have a larger dia. than the wheel.

The gizzards are pref. directed to the chain by a pair of parallel horizontal rolls. A brush is pref. located near the spreader bar to empty the gizzards. The appts. is simple and uses very little water. 3, 11.77 as 848030 (7pp1376)

GRAH/ ★ D12 07138C/04 ★US 4183-118
Severing oil bag from poultry carcass - held against rotating knife support bracket

GRAHAM K 20.03.78-US-890603
(15.01.80) A22c-21

Poultry carcasses are suspended from an overhead conveyor which carries them through a processing station. A bracket is attached to an auxilliary conveyor which is

synchronised with the main conveyor to bring the brace into contact with the tail of the carcass to support and orient it prior to cutting. A rotating knife engages the oil bag and pushes it against a stationary blade in a scissors action which removes the oil bag from the carcass.

The appts. removes the oil bag from a carcass with cutting away valuable meat. 20.3.78 as 890603 (9pp29)

VINO/ ★ D12 07312C/04 ★US 4183
Mfg. sausages in skins - by forming final casing thermo-seal and cooking over provisional seal to prevent filaments impairing seal
VINOKUR I 29.07.77-AR-268612

Q31 (15.01.80) B65b-07/02 B65b-09/12

Sausages are made by stuffing thermo-sealable tubular casing with meat emulsion, making a preliminary seal, at least partially cooking, then forming a final seal at the same site as but wider than the preliminary seal so that the meat is compressed into the casing.

For partial cooking, the sausages are pref. heated at 80°C for 2 min. before final sealing and cooking. The final sealing cuts meat filaments retained by the preliminary seal so that they do not interfere with the final seal and the seal remains intact. 20.7.78 as 926344 (3pp1358)

See Also

D13 J7 9044735

D13 J7 9044736

D13: OTHER FOODSTUFFS

GUAN D13 04786H/00 =DS 1692-434
Animal feed mineral supplements contg phosphates of

GUANO WERKE AG 19.07.67-DT-G50667 (18.07.67-DT-692434)
C03 (17.01.80) *BE-718-124 + C01b-25/26

A mineral food supplement of Na, Mg and opt. Ca orthophosphates is prepd. Phosphoric acid, freed from arsenic and fluorine and contg. 40-60% P₂O₅ is neutralised simultaneously with oxides, hydroxides or carbonates of Na, Mg and opt. Ca in stoichiometric proportions corresp. to a mixt. of the following compsn. in mole % 60-25% disodium monohydrogen phosphate, 20-50% magnesium monohydrogen phosphate and 0-25% calcium monohydrogen phosphate.

The neutralisation is carried out in a horizontal drum with lifting ledges, from which the solid components fall in a fine curtain. Into this mixt. is sprayed phosphoric acid and opt. sodium hydroxide. The hot, moist, crumbly prod. is cooled in an air stream and dried, too large and too small particles removed by sieving and returned to the neutralisation stage. The large particles are pref. comminuted first. A slurry stage is avoided by spraying with phosphoric acid. 18.7.67 as 692434 Add to 1301705 (3pp068).

BUCM D13 85966R/46 =DS 1761-986
Fruit juice extraction press

BUCHERGUYER MASCH 25.08.67-CH-011931
P71 (17.01.80) *US3541-951 + B01d-35

A filter press is to produce juice from 2 juice-contg. solids charge consists of a moving press plate inside a press cage which is traversed by juice-permeable tubes with an open end into the juice collection chamber. The latter is arranged at the abutment plate end, opposite to the moving press plate. The inlet of the charge is a tube in the centre of the abutment plate; the juice outlet is a concentric tube around the inlet tube.

This simplifies the charging and discharging operations. The design is simple and reduces the detrimental effect of the oxygen in the ambient air on the juice to a minimum. 1.8.68 as 761986 (9pp39).

UNIL D13 92172R/49 =DS 2029-506
Thia alkane thiols as meat aroma food additive

UNILEVER NV 17.06.69-LU-058893
E17 (17.01.80) *BE-751-946 A23I-01/22 C07c-149/10

Thia-alkanethiols (I) of formula R¹-S-C(SH)H-R² (I) (where R¹ and R² are each (m)ethyl), esp. 2-thiabutane-3-thiol, are new.

(I) may be prepd. by reacting acetaldehyde or propaldehyde with methane thiol or ethane thiol in presence of H₂ an alkali(ne earth) sulphide or bisulphide in aq. medium at pH 3-8 in presence of an organic solvent which forms two phase system with the aq. medium. (I) are useful as such or their salts to improve the meat flavour of foodstuffs. 15.6.70 as 029506 (8pp068).

NEST D13 26029T/17 =DS 2149-6
Food additive - having the taste and aroma of roast beef

MAGGI AG 06.10.70-US-078591
(17.01.80) *DT2149-682 A23I-01/23

A flavouring agent with a roast beef aroma is made by heating for 2-3 hrs. under reflux conditions, a mixt. of (a) 20-40 pts. wt. vegetable protein hydrolysate contg. no cystine or cysteine, (b) 0.09-1.5 pts. wt. methionine and (c) 0.5-6 pts. wt. of a pentose, hexose or lactose in the presence of 1-4 times the amt. of water (based on (a), (b) and (c)).

The reaction mixt. may be modified by comprising (a) 20-40 pts. wt. vegetable protein hydrolysate contg. no cystine or cysteine and (b) 2-12 pts. wt. of an acid hydrolysate of coffee chaff, coffee grounds, oats, rye or barley. Autolysed yeast may be added. 5.10.71 as 14968 (3pp068).

FARH D13 52188V/29 =DS 2264-2
6-Methyl-3,4-dihydro-1,2,3-oxathiazine-4-one-2,2 dioxide - used as sweetener produced by decompn of acetoacetate fluorosulphonyl adduct and cyclisation

HOECHST AG 30.12.72-DT-264235
B03 E13 (17.01.80) *DT2264-235 C07d-291/06

6-Methyl-3,4-dihydro-1,2,3-oxathiazin-4-on-2,2-dioxide (I), which is used as a sweetener, is prepd. by reacting an acetic acid alkyl ester with fluorosulphonylisocyanate. The prod. is converted into acetic acid amide-N-sulphofluoride with evolution of CO₂ and alkene by heating at 60-100°C, and then cyclised conventionally using aq. lye.

Pref. the tert. butyl ester is used. The method is cheaper than prior art and gives improved yields of 75-80%, compared with ca. 40% starting from acetylacetone. 30.12.72 as 264235 (5pp913).

NEST D13 76878V/44 =DS 2462-71
Semicontinuous prodn. of cheese from milk - via ultra-filtration fermentation, coagulation and press moulding

SOC PROD NESTLE SA (CLAU-) 16.08.73-FR-029866 (16.04.73-FR-013767)

P13 (17.01.80) *NL7405-008 A23c-19/02

Cheese, cut into pieces for sale is prepd. from ultrafiltered milk contg. at most 18 wt. % fat free dry measure. Such milk, contg. rennet and seeded with suitable lactic acid bacteria, is warmed and poured, together with known additives, into at least one vertical standing vessel. There the milk is allowed to coagulate in a stationary state to a coherent mass. Then the coherent mass is pushed upwards by a uniformly distributed pressure applied to its underside.

As the mass protrudes from the vessel cutters at a previously determined height on the upper edge cut the mass into standard gel-segments. These gel-segments are cut into gel-cubes and dehydrated until up to 70 wt. % of their water has been lost. The cheese is then ripened in the usual manner. 11.4.74 as 462710 Div. ex 2417926 (4pp068).

MILE D13 07733B/04 = DS 2842-070
Juicy self-basting sausage-like food prods. - based on protein, vegetable oil and cooked gluten
MILES LABORATORIES INC 28.10.77-US-846595
(17.01.80) *US4133-897 A23j-03 A23l-01/34

A juicy, self lubricating, sausagelike foodstuff is prepd. A protein bonded suspension contg. 20-32% water, 3-8% albumin, 0.5-4% caseinate and 0-2.5% vegetable protein isolate is prepd. and 3-15% vegetable oil added to the suspension. By strong stirring there is formed a protein-oil emulsion, which is mixed with a textured protein mixt. (I) and then 3-15% vegetable oil is mixed with the resulting compsn.

The resulting mass is shaped into the desired form and heated to harden the protein to a stable physical form. Protein mixt. (I) contains 30-40% cooked gelatin, 1-14% textured vegetable protein and 0-4% water. All percentages are by wt. and are based on the total wt. of the foodstuff. 27.9.78 as 842070 (5pp068).

GENO ★ D13 05685C/04 ★ DT 2925-988
Spray-dried agglomerated food e.g. coffee powder, prepn. - by mixing material with inert gas in 2-fluid nozzle and atomising in oscillating pattern
GENERAL FOODS LTD 28.06.78-CA-306392
(D17) (17.01.80) A23f-01/08 A23f-05/34 A23l-03/24 B01d-01/18 C13l-01/10

A spray-dried food prod. is prepd. by (1) passing a food extract, soln. or suspension through a 2-fluid mixer nozzle, for mixing with an inert gas, under a pressure varying from higher to lower than the pressure of the inert gas, and (2) atomising and partly degassing by charging through a nozzle, in an oscillating pattern, into a spray-drier.

Typical prods. are soluble coffee powder and dextrin grains. The end-prod. has the appearance of an agglomerated prod., caused by fusion of droplets within spray turbulence zone. Spray-drying and agglomeration take place in 1 step, simultaneously. 27.6.79 as 925988 (16pp200)

FIRM ★ D13 05712C/04 ★ DT 2927-090
Alpha, beta-unsatd. aldehyde food and drink aromatisers - e.g. 2-methyl-oct-2-ene aldehyde, to achieve a fried or meaty flavour (NL 8.1.80)

FIRMENICH SA 06.07.78-CH-007360
E17 (17.01.80) A23l-01/40 A23l-02/26 C07c-47/20

The organoleptic properties of foods and drinks can be acquired, improved or modified by adding a small quantity of ≥ 1 α , β -unsatd. aldehyde having formula

$R-CH=CR_1-CHO$ (I) (where R is linear 3-6C alkyl and R_1 is opt. branched ≤ 7 C alkyl). 2-Butyl-hept-, 2-propyl-oct-, 2-pentyl-oct- and 2-butyl-non-2-enal are new.

(I) are used esp. for achieving a meaty taste or for enhancing an oily-green flavour of fried foods. Aroma ranges over fatty, meaty, caramel or green, animal notes. E.g. 2-Me-oct-2-enal aroma hints at fresh-fried chips. Higher homologues of 2-Me-oct-2-enal can be used for flavouring meat or meat substitutes for human or animal consumption. 3.7.79 as 927090 (14pp200)

BATT D13 89608A/49 = EP ---6-856
Carbohydrate based ruminant feedstuff - contg. glucosyl-urea to increase cellulose and nitrogen assimilation
BATTELLE MEMOR INST 10.06.77-CH-007159
C03 (23.01.80) *WP7800-017 A23k-01/22 C07h-13/12

D/S: E(CH, DT, FR, GB, LU, SW)

1.6.78 as 900014

BLUE- D13 01951B/02 = EP ---6-895
Microencapsulation of lipids in protein to prepare foods - by solubilising protein, emulsifying fat and reducing pH

BLUE WING CORP 25.08.77-US-827572

C03 (23.01.80) *BE-869-970 A23k-01

D/S: E(FR)

24.8.78 as 900093 (WP 7900111)

NATR D13 22497B/12 = EP ---6-905
Treating fish to produce auto-immune response - for impairing gonad system so that fish farming harvest can be controlled by feeding

NATIONAL RES DEV CORP (HOLL/) 06.09.77-GB-037168

C03 P14 (23.01.80) *GB2003-711 A61k-39

D/S: E(DT, FR, SW)

5.9.78 as 900109 (WP 7900133)

STAU ★ D13 05761C/04 ★ EP ---7-054
Whippable compsn. which can replace egg albumen in baking - comprising whey protein, enzyme hydrolysed wheat protein, and gelatin, polyphosphate or gum

STAUFFER CHEMICAL CO 21.07.78-US-926682 (10.07.78-US-922898)

(23.01.80) A21d-13/08 A23g-03 A23j-03

D/S: E(DT, FR, NL).

Whippable compsn. comprises (a) $\geq 70\%$ of a prod. having ≥ 20 pts. soluble whey protein per 100 pts. dry prod.; (b) 1-10% gelatin, opt. with 5-15% of a water-soluble polyphosphate e.g. sodium hexametaphosphate (the additive total of gelatin and phosphate not exceeding 15%); and/or 0.5-5% of a gum e.g. carrageenan, accacia and (c) 5-30% of enzyme hydrolysed wheat protein.

The whey protein-contg. prod. (a) is chosen from: (1) a whey protein concentrate derived from the ultrafiltration of cottage cheese; (2) a water-sol. low mol. wt. prod. prepd. by (i) adjusting the pH of a whey protein-contg. soln. to 11-13, (ii) reducing the pH to 4-6 to yield a water soln. of a soluble whey prod. and insoluble whey solids, (iii) sepg. the soluble prod. and (iv) drying it; (3) a prod. prepd. by hydrolysing the insol. whey solids of (2) (ii) at pH 11-13; and (4) a pptd. whey protein prepd. by combining liq. whey with Na lauryl sulphate to form a complex which pptes. from soln., followed by reducing the Na lauryl sulphate content of the complex to $< 0.1\%$.

(All percentages are by wt., based on total wt. of the whey protein - contg. compsn.).

Compsns. prepd. using the whey protein described in (1) or (2) can be used as egg albumen replacers in whippable products such as meringues, nougat candy and divinity candy. Compsns. prepd. using the whey protein described in (1), (3) or (4) can be used as egg albumen replacers in preparing soft meringues and cakes such as yellow or sponge cake.

2.7.79. as 102230 (19pp914).

(E) ISR: US4089987; FR2118757; FR2009187; US2965493.

COKE ★ D13 05783C/04 ★ EP ---7-095
Anthocyanin coloured food - contg. blocked ascorbic acid deriv. as bio available vitamin/C, the food compsn. being colour stable

COCA-COLA CO 27.04.79-US-034065 (11.07.78-US-923523)

E13 (23.01.80) A23l-01/27 A23l-02

D/S: E(CH, DT, FR, GB, IT).

In a food contg. an anthocyanic pigment the improvement comprises using an ascorbic acid deriv., having at least one enol function blocked, as bio-available vitamin C.

The blocked ascorbic acid deriv. does not bleach anthocyanin or anthocyanidin pigments as rapidly as does unsubstd. ascorbic acid. Thus the coloured food prod. is colour stable. Foods may include dry mixes adapted to be mixed with water; beverage syrups or concentrates adapted to be diluted with water; or single strength beverages.

11.7.79 as 102381 (24pp914)

(E) ISR: US4132793; DT2534091; FR2281961.

ALKU ★ D13 05804C/04 ★EP---7-130
Agglomerating half peanuts - by rolling together on an irregular surface with an edible powder

AKZO NV 06.07.78-NL-007313

(23.01.80) A23l-01/36

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

Skinned peanuts are treated in an appts. which sets the peanuts rotating relative to each other by means of a moving surface provided with irregularities. The rotating peanuts are treated with a dry edible powder without adding water or an aq. soln.

The process is esp. useful when used with a starting material consisting wholly or mainly of half peanuts. During the treatment, the flat parts of the half peanuts become coated and bonded together, the bind between the halves being sufficiently strong to allow the bonded nuts to be used in processes requiring whole peanuts. Costs are reduced since the half peanuts are a relatively cheap raw material.

02.07.79 as 200354. (14pp 513).

(E) ISR: NL7209175; DS1031107; FR2202657; GB1484518; US1423014; FR2312199; US3671266; US3469561; US1876224.

BATT ★ D13 05809C/04 ★EP---7-136
Cattle feed produced from lignocellulosic materials - by partial hydrolysis and reaction with urea

BATTELLE MEMORIAL 07.07.78-CH-007402

C03 (23.01.80) A23k-01/12

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

In cattle feed based on partially hydrolysed ligno-cellulosic materials, the degree of hydrolysis corresponds to the formation of ≥ 1 mole of mono- and oligosaccharide aldoses per kg of starting material. The feed also contains ≥ 2 moles of urea per kg of starting material, part of the urea being found in the form of ureido-aldoses in the proportion of 1 mol. of urea per aldehyde function of the aldoses.

At least part of the remaining unbound urea is present in a form which is still not instantaneously degradable by urease and has a nitrogen slow-release capacity when used as a feed for ruminants.

The feed has a higher proportion of bound urea than prior art feeds of a similar type (cf. US 3878304 and 4089980), and a significant portion of the unbound urea is linked to the fibres in slow-release form.

5.7.79 as 200366 (24pp367).

(E) ISR: US4089980; US3878304; US4044156; DS-727691; FR2237587.

CARP- ★ D13 05812C/04 ★EP---7-144
Ice:cream machine flavour mixer - with piston above rotary agitator to incorporate flavour in periphery of ice:cream

CARPIGANI BRUTO 11.07.78-IT-012702

(23.01.80) A23g-09/28

D/S: E(BE, CH, DT, FR, GB, LU, NL, OE, SW).

Mixer and dispenser which amalgamates syrup with parts of the ice-cream periphery so that it does not drip along the ice-cream comprises a vertical cylinder with an open top and a base with central through bore and radial slits from the bore, and a flavour injection port just above the base.

An ice-cream inlet is above the port, and a rotor with radial arms at the bottom of the cylinder is carried by a top motor shaft. A piston with axial bore for the spindle is slidable in the cylinder from above the inlet to just above the rotor. Flavour flow is pref. controlled by electrically operated valves.

10.7.79. as 200387 (12pp1358).

(E)ISR: US3276633; GB1076117; FR2283634; US2667846; NL6709932; GB1260669; FR2233577; FR2158556; FR1360757; US2867418; LU--37982; US3267971; US3149756.

SAMI- ★ D13 05885C/04 ★FR 2421-56
Controlling atmos. of cold store for fruit and vegetables - with combined nitrogen generator and absorption unit for carbon dioxide (BR 27.11.79)

SAMIFI BABCOCK SPA 06.04.78-IT-022035

(07.12.79) A23b-07 A23n-15 C01b-13 C01b-21 C01b-31/20

Generator comprises a burner using a gas such as methane or propane so that the burner exhaust contains N_2 and CO_2 . The exhaust is passed through a water-cooled condenser which drains off sepd. moisture. The dried exhaust gas is directed through one or the other of two absorbers in parallel. Each absorber is charged with a substance, e.g. activated C, capable of absorbing CO_2 , so that N_2 alone is available for controlling an enclosed atmos. Cooling water is circulated in the burner casing.

Improvement is that burner casing comprises a cooling jacket in which each wall is a pair of plates narrowly spaced apart by intermediate, coincident bosses welded together. The narrow channel between the plates provides a passage for cooling water. The path of the water is determined to give uniform cooling over the whole of the wall.

Controlling the atmos. in cold stores etc. so that the proportions of N_2 , O_2 and CO_2 are best suited to extend store life of produce such as fruit and vegetables.

Uniform cooling of the burner casing reduces thermal stresses and eliminates breakages. The burner operates more smoothly and flame blow-back is eliminated.

30.3.79 as 008138(25pp448).

FROM ★ D13 05886C/04 ★FR 2421-561
Prepn. of alkali or alkaline earth metal caseinate(s) - soluble in acid medium, by strong alkali treatment of a clot obtd. by acid treatment of skimmed milk, followed by re-pptn. using acid

FROMAGERIES BEL-LA VACHE 06.04.78-FR-010298

(07.12.79) A23j-01/20

Prepn. of an alkali(ne earth) metal casein salt is claimed in which skimmed milk is acidified by natural or by acid means to about the isoelectric point (pH4.6 at 20°C), the lactoserum is drained or filtered off, the clot is washed with slightly acid warm water opt. followed by draining and drying, and then the prod. is solubilised by an alkaline soln. at about neutral pH to form the caseinate..

Before the solubilisation, the clot is first solubilised in a strongly base bath (pH10-12) constituted by an alkali(ne earth) metal base at ordinary temp. for 30 mins to several hours, or at up to 80°C for 30 min. to 3hrs. and a pH > 10 ; followed by reprecipitation of the casein at about the isoelectric point using acid, sepn. and washing with acidified water (pH 4.5).

The process enables caseinates of improved solubility, partic. in acid medium (e.g. up to pH 5.2), thereby enabling a wider application of the caseinate in food preps. 6.4.78 as 010298(9pp597).

ROSS/ ★ D13 05887C/04 ★FR 2421-566
Vacuum immersion of mushrooms etc. prior to canning for freezing - maintains flavour and prevents loss of prod. wt. and vol., without using additives

ROSSIGNOL JF 05.04.78-FR-010035

(07.12.79) A23l-03

The prod. is subjected to a vacuum, e.g. at 500-10 (100-10) torrs, so that air is extracted from the prod. The spaces evacuated by the air are immediately refilled with a natural liq., pref. pure water.

The prod. can be subjected to vacuum pressure in a closed vessel, while supported in the head space above the surface of pure water inside the vessel. After adequate vacuum treatment, the prod. is lowered into the water and vessel pressure brought up to atmospheric. Mushrooms can be vacuum treated as above, before or after blanching.

Used for pretreating proteinaceous prods. to be preserved by canning or freezing. The process is applicable to meat, fish, milk and dairy prods., as well as mushrooms. 5.4.78 as 010035(7pp448).

HYDR- ★ D13 05889C/04 ★FR 2421-569
Mfr. of pet food partic. of meat based raw material - by pressing out fluidisable phase to separate inedible residue of bone etc.

HYDROMER SOC 12.05.77-FR-014491

C03 (07.12.79) A23k-01/10 A23n-17 A23p-01

raw materials is loaded into a press chamber which is then closed completely apart from extrusion holes through which fluidised material is squeezed out by the pressing member. Non-fluidisable material such as bones, teeth etc. is sepd. from the prod. by retention in the chamber.

The press pref. employs a longitudinally channeled ram which compresses the raw material so that the fluidisable phase is squeezed along the channels to extrude through holes into the wall of the press chamber. Non-fluidisable matter is retained under the leading end of the ram.

The raw material may be pre-cooked before pressing. The raw material pref. includes animal heads, partic. sheep heads, animal feet, partic. pigs trotters, small whole animals, partic. rabbits and chickens, marrow bones, fish or shell fish.

A homogeneous, fibrous prod. with attractive appearance is obtd. at low cost. Used esp. for feeding cats and dogs. 12.5.77 as 014491(9pp448).

MUNK/ D13 70970A/40 = GB 1559-764
freeze-dried fruit slices - dipped in aq. ascorbic acid soln. to prevent browning and stored under protective gas (NL 26.9.78)

MUNK W G 22.03.77-DT-712551
+ Q34 (23.01.80) *DT2712-551 A23b-07/02
Dried fruits and vegetables in the form of chips which have been dipped into a soln. of a nutritionally acceptable material which prevents discolouration, then freeze-dried and immediately packed are new. The packing contains an inert gas and prevents the ingress of air and moisture.

Pref. the soln. is an aq. soln. of ascorbic acid, esp. contg. 0.1-0.5 wt. %. Pref. the slices have sugar and/or albumen and/or chocolate applied to them before packing.

Prods. can remain packed for long periods with no discolouration or loss of quality. 21.3.78 as 011124 (3pp974).

QUAK ★ D13 C/04 ★ IT 1035-035
High protein content foodstuff prepn.
QUAKER OATS CO 19.06.71-IT-051138
(20.10.79) A23j

STER= D13 96224X/52 #J7 9043-486
2,6-Di-tert-butyl 4-methyl phenol prepn. by hydrogenolysis - of N,N-dimethyl 3,5 -di-tert-butyl 4-hydroxy benzylamine with prod. as solvent

STERILITAMAK ISOPREN 08.06.76-BE-842690
A60 E14 F06 (20.12.79) *BE-842-690 B01j-23/74 C07c-37 C07c-39/06
2,6-Di-t-butyl-4-methylphenol is prepd. by catalytic hydrogenolysis of N,N-dimethyl-3,5-di-t-butyl-4-hydroxy benzylamine in the presence of a catalyst contg. Ni, Ti, Al and using as solvent, 2,6-di-t-butyl-4-methyl-phenol. The product is used as a stabiliser and anti-oxidant, e.g. for natural and synthetic rubber, polyethylene and polypropylene fibres, and food products.

The method avoids any solvent recovery stage and gives a yield of about 98.4% which is satisfactory for food use without further purification. 12.11.76 as 135447 C07c-39/06, 37/00; B01j-23/74 (20.12.79) STERILITAMAK ISOPREN (2pp) (J5 3063326)

ASAHI ★ D13 06657C/04 ★ J7 9043-589
Somen prepn. from wheat flour - by kneading with table salt soln. and emulsified oil, and ageing in sealed vessel
ASAHI TSUSAN KK (OAGI-) 09.11.72-JA-111622
(20.12.79) A23l-01/16

Wheat flour is mixed and kneaded with table salt soln. and emulsified oil, followed by conventional steps to give somen. The somen is then aged in a sealed vessel in which the temp. and humidity are controlled. 9.11.72 as 111622 A23l-1/16 (20.12.79) ASAHI TSUSAN KK & OAGI SHOGI KK (3pp22) (J4 9069856)

QPPP ★ D13 06658C/04 ★ J7 9043-591
Paste like foodstuff - prepd. by mixing coagulated egg white with fish, corn powder, starch, polysaccharide, seasoning, flavouring and then moulding and heating
Q.P. CORP 19.01.72-JA-006892
(20.12.79) A23l-01/32
Egg white is heated to coagulate, crushed and kneaded, and

then mixed with fish, corn powder, starch, polysaccharide seasoning agent, flavouring agent and other additives, followed by kneading, and the resultant is moulded and heated. 19.1.72 as 006892 A23l-1/325 (20.12.79) Q.P. CORP (3pp22) (J4 8077059)

FMCC D13 28269X/15 = J7 9043-593
Spreadable heat resistant edible jelly - stabilized with particles of beta-1,4-glucan associated with sodium carboxy-methyl-cellulose
FMC CORP 28.03.75-US-563242
A97(A11) (20.12.79) *US3947-604 A23l-01/04
Edible jelly with improved spreadability and heat resistance comprises a mixt. of (a) a gelling agent, (b) sucrose (c) flavouring, (d) a food acid, (e) water and (f) 0.5%, esp. 0.5-1.5% on total mixt. of finely divided water-insol. organic particles consisting of 85-95 wt. % β -1,4 glucan intimately associated with 5-15 wt. % NaCMC having a degree of substitution of 0.75+0.15. The jellies spread well and do not break down on heating, e.g. during baking.
Pref. (a) is e.g. pectin and/or starch. The jelly may also contain real fruit. 18.6.75 as 074254 (clg. 28.3.75-US-563242) A23l-1/04 (20.12.79) FMC CORP (7pp) (J5 1112559)

CORP D13 03921X/03 = J7 9044-728
Dry hydrosoluble foodstuff prodn - by mixing starch etc with friable mass of hydrophilic substance

CPC INTERNATIONAL INC 21.08.74-DT-439993
(27.12.79) *BE-832-598 + C13l-01/08
An 'instant' hydrosoluble foodstuff is prepd. by mixing an edible hydrophilic substance with water or aq. liq. to form a friable mass, adding starch or a material contg. starch until the mass is homogeneous, working the mass, drying and grinding to particles of 100-300 microns.

Mixt. gives rapid soln. in cold or hot water and does not form lumps. Mixt. is mixed with other edible ingredients to form final prod. Pref. hydrophilic substance is a sugar and/or a salt and water is added in amt. 3-30% by wt. Starch is added in amt. 25-75% by wt. of mass. 21.8.75 as 100714 (clg. 21.8.74-DT-439993) C13l-1/08 (27.12.79) CPC INT INC (5pp) (J5 1051533)

NISW D13 86807A/48 = J7 9044-729
Frozen fried tenpura prodn. - using coating liq. contg. edible oil, emulsifier, egg white, sodium casein flour and water
NISSHIN OIL MILLS KK 31.03.77-JA-035238
(27.12.79) *J53121-948 A23l-01/17

A liq. mixt. contg. liq. edible oil, emulsifier, egg white sodium casein, flour and water is coated onto food materials which are then fried and frozen. The refrigerated 'tenpura' can be easily defrosted by heating in an oven, etc. and palatable crisp 'tenpura' similar as the 'tenpura' just after frying, can be obtd.

Pref. the coating liq. contains liq. oil 1-15 (3-7)%, emulsifier 2%, egg white and sodium casein 0.1-10 (0.5-5)% (on dry basis) respectively, water 55-65% and balance flour. Suitably edible liq. oil, egg white, sodium casein and emulsifier are added in water and the mixt. is stirred for emulsification. Then the emulsion and flour are mixed. Thus obtd. liq. does not suffer from pptn. of gluten even after standing for a long period of time or exposing it to high temp., and after a long period of standing palatable 'tenpure' can be prepd. with it. 31.3.77 as 035238 A23l-1/176 (27.12.79) NISSHIN OIL MILLS KK (3pp)(J5 3121948)

TOSU- ★ D13 06730C/04 ★ J7 9044-730
Mfr. of packed sekihan - by soaking rice in water, mixing with boiled red beans, adding mono:glyceride, steaming, adding salt, sealing and sterilising
TOYO SUISAN KK 04.05.76-JA-049886
(27.12.79) A23l-01/10

Sekihan (i.e. boiled rice together with red beans) is produced by soaking rice in water in which red beans have been boiled, mixing the rice with boiled red beans, spraying onto the mixt. 0.2-1% aq. dispersion of monoglyceride steaming the mixt. for 10-15 mins. immersing the steamed mixt. in 0.1-1.5% salt soln. for 1-10 secs., sealing the mixt. in plastic bag, and sterilising the mixt. by heat and pressure. 4.5.76 as 049886 A23l-1/10 (27.12.79) TOYO SUISAN KK (3pp83) (J5 2134035)

AJIN D13 39541A/22 = J7 9044-735
Sausage-like food prepn. from non-fibrous vegetable protein - using hydrous mixt. of the vegetable protein and emulsion of oil, fats, coagulating protein and water

AJINOMOTO KK 30.09.76-JA-117675

(D12) (27.12.79) *J53044-649 A23j-03 + A22c-11

The method comprises mixing (a) the gelled prod. obtd. by kneading the hydrous mixt. of nonfibrous vegetable protein having 10-35% of protein concn. and (b) the emulsion composed of oil and fat, cool-coagulating protein, heat-coagulating protein and water with the wt. proportion of (a):(b)=1:4-4 pref. 1:1-2.5, moulding the mixt. and heating the mouldings.

Starting vegetable protein is e.g., soybean protein and heat-coagulating protein is egg white, gluten, etc. Cool-coagulating protein is collagen, etc.

Sausage-like food excellent in taste and flavour, texture and cooking property, can be prepd. from inexpensive non-fibrous vegetable protein. 30.9.76 as 117675 A23j-3/00, A22c-11/00 (27.12.79) AJINOMOTO KK (4pp) (J5 3044649)

NISW D13 23046B/12 = J7 9044-736
Frozen minced fish meat prepn. - by mixing soybean protein with aq. alcohol, mixing with fish meat and freezing mixt.

NISSHIN OIL MILLS KK 15.07.77-JA-084198

(D12) (27.12.79) *J54020-167 A23l-01/32 + A23b-04/06

Method comprising treating soy bean protein with hydrous alcohol, mixing it with minced fish meat and freezing the mixt. Pref. soy bean protein is treated with aq. alcohol (e.g. methanol, ethanol, propanol, butanol, etc.) of alcohol content >50 wt. % at 15-60°C for >5 mins. The standard of the degree of the alcohol-treatment is that NSI (soluble nitrogen indicator) of soy bean protein is decreased to <30. The treated soy bean protein is pref. combined in minced fish meat 10-40 wt. % esp. 20-30 wt. %.

Freeze-denaturation of soy bean protein is prevented by first treating it with aq. alcohol. The treated soy bean protein is mixed with minced fish meat prior to freezing and the conventional defrosting mixing process is simplified. By combining the soy bean protein with the fish meat the dehydration of the minced fish meat is simplified and the loss of fish meat by dehydration is decreased. 15.7.77 as 084198 A23b-4/06, A23l-1/325 (27.12.79) NISSHIN OIL MILLS KK (4pp) (J5 4020167)

NISW D13 32362B/17 = J7 9044-738
Pasty food mfr. using soybean protein - opt. contg. gluten, by combining with guar gum in animal or fish meat

NISSHIN OIL MILLS KK 24.08.77-JA-100595

(27.12.79) *J54035-240 A23l-01/32

The method comprises combining (a) soy bean protein or soy bean protein and gluten and (b) guar gum in animal or fish meat and prepg. pasty food as usual.

A pasty food of good quality can be prepd. with good workability without the problems of the prior art. The mixt. is hard enough for treating it easily without adhering to wall of the vessels and without the deformation of mouldings. Thus by the method pasty food can be prepd. inexpensively using soy bean protein without reducing the quality and the nutritive value. 24.8.77 as 100595 A23l-1/325 (27.12.79) NISSHIN OIL MILLS KK (6pp) (J5 4035240)

NIHA- D13 36017B/19 = J7 9044-739
Strengthening agent for coating egg-shells - prepd. by mixing inorganic powdered cpd. e.g. calcium sulphate, wax, paste e.g. of gum arabic and solvent

NIPPON HAIGO SHIRYO 09.09.77-JA-107970

(27.12.79) *J54041-360 A23b-05/06

Agent (I) for coating on eggshell, prepd. by homogeneously mixing inorganic powdery cpd. (II), wax (III) and paste (IV) in a solvent (V). (I) is used for strengthening and preventing change of quality of egg. By coating (I) on eggshell breakage can be reduced and weight-decrease, decrease of content of egg-yellow and/or protein in egg and generation of mould are prevented.

Typically, (II) is Ca sulphate, Ba sulphate, Mg sulphate talc etc. (III) is rice bran wax, carnauba wax, candelilla wax, vinyl acetate, cotton oil etc. (IV) is gum arabic, guar gum, Na polyphosphate etc. (V) is ethyl alcohol, propylene glycol, hexan, acetone, etc. 9.9.77 as 107970 A23b-5/06 (27.12.79) NIPPON HAIGO SHIRYO (4pp) (J5 4041360)

SANE ★ D13 06732C/04 ★ J7 9044-740
Gelled food prodn. from carrageenan - by mixing with calcium salt and dissolving mixt. in water to form a gel

SAN EI CHEM IND KK 03.08.68-JA-055035

A97 (27.12.79) A23l-01/34

Method comprises mixing 10 pbw. carrageenan (I) contg. 50 wt. % 1-carrageenan with ≥0.1 pbw. Ca salt (II) and dissolving the mixt. in water to form gel. Used for producing jelly, puddings, etc. and for preservative coating of meats, fish, vegetables, etc. In contrast to gelatin or agar-agar, 1-carrageenan dissolves in cold water and gels quickly, eliminating the need for heating and cooling processes. Volatile or heat-sensitive substances can be readily made into gel.

Of the three types of carrageenan, λ-, κ- and ι-, only ι-type is effective. (II) is e.g. lactate, citrate, glyconate, fumarate, tartrate, acetate, phosphate, carbonate, or stearate. The gel obtd. in various states, from a soft paste to a rigid gel, by changing the amt. of (II). To coat fish, etc., they are immersed in aq. soln. of ι-carrageenan, to which is added aq. soln. of Ca salt. 3.8.68 as 055035 A23l-1/34, (27.12.79) SAN EI CHEM IND KK (5pp83)

UNIL ★ D13 06736C/04 ★ NL7807-000
Detoxifying rapeseed protein concentrate - by treatment with myrosinase and ascorbic acid, used in foodstuffs and animal feed

UNILEVER NV 29.06.78-NL-007000

C03 (03.01.80) A23j-01/14

Prodn. of a detoxified rapeseed protein concentrate is carried out by (a) incubating an aq. slurry of coarse-ground rapeseed with myrosinase and ascorbic acid to hydrolyse glucose inolates; (b) extracting the product with a mixt. of H₂O and an organic solvent; (c) separating a protein-contg. residue from the solvent phase; and (d) drying the residue to produce a protein concentrate. The starting material is pref. deoiled coarse-ground rapeseed which has been roasted at 60-100°C (esp. 60-75°C) for 1-30 min.

The process gives products contg. <0.009% 5-vinylloxazolidine-2-thione (VO) and <0.004% 3-butenyl isothiocyanate (ITC), suitable for use in foodstuffs and animal feeds. 29.6.78 as 007000(12pp367)

UNIL ★ D13 06740C/04 ★ NL7807-127
Increasing the sweetness of di:saccharide(s) - by adding salt of unsubstituted mono:carboxylic acid

UNILEVER NV 30.06.78-NL-007127

E12 (03.01.80) A23l-01/23

The sweetness of orally ingestible products (esp. food-stuffs) contg. disaccharides (e.g. sucrose, lactose and/or maltose) is increased by adding one or more salts of unsubstd. ≤ 20C branched- or straight-chain monocarboxylic acids. Also claimed are sweeteners contg. one or more disaccharides and one or more of the above salts.

Pref. salts are alkali metal salts of 2-9C acids, esp. acetic, butyric, heptanoic or isovaleric acid. The products pref. contain 0.01-10 (esp. 0.1-10) wt. % of the salt. 30.6.78 as 007127(11pp367)

UNIL ★ D13 06741C/04 ★ NL7807-128
Increasing sweetness of poly:hydric alcohol(s) - by adding salt of unsubstituted mono:carboxylic acid

UNILEVER NV 30.06.78-NL-007128

E12 (03.01.80) A23l-01/23

The sweetness of orally ingestible prods. (esp. foodstuffs) contg. polyhydric alcohols (e.g. xylitol, sorbitol or glycerol) is increased by adding ≥1 salt of unsubstd. ≤ 20C branched- or straight-chain monocarboxylic acids. Also claimed are sweeteners contg. ≥ 1 polyhydric alcohol and ≥ 1 of the salts.

Pref. salts are alkali metal salts of 2-9C acids, esp. acetic, butyric, heptanoic or isovaleric acid. The prods. pref. contain 0.01-10 (esp. 0.1-10) wt. % of the salt. 30.6.78 as 07128(10pp367)

ANTI/ ★ D13 C/04 ★ SF7801-343
Butter which produces less cholesterol in blood plasma

ANTILA M 02.05.78-SF-001343

(31.12.79) A23c

MEAT = ★ D13 06776C/04 ★SU-179-180
Hard wood smoke condensate treatment - includes fractionation, adsorption, desorption and steam distillation, for use in food curing
MEAT IND RES INST 27.03.65-SU-949764
(03.07.79) A23b-04/04

Liquid used in curing processes is prep'd. by distilling the condensate of the smoke of hard wood; adsorbing the smoking components from the distillate, and sepg. them by desorption. This process is improved by distilling the smoke condensate in two fractions; sepg. the smoking components from the first fraction by adsorption and subsequent desorption, and combining the smoking components from the first fraction with unprocessed second fraction. By this method the smoke condensate is utilised to increased degree and harmful impurities are largely eliminated.

Goblik, V.F., Filimonov, A.V., Kotsur, V.G. Bul. 23/25.6.79. 27.3.65. as 949764 (2pp70)

CONF = ★ D13 06792C/04 ★SU-561-314
Porous chocolate prodn. appts. - with vertically reciprocable vacuum chamber and air coolers in common hood over stepping conveyor

CONFECTIONERY IND (MOFO = MOKR =) 18.12.73-SU-977348
(03.07.79) A23g-01/26

Installation producing chocolate of improved quality with reduced wastage comprises a main conveyor carrying moulds between feed and discharge conveyors, and a vacuum chamber and cooling elements enclosed in a common hood mounted over the main conveyor. Two elements are mounted directly above the vacuum chamber, which is reciprocable, while the others are over the conveyor.

The elements pref. have slot nozzles directed perpendicularly to the conveyor direction of movement. The elements are pref. ribbed and the lower part of the ribs is blackened. Both inner and outer surfaces of the chamber are pref. ribbed and blackened to improve heat transfer. A porous rubber seal is pref. secured to the lower periphery of the chamber. The conveyor is moved stepwise through the hood and the chamber is lowered over a series of moulds after each step.

Istomina, M.M., Marshalkin, G.A., Simutenko, V.V. et al. Bul. 23/25.6.79. 18.12.73. as 977348 (2pp1358)

CONF = ★ D13 06793C/04 ★SU-561-315
Porous confectionery products e.g. chocolate prepn. - includes heating in vacuo and cooling in stages at specified temp. and pressure

CONFECTIONERY IND (MOFO = MOKR =) 18.12.73-SU-978909
(03.07.79) A23g-01/20

Porous confectionery prods. consisting of a thermoplastic mass, e.g. chocolate, are prep'd. by a three-step operation; firstly the press is reduced so that pores are formed inside the mass (temp. 27-31°C) in the second step, the porous structure is fixed by radiative-convective cooling; in the third step, the press. is raised to the atmospheric press. The radiative-convective cooling occurs also, to some extent, during the first and the third steps as well.

The quality of the product is improved, esp. the pore distribution is rendered more uniform, by carrying out the convective cooling during the third step with an air stream having a temp. of 3-10°C. The finishing cooling is carried stagewise by the radiative-convective method.

Marshalkin, G.A., Ermakova, T.P., Goryacheva, G.N. et al. Bul. 23/25.6.79. 18.12.73. as 978909 (2pp70)

KICO = ★ D13 06890C/04 ★SU-661-335
Extent of confectionery glazing determination - using cylindrical holder of samples immersed in heated solvent and intermittently revolved by reciprocating motion of shaft

KIEV CONFECT FACTOR 04.04.77-SU-476294
R16 (15.05.79) G01n-33/02

Compactness of the appts. and improved quality of analysis for determining the amount of glazing present on confectionery, e.g. chocolate coating on candies, etc. is ensured. The electric heater is mounted under the bottom of the container with the solvent. Cylindrical screen drum with several radial compartments for the samples is mounted on hollow shaft between the spring supported disc, which serves as splash guard, and the nut. The

shaft is equipped with ratchet frictional-disc device which produces intermittent unidirectional rotation of the shaft, together with cylindrical sample holder, from linear reciprocating motion of the central rod activated manually by handle.

Fastovets-Kalinovskaya, G.A., Primak, B.I., Salamatova, A.I. Bul. 17/5.5.79. 4.4.77. as 476294 (3pp135)

GFOO = ★ D13 06909C/04 ★SU-662-057
Tea flush sorting appts. - has pocketed drums separating individual leaves before passing to chain conveyor wires and cutter

GEORG FOOD IND 06.12.77-SU-551155
(20.05.79) A23f-03

Appts. for sorting tea leaves and shoots into fractions, as in Parent Certificate No. 283819, comprises a feed conveyor with transverse scoops, and a multi-level chain conveyor with wires stretched between the chains to carry the tea, the lowest run leading from the working zone over a cutter.

The appts. is modified to improve output and product quality by having several sorting drums with pockets mounted under the lowest chain conveyor run with the drum longitudinal axes parallel to the scoops.

Khocholava, I.A., Shvelidze, E.K., Ivanov, V.K. et al. Bul. 18/5.5.79. 6.12.77. as 551155 Add to 283819 (2pp 1358)

KHLO/ ★ D13 06910C/04 ★SU-662-058
marshmallow sweets forming appts. - has opposed belt pairs twisting from horizontal to vertical to join halves without deformation

KHLOPOV LV 17.06.76-SU-373278
(20.05.79) A23g-03

The installation comprises boards carrying rows, each of six half sweets, to an inclined conveyor section leading to a horizontal section from which the halves are picked up by paired flexible belts with guide and pressure rollers. Each belt twists about a horizontal axis in one section and about a vertical axis in another, so that belt working surfaces move from a horizontal to a mutually facing vertical position.

As the belts move from the horizontal they contact the outside of the halves to bring their flat sides together to contact each other, finally delivering them to a discharge conveyor after joining.

Such arrangement improves reliability and accuracy and does not deform the halves.

Khlopov, L.V., Gvozdk, I.A., Shchekina, A.A. et al. Bul. 18/15.5.79. 17.6.76. as 373278 (3pp1358)

PYAR = ★ D13 06959C/04 ★SU-662-154
Determination of fat content in milk - using laboratory centrifuge with cylindrical casing, having externally mounted air-heating chamber

PYARNU SUPPLY MACH 22.12.77-SU-558431
P41 R16 (18.05.79) B04b-05/04 G01n-33/04

Faster determination of the fat content of milk, using laboratory centrifuge in whose rotor are placed milk-filled fat-measuring cells, and improved conditions of the motor's work, are ensured by uniform heating of the cells during centrifuging, without transferring the heat to the motor's shaft.

Thus on the cylindrical casing of the centrifuge is fixed an air-heating chamber equipped with electric heating element and connected with the rotor's chamber by vertical slots.

Udras, O.E. and Uutsalu, Yu.E. Bul. 18/15.5.79. 22.12.77. as 558431 (3pp135)

AUPH = ★ D13 07109C/04 ★SU-662-545
2,5-Di:methoxy-benzaldehyde prodn. for photography, perfumery and food - by reacting para-methoxy:benzene with di:chloromethyl butyl or amyl ether over titanium tetra:chloride in di:chloromethane

AS UKR PHYS-ORG CHE 22.12.77-SU-558694
E14 G06 (D23) (15.05.79) C07c-45 C07c-47/56

p-MeO-benzene (I) is reacted with dichloromethyl butyl ether (II) or dichloromethyl amyl ether at 0.30°C in presence of TiCl₄ in a low-boiling chlorinated hydrocarbon solvent, pref. CH₂Cl₂.

The 2,5-dimethoxybenzaldehyde so produced is suitable for use in the prodn. of materials for colour photo-

graphy, in the food industry and in the perfumery.
Dulenko, V.I., Alekseev, N.N., Golyak, V.M. et al.
Bul. 18/45.5.79. 22.12.77. as 558694 (2pp70)

TREE- ★ D13 07156C/04 ★US 4183-292
Apparatus for producing dried fruit products - with predetermined moisture content, by moisturising beyond desired value followed by drying

TREE TOP INC 12.10.77-US-841298
(15.01.80) A23b-07/06 A23i-03/18

The system comprises a moisturising appts. for increasing the moisture content of the fruit above the target value. The moisture content of the fruit is measured as it leaves the moisturising appts. and this measurement is used to alter the amt. of moisture being introduced into the appts.

The fruit is fed to a drier where the moisture content of the fruit is reduced to the target value. The moisture content of the fruit leaving the drier is measured and this value is used to alter the temperature of air introduced in to the drier.

If desired sulphur dioxide may be introduced simultaneously with the moisture to penetrate the fruit prod. The moisture content of the fruit pieces is controlled to give a uniform product in a relatively short time. 12.10.77 as 841298 (9pp295)

MATU D13 48151A/27 =US 4183-293
Fruit juice extractor - has scraper travelling over ports in wall of centrifugal drum cup section

MATSUSHITA ELEC IND KK 22.12.76-JA-155359
P28 (15.01.80) *DT2757-390 A23n-01/02

A juice extractor for adjusting the pulp content in pulp has a frusto-conical filter basket which is rotated at high speed, and a pot connected to the bottom of the basket which has perforations in the side wall and an adjustable scraper to remove pulp containing juice from the outer wall of the pot.

The scraper can be moved from one position in which the pulp removed from the wall to another in which the scraper is sufficiently spread from the wall not to contact the pulp.

The pulp passing through the perforators is recycled. 21.11.77 as 853831 (8pp1376)

AIRP ★ D13 07172C/04 ★US 4183-384
Fluid blending control appts. - for maintaining concn. of one fluid being blended below a max. value

AIR PRODUCTS & CHEM INC 18.01.78-US-870553
J02 Q39 + Q31 (15.01.80) B65b-03/04 B67d-05/56

The appts. ensures that in a fluid blending process the concn. of the fluid is maintained below a defined max. concn. The appts. comprises a single valve located in the inlet line of the fluid to be controlled and sensors for sensing the flow rate of each fluid stream being supplied to form the blend. The valve interrupts the flow of the fluid to be controlled if the flow rate of that fluid stream increases or if the flow rate of any other fluid stream decreases.

Used in blending CO with N₂ to form a medium for preserving foodstuffs. The control appts. ensures that the CO content is maintained at a level below that at which the CO could form an explosive mixt. with air. 18.1.78 as 870553 (6pp67)

CARP- D13 10452B/06 =US 4183-680
Scraper blade for ice cream mixer - adjustably secured to rotating radial arms to control wear

CARPIGANI BRUTO MA 27.07.77-IT-015193
(15.01.80) *GB2001-539 B01f-07/20

The scraper blades in an ice-cream making machine are attached to plates secured to radial arms extending from a drive shaft. The plates are radially adjustable on the arms. The clamp holding the plates on the arms has a guide block having wings, between which parts of the plates can be clamped by tightening a screw. The scrapers operate in a barrel.

Pref. the plates have shoes at their ends to slide against an inner mantle of the barrel.

The scraper blades can be easily adjusted. 21.7.78 as 926637 (6pp1376)

GRAC ★ D13 07304C/04 ★US 4183-953
Soln. preventing rot or mildew on seeds, silage and other feed comprising water, ammonium isobutyrate and free isobutyric acid and having neutral pH

GRACE W R CO 22.03.78-US-889010 (07.11.72-US-304462)
C03 (15.01.80) A01n-09/02

A soln. useful for preventing rot and mildew from forming on feedstuff, including seeds, consists of water, ammonium isobutyrate and isobutyric acid, such that the "nominal" NH₄ isobutyrate content is 54-62% and the "actual" isobutyric acid content is 2.5-8%. The soln. has a crystallisation temp. of -20 to -40°F and a pH of 6.8-7.2.

The "actual" isobutyric acid content is the amt. of Me₂CHCOOH present in the soln.; whereas the "nominal" NH₄ isobutyrate content is the actual NH₄ isobutyrate present in the soln. plus the amt. that would be formed if the actual isobutyric acid in the soln. were converted to NH₄ isobutyrate; i.e. "nominal" percent NH₄ isobutyrate plus percent water = 100%.

The compsn. prevents rot caused by bacteria and/or mould in stored silage. It can be used without introducing too much water into the treated feedstuff and also without causing corrosivity problems. It can be stored and transported. 22.3.78 as 889010 C.i.p. 3786086, 3899588 (+17.10.73, 15.5.75, 17.7.76-US-407106, 577890, 709118 (11pp914))

NEST D13 46965Y/27 =US 4183-963
Continuously impregnating food material with brine or sugar syrup - by passing down a liquid until impregnation is achieved

SOC ASS PROD NESTLE 02.02.76-GB-004004
(15.01.80) *BE-849-989 A23b-07/08 + A23b-04 A23b-05

Food material is impregnated and preserved by a continuous method of immersing pieces of material into a concn. impregnating soln. of higher specific gravity than the food pieces, such that they are buoyant in the soln.

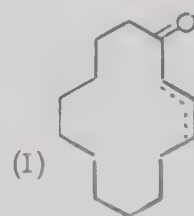
The soln. contg. the pieces is then passed to a sepn. zone, such that the downward flow rate of the soln. is greater than the rate of the pieces. The flow continues until those pieces whose S.G., by absorption of the impregnant equals that of the soln., and lose their buoyancy. Such pieces are carried downward by the soln., and are continuously sepd. from the still buoyant pieces.

The specific gravity of the impregnating soln. is pre-selected such that a sufficient amt. of impregnant is imparted to preserve the food pieces when their S.G. the same as that of the impregnant. The impregnating soln. is pref. brine. 6.9.78 as 939893 (+26.1.77-US-762650) (6pp931)

INFL ★ D13 07313C/04 ★US 4183-965
Depressing bitter taste of coffee, hops and artificial sweeteners - by addn. of 2- or 3-cyclo-tetra:decen-1-one

INT FLAVORS & FRAGR INC 26.12.78-US-973093
B05 E15 (15.01.80) A23f-01/04 A23i-01/22 C12c-03

Coffee, hops and artificial sweeteners have their bitter taste depressed by addn. of ≥ 0.001 p.p.m. of a 2- or 3-cyclotetradecen-1-one of formula (I)



(I) provide or potentiate flavour and aroma notes usually lacking in many fruit flavours, as well as suppressing the bitterness of coffee, hops and artificial sweeteners. They are therefore useful additives to solid and liquid foodstuffs, chewing gum, tooth-pastes, medicinal prods., cosmetics and to flavouring compsns. having pear, blackberry, peach or apricot flavours and to perfumes having sweet musky aromas. 26.12.78 as 973093 (19pp1248)

OKLA ★ D13 07314C/04 ★US 4183-966
High protein snack food mfr. - using heat pptd. protein from whey in which yeast has been grown

OKLAHOMA STATE UNIV 14.04.78-US-896348
(15.01.80) A23j-01/18

Whey is inoculated with Kluyveromyces fragilis yeast, and incubated with continuous aeration at 35°C until virtually all the lactose has been converted, then heated to about 89°C to ppte. proteins, which are recovered as a paste. This is mixed with egg whites, salt, baking powder or bak

ing soda as leavening, and dehydrated potatoe and/or
starch as filler; the mixt. is shaped into snack pieces
and deep fried. Cooking is completed in a microwave oven
The prod. has a higher protein content and lower star-
ch content than conventional snack foods, and provides a
use for whey. 14.4.78 as 896348 (4pp955)

GUNS- ★ D13 07315C/04 ★US 4183-967
Splitting pistachio nut shells - by soaking, subjecting drained nuts to
pressure and heating in air stream
GUNSONS SORTEX LTD 31.01.78-US-873886
(15.01.80) A231-01/36 A23p-01

The process comprises soaking the nuts in water at a
temp. below its b.pt. for ≤ 4 hours. The water is drained
from the nuts and a pressure member is applied to a batch
of the nuts to apply a pressure of 70-150 lbs/sq.in. The
pressure is released and the compressed nuts are subject-
ed to a temperature of 180-350°F for a time sufficient to
split most of the shells without damage to the kernals.

Pref. the water is at $< 176^\circ\text{F}$ and after the soaking
step it is drained from the nuts and is recycled. The pro-
cess is used to shell pistachio nuts without damage to the
kernals and using minimal quantities of water. 31.1.78
as 873886 (9pp295)

BOSC D13 25562A/14 =US 4183-968
Sweets cut from continuous extrusion then pressed - after pre-
pressing between cutting teeth and transferring to seamless
pressing chamber
BOSCH R GMBH 29.09.76-DT-643855
(15.01.80) *DT2643-855 A23g-03

Seamless candy blanks are formed from a cylindrical can-
dy strand by severing the blank from the strand, and shap-
ing each blank in a chamber using a pair of opposite axia-
lly aligned stamping dies. The dies move towards each
other to effect shaping.

The blanks are severed by cooperating teeth, one set
pref. being attached to the periphery of a rotating wheel.

Candy blanks can be produced without overflow prob-
lems usually associated with candies having a liquid core.
28.9.77 as 837338 (6pp1376)

FRIT- D13 30034B/16 =US 4183-970
Prepn. of aroma material esp. cocoa substitute or extender - by
meating whey solids and water under pressure; cooling and spray-
drying

FRITZCHE DODGE & O 04.10.77-US-839208
(15.01.80) *DT2843-322 A23c-21 + A23f-01/14 A23g-01

Flavour extender is prepd. by heating whey solids mixed
with a minor amt. of water, to 100-200°C at 10-200 psi.
The temp. and the pressure are sufficient to maintain
water in the liq. phase for ≥ 5 mins.

The resulting mixt. is cooled to $< 100^\circ\text{C}$ to produce the
processed whey solids material prod. Pref. the heated
mixt. contains 10-20 wt. % of water and 90-80 wt. % of
whey solids and is fried to a moisture content of < 10 wt. %

The whey solids prod. is esp. used to impart, enhance
or extend flavours of food prods. such as cocoa or coffee.
4.10.77 as 839208 (3pp931)

ASAE D13 30507A/17 =US 4183-971
Hard butter e.g. for chocolate mfr. - prepd. by selective
hydrogenation isomerisation of rice bran oil and opt. plant oil (NL
18.4.78)

ASAHI DENKA KOGYO 15.10.76-JA-123551
(15.01.80) *DT2745-718 A23d-05

Hard, edible hydrogenated vegetable oil prod. having an
iodine value 52-74, m.pt. 30-40°C, 16C satd. fatty acid
content 10-30 wt. %, 18C satd fatty acid content 55-75
wt. % and trans isomer content 40-70 wt. % is claimed.

It comprises (A) 50-100 wt. % of a first hardened oil
obtd. by hydrogenating, with isomerisation, a rice bran
oil having an iodine value of 97-108, 16C satd. fatty acid
content 15-22 wt. % based on total fatty acid content, and
contg. 1-4 wt. % of higher alcohol fatty acid esters, based
on the rice bran oil; and (B) 50-0 wt. % of a second harden-
ed oil obtd. by hydrogenating, with isomerisation, a veg-
etable oil that is free of tri-substd. glycerdes and having
a 16C satd. fatty acid content of 12-30 wt. % and an 18C
diunsatd. content of 30-55 wt. % based to total wt. of com-
bined fattyacids (A) and/or (B) may also be fractions obtd.
by fractionation of the first or second oils respectively.
The higher alcohols in (A) are unsaponifiable matters of
the bran oil.

The hard butter has a sharp m.pt., good compatability
with cocoa butter and excellent resistance to fat blooming.
12.10.77 as 841399 (8pp977)

See Also

D16 J7 9044754 D17 US 4183969 D23 DS 2808710
D23 J7 4155205

D14: FOODSTUFF MACHINERY

WVDE- ★ D14 05459C/04 ★BE -877-078
Agitating boiler esp. for defibering palm fruit kernels - has concave-
faced, V/section, grooved agitators and ejectors
CONSTRUCT VANDEKERC 19.06.79-BE-877078
(D23) (19.12.79) A23n B01f C11b

The vertical cross-section of the agitating arms carried
by the vertical shaft of a processing vessel, has a V-form
tangential to the direction of rotation, with the point of
the V aligned in the direction of rotation of the arms. The
vessel has fittings for the introduction and extraction of
the goods, and the agitator arms are arranged to project
radially and horizontally, at at least two levels. Below,
ejector arms are provided.

Used esp. for the treatment of palm fruits after their
sepn. from the bunches, preliminarily to the pressing of
the oil from the kernels. The design of the agitator bal-
ances out the axial loading of the driving shaft and ensur-
es a more efficient sepn. of the fibres, etc. without dam-
age to the kernels. At the same time the inwards scoop-
ing effect reduces wear on the vessel wall considerably.
19.6.79 as 877078 (F1) (12pp1014).

NEST D14 14353A/08 =DS 2732-130
Free-running material fluidity measurement - by inverted angles
splitting descending flow into primary and second arm streams and
comparing
MAGGI AG 09.08.76-FR-024334
J04 R16 (17.01.80) *DT2732-130 G01n-11/04

A device to check the fluidity of free-running bulk mater-
ials consists of a rectangular funnel with two complement-
ary adjustable halves so that the discharge gap can be var-
ied. Below the gap, a first central dihedron is followed at
a lower level by two dihedrons, one at each side. Three
containers are placed to catch the three streams of mat-
erial formed thereby. The proportion of it dropping in the
central to that in the outer containers gives a clear indic-
ation of the fluidity.

This creates a very simple and very accurate method
of checking the fluidity of any free-running or even fluid
media. 15.7.77 as 732130 (8pp39).

BONN/ ★ D14 05888C/04 ★FR 2421-568
Centrifugal dryer for washed vegetables before packaging - has
rotor with pivoted holders for baskets loaded with wet vegetables
BONNET R 06.04.78-FR-010182
P41 (07.12.79) A23n-13 B04b-05/12

Machine comprises a floor-mounted, vertical cylindrical
casing contg. a high speed rotor fixed to a power-driven,
vertical shaft. The rotor is equipped with pivoting basket
holders. The top of the casing has a circular cover of
which one half can be opened by swinging upwards on a
diametral hinge.

Pref., the stationary rotor suspends the basket holders
so that basket axes are parallel to the vertical rotor shaft.
At full speed rotating of the rotor, centrifugal force pivots
the holders so that basket axes are at 90° to the shaft

axis. Centrifugal force alone is used to thrust the basket into its holder, so no clamp or basket cover is required. The opening half of the casing cover pref. has a safety switch which prevents drive to the rotor if the casing half is not closed.

Used for drying washed vegetables ready for distribution in boxes etc., partic. leafy vegetables such as cabbage, spinach, endives, leeks, chicory, turnips, carrots, potatoes as well as fruits. Labour costs are reduced by mechanisation. Further savings are achieved by eliminating the use of contact drying materials such as tissues, wiping cloths, etc. Water extracted from the prod. can be drained from the casing for recycling. 6.4.78 as 010182 (9pp448).

SHIK-★ D14 06490C/04 ★J5 4157-161
Bottling device for milk or bean curd raw material - moulds the synthetic resin bottle, removes flash, and fills and seals it
SHIKOKU KAKOKI KK 02.06.78-JA-067090
A92 Q39 (A32) (11.12.79) B29c-07 B67c-07

A rotary blow moulder forms bottles, the synthetic resin bottles device removes the moulded bottles and places them on a conveyor, and device then cuts away the bottom flash and the excess top portion. Material is poured into the bottles which is then sealed. The removal device has a head with a pawl. When the mould is still closed, the pawl is inserted into the excess top part of the bottle and pulled out afterwards.

The movement of the head with the pawl is synchronised with the movement of the rotary portion, at least before the mould is opened. 2.6.78 as 067090 (12pp129).

SHIK-★ D14 06497C/04 ★J5 4157-171
Mfg. bottles for bottling milk or bean curd raw material - using rotary blow moulding device to form resin bottle, and trimming of flashings, etc.
SHIKOKU KAKOKI KK 02.06.78-JA-067091
A92 (A32) (11.12.79) B29d-23/03

Device moulds bottles of synthetic resin. A device removes the moulded bottle and places them on a conveyor. A completing device cuts away the bottom flashings and excess top portion. A desired material is poured in the bottle and the bottle is sealed.

The removing device has a head with a withdrawable inserting pawl. As the mould is still closed, the pawl is inserted in the top of the bottle. A reciprocal mechanism reciprocally displaces the head from the position over the mould and the bottle supplying position outside the moulder. An inverting mechanism inverts the head about the transverse axis through a predetermined angle. A pair of releasable clamping members for clamping the bottle is movable to the bottle supplying position.

The bottles are used for bottling milk or raw material for mfg. bean curd. 2.6.78 as 067091 (12pp129).

AMLA=★ D14 06782C/04 ★SU -407-457
Cylindrical electro-plasmolyser for grape pulp - with perforated chamber at inlet end for controlled gravity drainage and pulp densification

AS MOLD APP PHYS 27.06.72-SU-803469
(D16) (03.07.79) A23n-01

Electroplasmolyser comprises tubular electrodes mounted concentrically within a cylindrical housing connected to supply and discharge pipes. At the inlet end is a perforated chamber for initial gravity drainage and densification of the mass. The inner electrode is mounted on insulating guide inserts mounted on a hollow rod secured in centering spiders.

Offtake from the chamber can be controlled by a movable imperforate outer shield. The mass is treated with high-voltage pulses in the housing and the arrangement reduces pulp treatment time.

Lazarenko, B.R., Fursov, S.P., Shcheglov, Yu.A. et al. Bul. 23/25.6.79. 27.6.72. as 803469 (2pp1358)

AMLA=★ D14 06784C/04 ★SU -449-523
Electro-plasmolyser for vegetable pulp - has flat plate top and continuous plate bottom electrodes in rectangular housing for alternating or direct current

AS MOLD APP PHYSICS 15.09.72-SU-829158
(D16) (03.07.79) A23n-01

Electroplasmolyser for e.g. grape pulp, comprises a horizontal dielectric housing of rectangular section with several electrodes connected to a current source and mounted on the interior flush with the upper and lower walls and perpendicular to the longitudinal axis.

In order to ensure uniform treatment with a.c. of any frequency and pulsed high-voltage d.c., upper wall electrodes are flat and rectangular while the lower wall electrodes comprise a continuous plate. To damp high pressures occurring when treating pulp with pulsed current, there are apertures in the side walls covered by elastic sheet material, e.g., rubber. The electrodes are e.g., of sheet steel or graphite plates.

Lazarenko, B.R., Fursov, S.P., Shcheglov, Yu.A. et al. Bul. 23/25.6.79. 15.9.72. as 829158 (2pp1358)

VLME=★ D14 06903C/04 ★SU -662-046
Cheese-washing installation used in dairy industry - has rows of fleecy brushes mounted on hollow shafts through which water is fed under pressure to emerge through slits in the brushes

VOLG MEAT DAIRY IND 04.04.77-SU-476313
P13 (15.05.79) A01j-25/16

Machine for washing cheeses comprises brushes mounted on rotating shafts inside the body of the machine, the brushes having fleecy surfaces. There is a mechanism for moving the cheeses underneath the brushes, and a system to supply water to the surface of the cheeses. The washing quality is improved and the productivity is increased by making the shafts hollow with plugs in the ends. They have radial slots and are connected to the water supply system. The fleecy working surfaces of the brushes are divided into rows of segments with radial gaps relative to one another, in order to remove the contamination from both the brushes and the surfaces of the cheeses.

Shevyakov, N.P., Pochevskii, E.M. Bul. 18/15.5.79. 4.4.77. as 476313 (3pp29)

WILL- D14 47135B/25 #US 4183-294
Stone fruit cutter - includes a pair of vertical belts guiding the fruit to vertical disc cutters

WILLIAMS J A & A M 31.03.78-ZA-001864 (02.02.78-US-874861)
P28 (15.01.80) *ZA7801-864 +A23n-04/04

A fruit cutter has two cooperating belts which feed fruit to a pair of rotating cutters. The belts cause the fruit to rotate such that the cutters slice around the fruit to the depth of a fruit stone. A chute directs the fruit, which is pref. apricots, to between the belts.

The cutter which is below the belts pref. rotates at a higher speed than the one above. The lower cutter is pref. scalloped to pass the fruit through the cutting zone. The cutters can pref. be moved towards and away from each other.

Stones can be removed without bruising the fruit. 2.2.78 as 874861 (5pp1376)

FEED-★ D14 07202C/04 ★US 4183-675
Animal feed pelleting mill with steam jacket - fed from closed cycle heater also heating feed moistening water
FEED PELLETING INC 20.10.78-US-953220
(15.01.80) B01f-15/06

The feed to a pelleting mill is passed through a steam-jacketed mixer which raises the feed temperature by 30°F. In addn. hot water is added to the feed to adjust its moisture content.

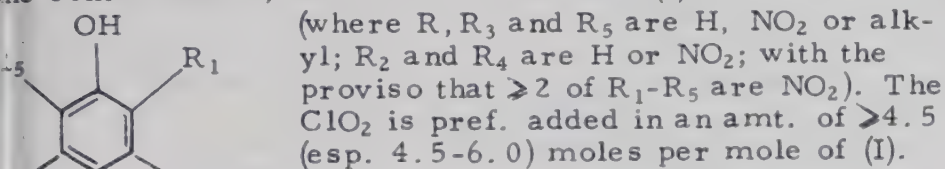
A single boiler generates dry steam which is fed to the steam jacket whose condensate is returned to the boiler in a closed cycle. A second steam stream is fed to a heat exchanger whose condensate is also returned to the boiler in a closed cycle. Moistening water for the feed is heated within the heat exchanger.

Recycling the condensate from the steam jacket and heat exchanger reduces the energy consumption compared with an open loop system. 20.10.78 as 953220 (9pp295)

D15: WATER TREATMENT

COSD ★ D15 05499C/04 ★BE-878-335
Removal of poly:nitrophenol contaminants from water - by treating with chlorine dioxide
COSDEN TECHN INC 21.08.78-US-935148
A41 E14 H05 (17.12.79) C02c C07c

Removal of nitrophenol contaminants from aq. streams is effected by adding ClO_2 in an amt. sufficient to degrade the contaminants, which are of formula (I)



The process is useful for treating (I) waste waters from the petrochemical industry esp. from the mfr. of vinylaromatic cpds., in which cpds. (I) are used as polymerisation inhibitors. The treatment effectively removes di- and trinitrophenols, esp. 2,6-dinitro-p-cresol (DNPC), which cannot be removed by alkali/ Cl_2 treatment. 21.8.79 as 878335 (12pp367).

BOV ★ D15 05502C/04 ★BE-878-346
Electro-flotation appts. to purify polluted effluent - has self cleaning cathodes arranged as a pair alternately actuated for each anode
BBC BROWN BOVERI SA 23.08.78-CH-008913
P41 (17.12.79) B03d C02b C02c

Two cathodes are fitted in relationship to each anode. All the electrodes are pref. cylindrical rods, the cathodes being arranged as one grill of parallel rods and the anodes as another grill. Alternate cathodes are connected to two separate electric supply conductors. The anodes are pref. made of titanium or stainless steel and are coated with lead dioxide. The combined surface area of the anodes should be at least equal to, more partic. twice as great as, the total surface area of the cathodes.

One cathode conductor is held at negative potential while the other is retained at zero potential. Connections to these two conductors are periodically reversed. Conductor reversal can be automatically effected by a time switch, by voltage rise in a constant current system or by current drop in a fixed voltage system.

Used in electroflotation to purify polluted effluent. Deposit on one set of coupled cathodes is dissolved away whilst that set is at zero potential. Periodic reversal of cathode connections makes the cathodes self cleaning. No need to empty the cell or remove the cathodes for cleaning. 21.8.79 as 878346 (8pp448).

CANA ★ D15 05522C/04 ★CA 1068-856
Casting tubular membranes - in a casting tube using a casting bob having a casting slot of variable size
NAT RES COUNCIL CAN 29.04.77-CA-277416
A88 J01 (01.01.80) B29d-23/08

Appts. for casting tubular membranes, for use, e.g. in ultrafiltration and reverse osmosis, includes vertical casting tubes and a casting bob assembly movable through each tube. The bob assembly includes means to supply casting soln. to the assembly and means to introduce gas into each tube below the assembly.

The bob assembly comprises a casting bob having an axial soln. feed channel leading to an annular channel and is screwed into a centering sleeve to a greater or lesser degree to alter the casting slot formed by the annular channel and the lower end of the sleeve. Associated with the casting bob assembly is a transport sleeve which can be moved into engagement with the casting bob to close the casting slot.

The centering sleeve accurately centres the bob during casting and screwing the bob into and out of the sleeve facilitates easy adjustment of the casting slot. Also the transport sleeves enable quick change over from casting tube to casting tube. 29.4.77 as 277416 (25pp525)

HOOK D15 63712Z/00 =DS 1900-998
Continuous production of chlorine dioxide - from alkali metal chlorate, alkali metal chloride and sulphuric acid in the presence of vanadium pentoxide catalyst
HOOKER CHEM & PLAST 05.03.68-US-710648
E36 F09 (17.01.80) *BE-729-357 C01b-11/02

Chlorine dioxide and Cl_2 are prepd. together with an alkali metal salt from a mixt. of an alkali metal chlorate, alkali metal chloride and a strong acid in proportion such that chlorine dioxide and Cl_2 are formed. The reaction mixt. is fed into a reactor maintained at -25° to 105°C (65 - 85°C) and under the temp. at which decompsn. of chlorine dioxide occurs. A catalyst from the gp. vanadium pentoxide, Ag ions, Mn ions, dichromate ions and As ions is present.

Reaction mixt. is subjected to a vacuum of 100-400 (150-250)mmHg to evaporate off water, chlorine dioxide and chlorine and a mixt. of water vapour, chlorine dioxide and Cl_2 and the crystallised alkali metal salt of the strong acid are removed from the reactor. During reaction the acidity of the mixt. is maintained at 7.5-6 (3-4)N by addn. of the strong acid and by evapn. of water. 9.1.69 as 900998 (6pp068).

WEBE/ D15 46328X/25 =DS 2458-157
Storm sewage tank - of circular shape with steeply inclined bottom and tangential inflow with inward offset
WEBER W 09.12.74-DT-458157
+Q42 (17.01.80) *DT2458-157 C02c-01/26 +E03f-05/10

A rainfall collection basin for municipal sewage plant has a circular shape and a conical bottom with an inclination of $\geq 25(45)^\circ$. The sewage, augmented by rainfall, enters tangentially at the conical bottom at two-thirds of the basin radius. A sludge pit is arranged at the centre, the sludge is carried away by a rising discharge pipe, starting at the pit. Clear water leaves the basin through an overflow weir.

This ensures a self-cleaning action for the sludge even for greatlt fluctuating inflow and fluid level conditions. The basin can also be utilised as a mechanical settling tank. 9.12.74 as 458157 (3pp39).

ALME- D15 11547X/07 =DS 2531-589
Rotary furnace for drying waste sludges - which tend to stick to the wall of the rotating drum
ALMER SANGYO KAISHA 15.07.74-JA-080907
J09 Q76 +Q77 (17.01.80) *DT2531-589 F26b-11/06

A horizontal rotary kiln for drying sewage sludge prior to combustion is fitted on its wall with L-shaped strips to lift up the charge, with the free ends pointing in the direction of rotation. Short chains with a ball at the end are suspended from the free ends; they are long enough to slide along the faces of adjoining strips without being caught by it. The chains are Al-coated. Two chain curtains, suspended from the wall without strips, divide the kiln into three compartments.

This kiln can deal with very adhesive sludge, partic. if preceded by a conical charging section. The kiln has a compact design and creates a min. of noise. 15.7.75 as 531589 (9pp39).

NIIG D15 14994Y/09 =DS 2636-535
Aerobic compost fermentation from organic sludge - by traversing stirrer mechanism and top layer skimming conveyors in aeration tank

NIIGATA ENG KK (SEIB) 13.08.75-JA-098239
(17.01.80) *DT2636-535 +C05f-07

An open rectangular fermentation tank for the aerobic conversion of organic waste into compost has rails on its rim on which two straddling frames are slowly moved by gear motors. The first supports a carriage with two driven stirring shafts with outer spirals which is slowly reciprocated crossways by another gear motor. The second, also driven by a gear motor, supports a cross belt conveyor on which the finished compost is transferred by two opposite-hand worm conveyors on a hinged structure

which charge two parallel contrarotating transfer worm conveyors. The air is introduced at the bottom by a perforated plate or by parallel perforated tubes.

This fermentation system has a very high efficiency. Satisfactory aerobic fermentation is achieved even when the layer of refuse is high. 13.8.76 as 636535 (10pp39).

HENK ★ D15 05581C/04 ★DT 2829-143
Water softening aluminosilicate granulate cation exchanger prepn. - by adding aq. silicate soln. or siliceous sol to aluminosilicate powder and reacting with alkali aluminate

HENKEL KG AUF AKTIEN 03.07.78-DT-829143

E33 (A25) (17.01.80) C01b-33/26 C02b-01/44 C11d-07/14

The granulate is prepd. by admixing, in standard granulators and at room temp., a finely-divided water of crystallisation-contg. crystalline aluminosilicate powder having compsn. 0.7-1.5 Cat₂/nO. Al₂O₃. 0.8-6 SiO₂ (I) (where Cat is an n-valent cation), particle size <30 μ, and Ca bonding capacity 50-200 mg. CaO/g. anhydrous aluminosilicate, with an aq. soln. of an alkali silicate, (A) or an aq. silicic acid sol. (B) as binder, to form a granulate having particle size 0.05-1 (0.1-0.5) mm.

This is followed by drying and then intimately contacting this granulate for 1 min. to 2 hrs. (1-30 min.) at room temp., with an aq. alkali aluminate silicate soln., (C), contg. 0.5-0.05 mol. Al₂O₃ w.r.t. 1 mol. SiO₂ binder; opt. sepg. the prod. obtd. from the aq. phase; and drying it for 0.5-30 (10-30) hrs. at 80-150 (100-120)°C.

The solns. of (A), having molar compsn. of 1 Na₂O. 1-3.5 SiO₂, or of (B), contg. 10-40 wt.% SiO₂, are added in amts. corresp. 5-30 wt.% SiO₂ w.r.t. solid mixt. consisting of aluminosilicate powder (I) and added SiO₂.

The cation-exchangers are used as water pre-softeners or softeners in washing and cleansing processes. The granulates are stable in hot and cold water and have high exchange capacity. 3.7.78 as 829143 (15pp200)

HENK ★ D15 05584C/04 ★DT 2829-230
Aluminosilicate granulate cation exchanger prepn. - by adding aq. silicate soln. or siliceous sol to aluminosilicate powder and reacting with aluminium sulphate

HENKEL KG AUF AKTIEN 03.07.78-DT-829230

(D25) (17.01.80) C01b-33/26 C02b-01/44 C11d-07/14

Cation-exchanging aluminosilicate granulate is prepd. by (a) admixing, in standard granulators, and at room temp., a finely-divided, water of crystallisation-contg. crystalline aluminosilicate powder having molar compsn. 0.7-1.5 Cat₂/nO. Al₂O₃. 0.8-6 SiO₂ (I) (where Cat is a cation having valence n), particle size <30 μ and Ca bonding capacity 50-200 mg. CaO/g. anhydrous silicate, with an aq. soln. of an alkali silicate (A) or with an aq. silicic acid sol. (B) as binder, to form a granulate having particle size 0.05-1 (0.1-0.5) mm., (b) drying and intimately contacting this granulate, by shaking or spraying for 1-20 (1-30) min. at room temp., with an aq. soln. of an acid-hydrolysing Al salt, (C), esp. Al₂(SO₄)₃, contg. 0.5-0.05 mol. Al₂O₃ w.r.t. 1 mol. of SiO₂ binder; (c) opt. separating the prod. from the aq. phase and (d) drying 0.5-30 (10-30) hrs. at 80-150 (100-200)°C.

The solns. of (A), having molar compsn. 1 Na₂O. 1-3.5 SiO₂ or of (B), contg. 10-40 wt.% SiO₂, are added in quantities corresponding to 5-30 wt.% SiO₂ w.r.t. solid mixt. consisting of powdered (I) and added SiO₂.

Cation-exchangers are used as water pre-softeners in washing and cleansing processes, esp. for washing textiles and dishes with recycling of washing liq. through an ion-exchange device sepd. from washing-vessel. The granulates are stable in hot and cold water and have high exchanger capacity towards water-hardeners. The use of (C) for the conversion of binder silicate to binder aluminosilicate prevents undesired pH-increase in use by alkali supply to the washing- or cleansing baths. 3.7.78 as 829230 (16pp200)

SCHR/ ★ D15 05599C/04 ★DT 2829-530
Electrodialytic element - for desalination or power generation using dissociable metal salt solns.

SCHREIBER H 05.07.78-DT-829530

J03 R47 (17.01.80) B01d-13/02 C02b-01/82 H01m-14

A system of electrodialysis for use in the desalination of

seawater, the generation of electrical power from brine of different concn., or the storage of electrical energy uses in the electrode chambers solns. of substances which can dissociate into ions and can be reduced or oxidised as the ions change their charge, without passing into the gaseous phase. The pref. dissociable substances metallic salts or metallic complexes.

This eliminates the release of chlorine and hydrogen gas and the shortening of the life of the electrodes and membranes by the attack from aggressive gases. The complicated means for the disposal of the gases are saved. 5.7.78 as 829530 (17pp39)

RHKA ★ D15 05742C/04 ★EP ---7-01
Sewage sludge mixer and granulator - with hydraulically setting solid using conveyor of differing degree of filling

RHEINISCHE KALKSTEI GMBH 18.07.78-DT-831418

C04 (23.01.80) C02f-11/14 C05f-07

D/S: E(BE, CH, DT, FR, GB, LU, NL, OE, SW).

Appts. for the continuous mixing of dewatered sewage sludge with a solid material which hardens under water, for the manufacture of a mix for safe dumping on a spoil heap or for a fertilizer, has a common feeder for sludge and solid. At the feed point of the sludge the feeder has the full intake capacity but this is reduced at the solids feed point to suit its smaller percentage. A separately driven mixer/granulator continues the treatment.

The plant operates satisfactorily nonstop in spite of fluctuating moisture content of the sludge. The plant can be quickly adapted to varying working conditions.

13.6.79 as 101925 (12pp39).

(G) ISR: FR-469427; DS---2956; FR2329938.

GRAH- ★ D15 05824C/04 ★EP ---7-168
Extracting methane gas by anaerobic digestion of e.g. livestock waste - using air-tight digestion vessel having sub atmospheric pressure in space above waste

GRAHAM-SNIDER ENERG 02.06.78-US-912103

C04 E17 H06 (23.01.80) C01c-01 C12p-03 C12p-05/02

D/S: E(BE, CH, DT, FR, GB, NL).

In the extraction of CH₄ gas from carbon cpd.-bearing material by anaerobic bacteria digestion of the material, the improvement is that the digestion is carried out in an air-tight container into which the material is partially filled, and the space in the container above the surface of the material is maintained at a pressure less than atmospheric while digestion proceeds.

The process is esp. for treating livestock waste slurry material.

The sub-atmos. pressure above the waste material stimulates bacterial action by drawing the gas out of the slurry as it is generated, ensuring constant anaerobic fermentation and accelerated decomposition of the raw waste.

31.5.79. as 301013 (15pp914).

(E)ISR: FR-911622; FR1048146; FR-994032;

J75135279; 1 Journal Reference.

CALG D15 56204B/30 =EP ---7-259
Resolving oil-in-water emulsions - using copolymer of acrylamide and methacrylamido propyl-tri:methyl-ammonium chloride

CALGON CORP 15.06.78-US-916034

A97 H05 J01 (A14) (23.01.80) *US4160-742 B01d-17/04 +C02f-01/56 C10g-33/04

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Oil-in-water emulsions are broken by treatment with a copolymer of acrylamide (≥ 50 wt.%) and methacrylamido propyl ammonium chloride (I).

The copolymer is used to de-emulsify oil-in-water emulsions, esp. in waste streams prior to their discharge from petroleum refineries, industrial plants, etc.

13.6.79 as 400388 (19pp960).

(E)ISR: US2974178; US3691086; US3090759; US3316181;

US3528928; US3585148; US3687845; US3756959;

US4026794.

RB-★ D15 05897C/04 ★FR 2421-669
 Injecting gas into liq. esp. oxygen into waste water - with rapid response to peak loads of BOD
 CARBOXYQUE FRANCAIS 10.01.78-FR-000550
 (07.12.79) B01f-03/04 B01f-13/02 C02c-01/06
 Bubbles of the gas are injected into a moving, agitated interface of the liq. flowing across injection holes. In order to enter the injection zone the liq. is temporarily pressurised slightly and formed into a branch current which is diverted from and subsequently returned to the main body of the liq.. The main body of the liq. remains at a lower pressure and less charged with gas than liq. at the discharge end of the branch current.

Appts. pref. comprises a tank contg. waste water which is impelled up a submerged, vertical chimney into which a coaxial, perforated pipe injects oxygen. The branch current in the annular passage between chimney and pipe is slightly pressurised by the impeller. Impeller speed and rate of gas injection are pref. adjusted automatically in response to continuous monitoring of gas content of liq. in the main body surrounding the chimney.

Used for injecting gas into liq., partic. pure O₂ into waste water being purified by activated sludge. Liq. leaving the branch current is released into a lower pressure zone so gas retention is improved. Using pure O₂ instead of atmos. air reduces energy required for dissolving by 70% and raises the plant output by 30%. Great flexibility in handling peak loads is achieved. 10.1.78 as 000550(15pp).

ST-★ D15 05898C/04 ★FR 2421-671
 Generator of bubbles in liq. medium - with nozzle feeding liq. stream sweeping zone between nozzle and perforated gas emission face, maximising distribution and dispersion
 ALSTHOM-ATLANTIQUE 05.04.78-FR-010040
 (07.12.79) B01f-03/04 B01f-05 B01f-13/04 C02c-01/12
 Generator of bubbles in a liq. medium comprises a component connected to a source of gas having a face emitting the gas through a large number of small perforations and a device feeding a liq. stream sweeping the zone of emission of the gas at high speed, ≥ 1 m/s.
 Bubble generator is used in the field of chemical engineering and in the treatment of waste waters. Appts. ensures better distribution and better diffusion of the bubbles in the body of the liq. in which it is immersed than existing bubble generators, and uses little energy. 5.4.78 as 00040(8pp1192).

VI/★ D15 05900C/04 ★FR 2421-673
 Contacting plate for packing heat and mass transfer columns - makes up inexpensive, high performance, low pressure drop assemblies
 DAVID PA 03.04.78-FR-010173
 J04 (07.12.79) B01d-03 B01j-10 C02c-01/02
 The plate is of the type which is square or rectangular in plan view.

Improvement is that it is divided into two triangular sectors by a vertical, diagonal wall extending between two opposite corners of the plate. The two sections are inclined in opposite directions to each other from one end of the diagonal to the other.

A rectangular contacting tray can be made by assembling a number of plates side by side. Plates or trays can also be superimposed to provide multistage percolation, partic. for liq.(s) descending countercurrent to or cocurrent with a flow of gas(es).

In partic. a mixt. of waste water and activated sludge may be contacted with a flow of air to effect biological purification of the water.

Used as packing in columns for heat and/or mass transfer, e.g. in trickle coolers, aerators and deaerators for liq., in bacterial beds for biological treatment of waste water, etc..

Inexpensive, high performance, low pressure drop packing is provided. A single style of plate offers a variety of possible arrangements, all with extended flow paths for efficient contacting. Lower columns are suitable for given duty so liq. requires pumping to a reduced head. 5.4.78 as 010173(13pp448).

KORN- D15 59540Y/34 =GB 1559-725
 Preventing oxidative corrosion in water pipes - by addn. of reactive cpds. from tannin and sulphite or hydrazine
 FA KORN E 23.04.76-DT-617813
 A97 M14 (23.01.80) *DS2617-813 +C07g-01 C07g-03 C23f-11/14

In a method for inhibiting oxygen-corrosion of metal surfaces exposed to water by adding a corrosion inhibitor having O₂-binding properties, the amt. of oxygen is first determined; and a water-soluble or -dispersible corrosion inhibitor is added to bind the calculated amt. of oxygen, on the assumption that the oxygen-binding capacity of a unit wt. of corrosion inhibitor is determined by the reducing sulphite or hydrazino gps. contained in it, considered as Na sulphite or hydrazine.

The corrosion inhibitor is of formula AB, where A is a polymer matrix or skeleton (pref. a natural or synthetic polymer, a tannin, a lignin or cellulose), and B are covalently bound sulphite or hydrazino gps. capable of binding O₂. Used in boiler feed water and other industrial water installations. 22.4.77 as 016859 (4pp997).

DOWC ★ D15 C/04 ★IT 1035-003
 Water and aq. solns. bromination process
 DOW CHEMICAL CO 12.07.66-IT-015775
 (20.10.79) C02b

PIAZ/★ D15 C/04 ★IT 1035-444
 Potable water purifier of portable type
 PIAZZA P 23.04.75-IT-049269
 (20.10.79) C02b

ASAG ★ D15 06165C/04 ★J5 4155-174
 Deodorisation of exhaust gas or waste water - by contact with aq. soln. of hypochlorous acid or hypochlorite
 ASAH GLASS KK 30.05.78-JA-063786
 J01 (D22) (06.12.79) B01d-53/34 C02c-05/04

Deodorisation of exhaust gas (I) or waste water (II) contg. oxidisable odoring compounds (III), comprises contact of (I) or (II) with aq. soln. of hypochlorous acid (IV) or hypochlorite (V) the concn. of which is controlled at a suitable value by analysis using absorptiometry.

The method is applied effectively to (I) or (II) from plant for treatment of food, faeces and urine, pulp, waste, petroleum, etc.

(IV) and (V) convert to alkali chloride by the deodorisation treatment. The soln. is regenerated by electrolysis in a bath without diaphragm, after concn. of (IV) or (V) has been lowered. 30.5.78 as 063786 (5pp42).

AGEN ★ D15 06268C/04 ★J5 4155-887
 Continuous prepn. of water contg. slight amt. of dissolved oxygen - of known concn., by mixing water contg. one micro gram of oxygen per litre with satd. oxygen soln.
 AGENCY OF IND SCI TECH 30.05.78-JA-063845
 J04 R16 (08.12.79) G01n-01

Water contg. slight amt. of dissolved oxygen of known concn. is prepd. by mixing water contg. almost 0µg./l. of dissolved oxygen obtained by bubbling N₂ gas into material water with sat. dissolved oxygen water obtd. by bubbling air into pure water of a given temp.

The oxygen water of known concn. is useful for checking and calibration of analyser. 30.5.78 as 063845 (3pp).

NIRA ★ D15 06289C/04 ★J5 4155-945
 Recovering selenium component in electrolytic colouring of aluminium - by treating waste water with cation exchange resin, adjusting pH, treating with anion exchange resin, desorption and recycling

UNITIKA KK 30.05.78-JA-064807
 E36 M11 (08.12.79) C01b-19 C25d-11/22

Waste water contg. oxyacid components of Se is treated by (a) treating the waste water with a cation exchange resin and adjusting the pH to ≤ 6 ; (b) treating the waste water with an anion exchange resin to adsorb the Se oxyacid component; (c) desorbing the adsorbed Se component from the anion exchange resin by using an acid soln. and obtaining a recovery soln. which contains Se component as ≥ 800 mg/l; and (d) reutilising the obtd. soln. in the electrolytic colouring process.

The cation exchange treatment and the adjustment of

pH may be achieved in a single process using a H-type cation exchange resins. The acid solution for the desorption may be a mineral acid solution. Se components can be recovered in a high purity, and environmental pollution caused by the discharge of Se is prevented. 30.5.78 as 064807 (5pp121).

SASN ★ D15 06299C/04 ★ J5 4155-979
Metal treatment aq. waste purificn. - includes inorganic acid treatment and electrolysis to remove organic impurities, e.g. surfactants

SANSHIN SEISAKUSHO 31.05.78-JA-064325

J03 M11 (08.12.79) C02c-05/12

It is to filter a waste alkaline soln. contg. organic cpds., e.g. organic surface active agents, exhausted from surface treatment of metals.

The method comprises treating the waste alkaline soln. with a mineral acid, e.g. sulphuric acid or hydrochloric acid, to obtain an acidic soln., electrolysing the acidic soln. to coagulate the organic cpds. filtering the coagulated substances from the soln.

Typically, a waste defatted soln. pH 13-3 exhausted from a plating factory was adjusted with 20% H_2SO_4 to pH 3. The adjusted soln. was electrolysed in a cell equipped with a lead dioxide deposited titanium anode and a stainless cathode in the condition of 6-7V, 15-47°C, and 3A/dm² to obtain a soln. contg. flocked substances. The flocked substances was filtered out from the obtd. soln.

As organic compounds contained in the waste solution was flocked by electrolysis thereof, the resulting electrolysed solution can be easily filtered. 31.5.78 as 064325 (3pp51).

HERM/ ★ D15 C/04 ★ J5 4155-981
Filter for softening of liquid or complete desalination

HERMANN W 29.05.78-DT-823432 (29.05.78-DT-823314)

J01 (08.12.79)

29.5.79 as 065711.

MITB ★ D15 06301C/04 ★ J5 4155-982
Reverse osmosis device for desalination of sea water - includes high pressure circulator between pump and a reverse osmosis module, to ensure adequate soln. flow-rate

MITSUI SHIPBUILDING ENGG 31.05.78-JA-065108

J01 (08.12.79) B01d-13

Reverse osmosis device is used for separating a soln. circulating, in the device. It is used for producing plain water from sea water.

The object is to reduce the concn. polarisation without increasing the energy required for operation of the device. In addn. to a high pressure pump for supplying the soln. with high pressure, a high pressure circulator for circulating the soln. in a pressuring system at high speed is inserted between the pump and the following reverse osmosis module. Hence, the entire or part of the soln. is circulated without pressure redn., to assure adequate flow-rate of the soln. required for an osmotic membrane of the module, and the pressure exceeds the pressure loss of the module. 31.5.78 as 065108 (4pp26).

KENN/ ★ D15 06371C/04 ★ J5 4156-096
Synthesis of absorptive resins esp. for removing carbonyl cpds. - by adding di:vinylbenzene crosslinker to methyl acrylate, adding diluent, suspension polymerising and reacting with polyethylene poly:amine

KEN N 31.05.78-JA-064811

A97 E17 (A14) (08.12.79) B01d-15 C08f-08/32

The resins are synthesized by adding divinylbenzene as a cross-linking agent to methyl acrylate, adding diluent (e.g. isooctane, petroleum benzine, ligroin, chloroform, CCl_4 , benzene, toluene, chlorobenzene, xylene, MEK) to the mixt., suspension-polymerising the mixt., and reacting the copolymer formed a polyethylene polyamine.

The resins are used for removal of carbonyl cpds. from the waste water discharged from factories and for purificn. of organic chemicals, esp. methanol.

Specifically 90 vol. % of methyl acrylate is mixed with 10 vol. % of divinylbenzene and 1wt. % of benzoyl peroxide. The mixt. is mixed with 50 vol. % diluent and suspension-copolymerized. The copolymer obtd. is reacted with poly-ethylenepolyamine (e.g. diethyltriamine, triethyltetra-

mine, tetraethylenepentamine) at 175°C for 1-5 hrs. The resins obtd. adsorb carbonyl cpds. such as formaldehyde, acetaldehyde, benzaldehyde. 31.5.78 as 064811 (5pp136)

MITR ★ D15 06383C/04 ★ J5 4156-26
Treatment of emulsified oil-contg. waste waters - b demulsification, flotation and filtration

MITSUBISHI RAYON KK 29.05.78-JA-064168

A88 (10.12.79) B01d-17/04

Oil components and floating solids are removed from emulsified oil-contg. waste waters, by (i) adding an emulsion-breaker to form fine oil droplets, (ii) introducing the demulsified water into a separating tower wherein oil component is sepd. by flotation, and (iii) passing the water through fibril layers made of hydrophilic synthetic fibrils arranged such that the fibril clearance of the fibril layers becomes smaller along the direction of flow of the water.

The fine oil droplets are suppressed to pass smoothly through the fibril layer by the exclusion action of the synthetic fibrils, and the oil droplets are bound together in the fibril layers to form larger oil droplets. They rise to the surface without any damage to the filter. Further fine oil droplets are bound together at subsequent fibril layers and they too rise to the surface.

The waste is e.g. cutting oil-contg. waste water, defatting waste water, car-washing waste water, compressor drain waste water or drying waste water. The emulsion breaker is e.g. $MgSO_4$, $CaCl_2$, $MgCl_2$ and $ZnCl_2$ etc. at 0.2-5wt. %. The fibrils are e.g. of a polymer comprising 93wt. % of acrylonitrile and 7wt. % of vinylacetate. 29.5.78 as 064168 (5pp34).

AGEN ★ D15 06384C/04 ★ J5 4156-341
Waste water treatment - with heavy metals being removed at an early stage so as to prevent them interfering with the oxidation of cyanate(s)

AGENCY OF IND SCI TECH 31.05.78-JA-064300

(10.12.79) C02c-05/02 C10b-49

Waste water from the thermal decomposition of e.g. municipal domestic wastes and industrial wastes etc. is treated by (i) adjusting its pH to 10; (ii) adding a polymer coagulant, and ferric salt to ppt. heavy metal components and reducing matter, e.g. oil etc.; (iii) adjusting its pH to 10-12 with NaOH; (iv) adding an oxidizing agent, to maintain the oxidation potential at $> +300$ mV and to carry out the initial oxidation smoothly without any generation of cyanic chloride; (v) adjusting the pH to 8-9 with H_2SO_4 and (vi) adding NaClO to maintain the oxidation potential at $> +650$ mV and to decompose NaCN to N_2 and CO_2 .

If heavy metal is contained in the water, it reacts to form stable cyanate complex salts and therefore the cyanate is not removed smoothly. By previously removing the heavy metals, 96% of the cyanate can be removed with less NaClO being required. 31.5.78 as 064300 (6pp34).

AGEN ★ D15 06385C/04 ★ J5 4156-342
Treating waste water from thermal decomposition of waste - by centrifugation and recycling recovered oils and solids for use as a fuel in thermal treatment

AGENCY OF IND SCI TECH 31.05.78-JA-064301

(10.12.79) C02c-05 C10b-49 C10l-01

Waste water from the thermal decomposition of e.g. municipal domestic wastes and industrial wastes etc., is treated by (i) removing oil components by flotation and solid components by centrifugation and (ii) recirculating them in slurry form for use as a heat source to the heat decomposing step.

The effective utilisation of the oil and solid components becomes possible and the waste water is effectively treated in the subsequent procedures without any disadvantages.

The recovered oil component has a calorific value of about 8,000-9,000 Kcal/Kg., and the recovered solid component has a calorific value of about 3,000-4,000 Kcal/Kg. 31.5.78 as 064301 (4pp34).

AGEN ★ D15 06386C/04 ★ J5 4156-343
Waste water treatment - using recycled oils and combustible gases as a fuel

AGENCY OF IND SCI TECH 31.05.78-JA-064302

(10.12.79) C02c-05 C10b-49 C10l-01

Waste water from the thermal decomposition of e.g. municipal domestic wastes and industrial wastes etc. is treated by (i) contacting it countercurrently with air and steam to strip-off volatiles, e.g. lower boiling oil components etc. and (ii) introducing the volatilised components into a condenser in which they are cooled, condensed and sepd. into scum (oil component), condensed water and an uncondensed gaseous component.

The uncondensed component is then burnt and made harmless. The scum and the uncondensed gaseous component are used as a source of heat in the thermal decomposition.

The steam used in the stripping treatment is generated with surplus heat from the combustion furnace. By this process, about 80% of cyanide and about 50% of the COD components are removed in a short period. The amt. of NaClO etc. to be used for oxidative decompsn. of cyanides etc. in the subsequent procedure is greatly reduced. 31.5.78 as 064302 (4pp34).

KANE ★ D15 06387C/04 ★ J5 4156-344
Treatment of polyvinyl alcohol-contg. waste liquor - with titanium cpds., aldehyde(s) and acids, followed by biological treatment
KANEBO KK 30.05.78-JA-065378
A35 (A14) (10.12.79) C02c-05/02

PVA-contg. waste liquors are purified by solidifying the PVA for solid/liquid sepn., and then subjecting it to biological treatment. Ti cpd(s) are added so that the PVA is easily and effectively pptd. and removed by conventional solid/liquid sepg. means, e.g. filtration or centrifuging etc., so that the COD due to the PVA becomes almost zero.

Ti cpd(s) are e.g. titanitic acid, oxyacid salts of Ti, Ti malides or esters of titanitic acid etc. They are used at 0.3-10 pts. wt. per pt. wt. COD components in the waste liquor to react with them at 30-100°C. PVA pptn. is further accelerated by using the Ti cpd(s). in combination with an aldehyde, e.g. formaldehyde, glyoxal, malonic aldehyde etc.

The pptn. reaction proceeds more smoothly under acidic conditions with H₂SO₄, HCl, HNO₃ and acetic acid etc. The amts. of Ti cpd., aldehyde and acid to be added vary with the PVA content of the liquor, but are at approx. 0.3-10, 0.9-10 and 0.1-5 times the COD components concn. resp. 30.5.78 as 065378 (4pp34).

JAOR ★ D15 06615C/04 ★ J5 4157-770
Continuous neutralisation of regenerated waste soln. - from continuous mixed bed pure water mfr. appts.
JAPAN ORGANO KK 02.06.78-JA-065793
(12.12.79) C02b-01/30 C02c-05/02

Continuous neutralisation of regenerated waste soln. from continuous mixed-bed pure water mfr. appts. (I) comprises mixing acid waste soln. and alkali waste soln. discharged from (I) to neutralise them. Acid waste soln. is introduced into a mixing-neutralising tank through a pipe connecting the acid waste soln. receiving tank with the mixing-neutralising tank, and alkali waste soln. is introduced into the mixing-neutralising tank through a pipe connecting an alkali waste soln. receiving tank with the mixing-neutralising tank, and when necessary, adding acid further needed for neutralisation to the pipe, and both waste solns. are mixed with air to neutralise with discharging CO₂ gas evolved.

The process of the present invention makes possible to neutralise waste soln. with a very small amount of acid, without causing SS in neutralised water. Apparatus is simple, and it can be continuously operated, therefore running cost and initial cost may be reduced. 2.6.78 as 065793 (7pp96).

SHIM/ ★ D15 06616C/04 ★ J5 4157-772
Fresh water prodn. and concn. by refrigeration - by cooling water-contg. substance, effecting heat exchange between compressed refrigerant and cooled substance and/or ice, etc.
SHIMOKAWA M 01.06.78-JA-064957
(12.12.79) B01d-09 C02b-01/12

Process comprises (a) compressing refrigerant gas used to cool water-contained substance, and then effecting heat-exchange between the compressed refrigerant gas and the cooled substance and/or ice; and (b) absorbing the refrigerant gas to solvent, and sepg. the solvent and refrigerant by distn.

erant gas to solvent, and sepg. the solvent and refrigerant by distn.

Compression costs are reduced by ~ 50% c.f. conventional processes. In an example, sea water was frozen by contacting with refrigerant. The ice and water at 0°C were carried into a washer and brine removed. The ice was introduced into the condenser with pure water. At the condenser, refrigerant gas of 0.1 to 0.7 kg/cm² generated at the freezer was introduced, and one part of the refrigerant gas was liquefied and carried to a storage tank. Gas of 0°C which is not liquefied passing through the tank was absorbed into solvent and sepd. in a distn. tower. 1.6.78 as 064957 (3pp96).

MITU D15 23022W/14 = J7 9043-477
Polymer coagulant for purificn of waste water - consists of condensation products of epichlorohydrin and guanidine
MITSUBISHI CHEM IND KK (MITS) 14.11.72-JA-114152
A97 (20.12.79) *J49079-979 + B01d-21/*

Condensation products between epichlorohydrin and guanidine, its salts, or their mixts. with urea or thiourea have high coagulative action and are used as coagulants for clarification of waste water.

In an example, guanadine carbonate 18, epichlorohydrin 18.5, and NaOH 8g were mixed and heated at 100° for 3 hrs and then at 135-140° for 6 hrs. to obtain a brown solid material, 20 ppm of which was added to 100ml activated sludge suspension (solid content 1%) and subsequently the suspension was dfiltered. For obtaining 50 ml of filtrate, it took 11 sec. 14.11.72 as 114152 B01d-21/01 (20.12.79)
MITSUBISHI CHEMICAL INDS (3pp) (J4 9079979)

SAOB D15 28318Y/16 = J7 9043-994
Electrolytic waste water treating device - using hydroxy ion produced at the anode as effective cleaning agent
SANKYO SEIKI MFG KK (SANY) 08.09.75-JA-108778
J03 (22.12.79) *J52032-887 + C02c-05/12 C25b-09

Electrodes are disposed in an electrolytic cell and fixed to a negative potential as a cathode. A band anode plate is passed through both electrodes and wound around a winding drum. Drain and feed pipes are connected to the cell and respective openings are disposed between both electrodes whose upper ends are further apart from each other compared with the respective lower ends. A treating water drain port is disposed at a lower section of the cell.

Waste water is fed into this structure, and dirty materials contained in the waste water are removed by the action of hydroxides of anode metal produced at the anode. 8.9.75 as 108778 C02c-5/12, C25b-9/00 (22.12.79)
SANKYO SEIKI SEISAK (4pp) (J5 2032887)

YAWH D15 76630X/41 = J7 9043-998
Sepn of aq emulsion contg heavy oil from coal tar - using specified anionic surfactants to break emulsion
NIPPON STEEL CHEM KK 24.02.75-JA-021944

A97 H09 J01 (22.12.79) *J51096-785 B01d-17/04 + C02c-01/38
In sepg. oil and water from aq. waste oil in which heavy oil of s.g. >1 consisting mainly of oil from coal tar (e.g. high boiling oil such as naphthalene oil, wash oil, anthracene oil, creosote oil, etc.) and water form the emulsion, one or more anionic surfactants selected from alkylaryl-sulphonate, alkanesulphonate, higher alcohol sulphuric acid ester, polyoxyethylene alkylphenylsulphate and polyoxyethylene alkylsulphate are added to the waste to destroy the emulsion, and the water and oil are sepd. utilising difference in the specific gravities.

Oil useful as fuel oil or material oil can be recovered without causing environmental pollution. 24.2.75 as 029144 B10d-17/04, C02c-1/38 (22.12.79) NIPPON STEEL CHEM KK (3pp) (J5 1096785)

CHUI D15 39345A/22 = J7 9044-269
Granulating ash from incineration of wastes, esp. sewage sludge - with addn. of water and esp. Portland cement or bentonite, as binder
CHUGAI RO KOGYO KAISHA 30.09.76-JA-118002

L02 Q73 (25.12.79) *J53043-975 B01j-01 B01j-02/12
Method comprises adding 25-45 wt. % water to the ash contg. SiO₂, CaO, Al₂O₃, Fe₂O₃, etc. to produce a hydrating reaction while granulating them and then pelletising into desired grain size pref. 2-30mm.

The method is suitable for treatment of sludge from sewage treatment, and eliminates secondary pollution due to scattering during loading prior to transporting. Material obtd. may be used in prodn. of roadbeds. 30.9.76 as 118002 B01j-2/12, 1/00 (25.12.79) CHUGAI RO KOGYO KAISHA (3pp) (J5 3043975)

DNTO ★ D15 06699C/04 ★ J7 9044-270
Electrolytic treatment appts. - where liq. contg. conductive powder is formed by compressed air up between coaxially disposed tubes which act as electrodes

DAINIPPON TORYO KK 19.03.76-JA-030632

M11 (25.12.79) C02c-05/12 C25b-09

An electrolytic treating appts. comprises an outer casing having a liq. inlet near the bottom, and a double walled tube extending centrally in the casing and comprising a pair of spaced, coaxially disposed tubes one serving as a cathode and the other serving as an anode.

A pressurised air is blown into the inlet liq. to convey the liq. upwardly through the inner tube with a suspension of conductive power. The liq. being separated from the air at the top end of the double-walled tube and then passed with the powder downwardly through the electrolytic treating chamber defined between the inner and outer tubes. 19.3.76 as 030632 C02c-5/12, C25b-9/00 (25.12.79) DAINIPPON TORYO KK (4pp47) (J5 2113560)

NISH/ D15 03099B/02 = J7 9044-676
Device for electrolysed water prodn. - can be easily handled without dismantling electrodes

NISHINO T 00.00.78-JA-055939

J03 (27.12.79) *J53137-074 A231-01 C02b-01/82

Platinum metal film electrodes are laid over an upper outer area and inner area of a ceramic cup and this cup is coaxially disposed in another ceramic cup having similar metal film electrodes. A lower section of the inner cup is made water-permeable. The electrodes of the inner and outer cups are connected to opposite electrodes of a DC current source to electrolyse the water in the cup.

The water which is electrolysed to alkaline water contg. cations and acidic water contg. anions, has medical applications. 25.9.75 as 55939/78 C02b-1/82, A231-1/00 (27.12.79) NISHINO, T (3pp) (J5 3137074)

BUCL D15 44129A/25 = J7 9044-694
Compsn. used to prevent corrosion and incrustation in aq. systems - contg. di:methylamino methylene bis:phosphonic acid and water-soluble polymer such as polyacrylic or polymethacrylic acid

BUCKMAN LABS INC 25.10.77-US-845011

A97 E11 M14 (27.12.79) *BE-863-904 C02b-05/06 C08k-05/53 C08l-101/08 C23f-11/16

A comps. comprises:- (A) dimethylaminomethylene bis-phosphoric acid or its water-soluble salts of formula $(\text{HO})_2\text{OP}-\text{CHN}(\text{CH}_3)_2-\text{PO}(\text{OH})_2$; (B) a water-soluble polymer having a linear hydrocarbon structure contg. in lateral chains carboxylic or carboxylate gps. of m.w. 200-100,000 and one or more of water, an aq. soln. of phosphorous acid or its alkali metal salt, or an aq. soln. of water-soluble zinc salts.

The compsns. are used to inhibit corrosion and prevent incrustation on metal surfaces in aq. systems, esp. in amt. 0.5-1,000 ppm. The compsns. are esp. used in heating and cooling systems. 25.10.78 as 131467 (clg. 25.10.77-US-845011) C08l-101/09, C08k-5/53, C02b-5/06 C23f-11/16 (27.12.79) BUCKMAN LABS INC (11pp) (J5 4095648)

TOYM D15 26285A/14 = J7 9044-771
Hollow fibre membrane material prodn. - by extruding soln. of cellulose ester and polyether in amide solvent

TOYOBOKK 30.07.76-JA-091467

A11 F01 (A25 A32) (27.12.79) *J53019-423 D01f-02/24

A spinning soln. composed of 26-39 wt. % of cellulose ester, linear or cyclic amide series solvent and 74-61 wt. % of polyether of formula $\text{R}_1\text{O}(\text{C}_2\text{H}_4\text{O})_n\text{R}_2$ in a wt. ratio of solvent to polyether of 85:15-50:50 is extruded to form a hollow fibre. In the formula, R_1 and R_2 each is H, 1-6C hydrocarbon residue, $-\text{C}_2\text{H}_4\text{R}'$ or $-\text{COR}_2''$ and R' is $-\text{CN}$, $-\text{COOR}_2''$, $-\text{CONH}_2$ or $-\text{CH}_2\text{NH}_2$. and R_1'' and R_2'' each is H or 1-6C hydrocarbon residue and n is 2-35.

The resulting hollow fibre membrane is used as rever-

se osmosis membrane to mfr. pure water, to make fresh water from seawater; to recover useful substance and to treat waste water from a factory. 30.7.76 as 091467 D01f-2/24 (27.12.79) TOYOBOKK (5pp) (J5 3019423)

FEPu ★ D15 06816C/04 ★ SU -655-654
Mechanism for flotation cleaning of fluid - has cylindro-conical baffle and plate on evolvent between baffle and body

FERR METAL EFFL PURIF 26.07.77-SU-512998

J01 P41 (28.07.79) B03d-01/14 C02c-05

The mechanism is for the removal of impurities which float up and settle down. It comprises a cylindrical body, inlet and outlet for dirty and clean water, outlet for floating impurities, and attachment for removal of the settling impurities. In order to create counterflow motion of the fluid and air, it has a cylindro-conical baffle set coaxially within the body. The fluid inlet is in the top of the body. There is a plate set on the evolvent between the baffle and the body, and a funnel is telescopically connected to the clean fluid outlet.

In the cylindrical body, the fluid rotates and moves down, and the dissolved air is separated out in the form of tiny bubbles, and floats up against the flow of the water. On meeting oil and other hydrophobic particles, the air sticks to them and floats them to the surface.

Kondratiev, V.N., Kholodnyi, V.A., Guseva, L.N. et al. Bul. 13/5.4.79. 26.7.77. as 512998 (3pp18)

FARE= ★ D15 06817C/04 ★ SU -655-655
Removing petroleum products from effluent water - using filtering units which are regenerated under effect of compressed air stream and negative pressure of pumping sediment off

FAR EAST DALMORNIIP 17.11.77-SU-544163

A88 H03 J01 (28.07.79) B01d-23/24 C02c-05

Regeneration of the filtering units in the installation for removal of particles of dispersed petroleum products from effluent water, without dismantling the installation used, e.g. in shipbuilding or other inds. whose production processes involve contact of petroleum products with water, is made possible by novel design. In the column of filtering units mounted in the cylindrical tank, each filtering unit, which consists of cylindrical grid covered with filtering material and revolves on central hollow axis, is equipped with top nozzle mounted above the lid of the unit and connected to the line of compressed air, and with a nozzle mounted below its bottom and connected to the vacuum line.

Alaev, A.A., Chepushtanov, V.P. Bul. 13/5.4.79. 17.11.77. as 544163 (3pp135)

URAL= ★ D15 06857C/04 ★ SU -661-221
Mixing and preheating unit - has hydraulic lock with perforated upper horizontal sheet to increase passage cross/section

URAL THERMOTECH RES 28.01.77-SU-449006

J04 Q78 (15.05.79) C02b-01/10 F28c-03/06

The unit claimed in Parent Patent 399706, can be used as deaeration column, and contains a water distributor, a drainage arrangement made as a hydraulic lock and one or several bubbling plates. The plate is provided with a bypass arrangement. The bypass arrangement is made as a hydraulic lock submerged in water at low loads. The hydraulic lock outlet cross section is partially or completely covered with a perforated baffle. The perforated section slopes in the water flow direction.

To increase the efficiency by increasing the hydraulic lock passage cross-section, the hydraulic lock upper horizontal sheet is perforated. The perforated sheet allows the plate width to be reduced thus increasing the hydraulic lock passage cross section. The passage of additional amount of vapour through perforated sheet and through the hydraulic lock ensures a nominal pressure drop on the bubbling plate thus increasing the efficiency.

Kurnik, L.N., Buskunov, R.Sh., Kondratiev, A.D. Bul 17/5.5.79. 28.1.77. as 449006 Add to 399706 (2pp110)

LEMI ★ D15 06874C/04 ★ SU -661-308
Quantitative determ. of oxyethylated surfactants - by photolorimetric method using potassium tetraiodo plumbate, to improve sensitivity

LENINGRAD PLEKHANOV MINE 08.08.77-SU-521103

E19 J04 R16 (07.05.79) G01n-21/24

This highly-sensitive method features treatment of a sample contg. hydroxylated surface active agents (I) with potassium tetra-iodo-plumbate (II) at pH 12-14, followed by photocolourimetry of the obtd. soln. it permits, without interference, determin. of (I) both soluble and insoluble in water. The sensitivity of the determin. is up to 0.005%.
Markhomovskii, V.L., Dubrovskaya, N.Ya. Bul. 7/5.5.79. 8.8.77. as 521103 (2pp048)

COM = ★ D15 06928C/04 ★ SU-662-117
Sedimentation of suspended particles in effluents - using accelerated coagulation of dispersed solid phase in stream of liquid, by submitting it to cavitation conditions

UKR COMMUNAL BUILD 21.09.76-SU-406067

J01 (15.05.79) B01d-21 C02c-01/26

Improved efficiency of separation of suspension by sedimentation, as used for clarification of effluents in public services and various branches of ind. is ensured by submitting the liquid to cavitation before feeding it into the settling tank.

Thus the liquid pumped into the settling tank passes through the cavitation producing unit which consists of two conical sections of a tube connected by their smaller diameters.

Gegeev, I.P., Ganchev, N.A., Kozlovskii, A.S. et al. Bul. 18/15.5.79. 21.9.76. as 406067 (2pp135)

CHI = ★ D15 07076C/04 ★ SU-662-503
Reagent for purificn. of circulating water - comprises nepheline slurry used for removal of impurities and hard water salts

ACHINSK ALUMINA (ALMG) 21.02.73-SU-886458

E33 (05.05.79) C02c-05/02

The reagent is used for removal of impurities and hard water salts from circulating water. In particular, it is used in alumina prodn. circulating water supplies. The reagent comprises nepheline slurry which is a waste from alumina prodn. It contains Na(K)AlO_2 ; Na(K)FeO_2 ; Ca_2SiO_4 ; $\text{CaO.SiO}_2.\text{H}_2\text{O}$, and $\text{Na}_2\text{O.Al}_2\text{O}_3.2\text{SiO}_2.2\text{H}_2\text{O}$.

Minkelshtein, L.I., Tkachenko, G.P., Pshenitsyn, G.I. et al. Bul. 18/5.5.79. 21.2.73. as 886458 (1pp932)

AN/ ★ D15 07077C/04 ★ SU-662-504
Removal of lubricant from polyamide fibre prodn. aq. effluent - using aluminium sulphate, 2-methyl-5-vinyl pyridine based cationic polyelectrolyte and ground cellulose fibres

IVANOVAN F 11.04.75-SU-124424

A97 F06 (05.05.79) C02c-05/02

The degree of purificn. is increased by adding, after treatment with $\text{Al}_2(\text{SO}_4)_3$, a water-soluble cationic polyelectrolyte based on 2-methyl-5-vinylpyridine mixed with fibrous cellulose. The $\text{Al}_2(\text{SO}_4)_3$, polyelectrolyte and cellulose are employed in the ratio 5 : 5.1-25; 5.2.

Ivanova, N.F., Zubakova, L.B., Zamelin, V.I. et al. Bul. 18/5.5.79. 11.4.75. as 124424 (2pp835)

MONO = ★ D15 07078C/04 ★ SU-662-505
Industrial waste water purificn. - includes hydrogen peroxide treatment in presence of active carbon to improve removal of nitro- and amino-aromatic cpds.

MONOMER RES INST 22.08.75-SU-167104

(15.05.79) C02c-05/02

In chemical industry, aq. effluent is freed from nitro- and amino-aromatic cpds. by passage through carbon in presence of O_2 - contg. cpd. at elevated temp.

The purificn. process is improved by employing H_2O_2 as the O_2 contg. cpd. using ratio H_2O_2 : effluent ratio of 1-2.5 : 100.

Perova, N.A., Dudina, M.I., Voronenko, V.V. et al. Bul. 18/15.5.79. 22.8.75. as 167104 (2pp835)

MCCL = ★ D15 07079C/04 ★ SU-662-506
Paper mill aq. effluent clarification - using ultrasonically treated clay and poly-1,2 di:methyl-5-vinyl-pyridinium methyl-sulphate flocculant

UKR CELL-PAPER IND 03.05.77-SU-482318

A97 F09 (15.05.79) C02c-05/02

Effluent from paper manufacture is cleaned by adding a clay and a flocculant, settling and removing the fibrous deposit.

Better purification is secured by using ultra-sonically treated clay, and poly-1,2-dimethyl-5-vinylpyridinium

methylsulphate (I) as flocculant.

Ometsinskii, B.F., Svitelskii, V.P., Denisenko, N.G. et al. Bul. 18/15.5.79. 3.5.77. as 482318 (2pp835)

HYNN- ★ D15 C/04 ★ SW 7904-704
Continuous filter press for drying sludges - has sludge between two filter bands

HYNNAT OY 30.05.78-SF-001707

J01 (14.01.80) B01d-33/02 C02c-03

Thickened suspension is fed from a trough onto an endless upper filter band, passes around a roller to meet a lower filter band and continues between the two bands over driven tension drum, through whose perforations the filtrate is drained away to a sump. The sludge continues between the bands, around pressure rollers until the resulting cake is finally scraped off the bands. 30.5.79 as 004704 (-pp1429)

NITA- D15 25184B/13 = US 4183-807
Reducing COD of effluent water - contg. large amts. of food material by treatment with polysaccharide-assimilating yeast before active sludge treatment

JAPAN TAX ADMIN (NINA- TOZI- HOKU-) 01.08.78-JA-093117 (12.09.77-JA-108758)

(15.01.80) *NL7809-229 C02c-01/04 C02c-05/10

Waste water rich in nutrients is treated by adding a polysaccharide-assimilating yeast to the water, allowing the yeast to assimilate such nutrients, and flowing the waste water obtd. into an activated sludge tank which is then treated with an activated sludge. The yeast used is *Debaryomyces hansenii* D-N FERM-P No. 3592, *Pichia acaciae* AM-37. W FERM-P No. 3523, *Hansenula anomala* Y-1 FERM-P No. 3594, *P.nakazawae* LKB-335 FERM-P No. 3595, *P.dispora* Pd-671 FERM-P No. 3596, *Candida* sp. As-50 FERM-P No. 3597, *Endomycopsis platypodis* AM-46 FERM-P No. 3598, *Saccharomyces cerevisiae* BR-1 FERM-P No. 3972 or *S. cerevisia* var. *ellipsoideus* YS-1 FERM-P No. 4498.

When *ellipsoideus* YS-1 FERM-P no. 4498 is used as the yeast, sulphurous acid, starch and protein are decomposed and assimilated at once, and the BOD of the waste water from starch production plants decreased. 11.9.78 as 941017 (6pp934)

UNIC ★ D15 07242C/04 ★ US 4183-808
Activated sludge waste water treatment - for removal of phosphate without addn. of chemicals

UNION CARBIDE CORP 23.11.77-US-854320

(15.01.80) C02c-01/06

The Known activated sludge waste H_2O treatment process for removing phosphate (I) from BOD-contg. H_2O in which (i) (I)-contg. influent H_2O is mixed with activated sludge and an O_2 -contg. gas in an aeration zone to reduce the BOD content and cause the activated sludge bacteria to take up (I) to form oxygenated phosphate-enriched mixed liquor (II); (ii) (II) is then discharged from the aeration zone and passed to a sepn. zone for concn. of solids to provide a (I)-depleted effluent and (I)-enriched sludge (III); and (iii) at least part of (III) is passed to an anoxic zone to resolubilise (I) from it to form solubilised (I)-contg. sludge is modified.

The improvement is that (a) at least a major part of the solubilised (I)-contg. sludge (III) is returned directly to the aeration zone as part of the activated sludge without intervening addn. of a (I) precipitant (for (I) removal) to biologically remove (I) from the BOD-contg. influent H_2O ; (b) the average food/biomass ratio of (II) in the aeration zone during the mixing in (i) is kept so that the product of the food/biomass ratio (in lb. $\text{BOD}_5/\text{day} \times \text{lb.}$ of volatile suspended solids) and the influent H_2O food/influent P ratio (in lb. $\text{BOD}_5/\text{lb.}$ of P) is ≤ 10 ; (c) (I) is removed from the process solely by wasting from at least one of the above sludges.

The process using the anoxic zone is less complex, uses less equipment, requires less power, and eliminates the need for chemical treatments to remove (I). The method removes $\leq 85\%$ pref. $\leq 90\%$ of total P introduced in the H_2O influent. 23.11.77 as 854320 (10pp438)

STAM D15 63415A/36 = US 4183-809
Effluent water treatment to remove nitrogenous and organic materials - by passing successively through denitrification and nitrification zones

STAMICARBON BV 02.03.77-NL-002236
(D16) (15.01.80) *BE-864-340 C02c-01/04

In removing organic substances and nitrogen cpds. from waste water some of the water-by-passed a denitrification zone and passes directly to a nitrification zone. At least part of the water from the nitrification zone is re-cycled to the denitrification zone.

The nitrate content from the denitrification zone is pref. ≥ 0.5 mg/l. Pref. $\geq 25\%$ of the water is re-cycled. Denitrification is pref. effected by at least one rising-flow reactor. The pH in the reactor is pref. ≥ 8.0 .

The accumulation of organic substances in the sludge is prevented. 27.2.78 as 881531 (5pp1376)

STAM D15 88094A/49 = US 4183-81
Biological treatment of nitrogenous industrial wastes - with two denitrification stages and controlled admixture of BOD material (N 21.11.78)

STAMICARBON BV 17.05.77-NL-005427
(15.01.80) *DT2821-341 C02c-05/10

A nitrite plus nitrate analysis is carried out to allow automatic control of additional BOD added to waste in a final denitrification process in biological purification. The analysis is performed by converting all the nitrite to nitrate or vice versa in a sample, determining the nitrate or nitrite content by spectrophotometric analysis, and converting the signal to one to the BOD supply appts.

While the analysis equipment is zero adjusted the BOD is supplied at the same rate determined by the final sample.

Pref. the waste water is denitrified, nitrified and then denitrified again. 11.5.78 as 905172 (8pp1376)

D16: FERMENTATION INDUSTRY

WILZ/★ D16 05516C/04 ★BE-878-391
Beer clarifier comprising gelatin or fish glue - fixed on a carrier by adsorption or crosslinking

WILZ-PAULS R M 24.08.78-OE-006189
(17.12.79) C12h

The clarifier is fixed on a carrier so as to be insoluble in the beer. A particular embodiment comprises a fine powder mixt. of gelatin or fish glue with a known adsorption agent ensuring stabilisation of the proteins on which the gelatin or fish glue is fixed.

The clarifier is prepd. by contacting a soln. of gelatin or fish glue with a suspension of an adsorption agent stabilising proteins. The mixt. is left in contact for some time with occasional agitation. Alternatively a suspension is formed of the dry ground ingredients; or the protein is incorporated in the mfr. of the adsorption agent.

The clarifier accelerates the natural clarification of the beer, improves its filterability, has an adsorbing effect and does not affect the taste or smell of the beer. 23.8.79 as 878391 (19pp597).

PFIZ D16 62990T/40 = DS 2157-693
Cephalosporin c extraction - using n-benzoyl deriv and water-immiscible solvent used for prodn of 7-aca as inter for anti

PFIZER INC 26.01.71-US-109933
B02 (17.01.80) *DT2157-693 C07d-501/12

Cephalosporin C is isolated from the fermentation broth by acylating the soln. with benzoyl chloride, then extracting with a water-immiscible solvent. Pref. reaction is effected at pH 8.0-8.5.

Suitable solvents are alcohols, esters, ketones or chlorinated hydrocarbons. Fermentation broths of high or low potencies can be treated. Cephalosporin C can be obtd. in overall yield of ca. 70% from broths contg. Penicillin N, and is suitable as an intermediate for 7-ACA. 20.11.71 as 157693 (3pp913).

HEIN/ D16 70216B/39 = DS 2811-782
Accelerated hop cone drying - by heating during consecutive intervals to temps. above or below max. temp. tolerated by prod.

HEINDL A 17.03.78-DT-811782
P15 Q76 (17.01.80) *DT2811-782 A23f-03 A24b-01/02 C12c-03/02 F26b-03/06

Hop cones or similar delicate prods. are dried in successive periods of 5-60(10-25)mins. During at least one of these periods the temp. is higher than that acceptable to the prod. and then lower than the max. acceptable temp. The time at the higher temp. is such that the temp. produced inside the hops or other prod. does not exceed a still acceptable temp.

The drying process is shortened by varying the temp. in this manner. 17.3.78 as 811782 (3pp068).

BOEF D16 69916B/39 = DS 2812-154
Analytical determ. of alpha amylase - using a starch derivative couplable to form a colourant

BOEHRINGER MANNHEIM GMBH 20.03.78-DT-812154
A89 B04 J04 R16 (17.01.80) *BE-874-944 G01n-31/14

Determn. of α -amylase comprises using as substrate an oligomeric or polymeric starch deriv. which contains a substit. capable of coupling to form a dye. The low molecular, soluble prods. formed on cleavage of the substrate are sepd. from the starch-contg. phase and coupled with a further dye-forming component, and the resulting dye is measured.

A pref. starch deriv. is one substd. with a cpd. of formula $X-(CH_2)_n-N(R)-C_6H_5$ where R is H, 1-4C alkyl or $-X-(CH_2)_n$, X is a gp. which can form a covalent bond with an OH gp. of the starch, and n is 1, 2, 3 or 4.

Method can be carried out in automatic analytical appts. having multiple separate soln. circuits. 20.3.78 as 812154 (6pp927).

ZAID D16 55160A/31 = DS 2813-507
Amastatine A1, A2, A3, B1, B2 aminopeptidase A inhibitors - which stimulate antibody formation, are 3-amino-2 hydroxy-4- or 5-L-valyl-L-valyl tetra:peptide(s)

ZH BISEIBUTSU KAGAKU KEN 22.07.77-JA-088729
B04 (17.01.80) *BE-865-565 A61k-37/02 C07c-103/52

New tetrapeptides designated amastatin A₁, A₂, A₃, B₁ and B₂ are of formula $H_2N-CH(-CHR_2-CHR_1-CH_3)-CH(OH)-C(=O)-NH-CH(-CH(CH_3)-CH_3)-C(=O)-NH-CH(-CH(CH_3)-CH_3)-C(=O)-NH-CH(-CH_2)_n-COOH)-C(=O)-X$ in which the aminoacid gps. 2-4 are in L-configuration.

In amastatin A₁, R₁ = CH₃, R₂ = H, n = 1, X = NH₂. In amastatin A₂, R₁ = CH₃, R₂ = H, n = 1, X = OH. In amastatin A₃, R₁ = CH₃, R₂ = H, n = 2, X = OH. In amastatin B₁, R₁ = H, R₂ = CH₃, n = 2, X = NH₂. In amastatin B₂, R₁ = H, R₂ = CH₃, n = 2, X = OH. The salts, methyl ester, N-acetyl and N-propionyl derivs. and their methyl esters are also claimed.

The amastatins are obtd. by culturing Streptomyces sp. ATCC 31318 or its mutants under aerobic conditions at 25-35°C and pH 6.0-9.5. They are aminopeptidase A inhibitors and stimulate formation of antibodies. 29.3.78 as 813507 (24pp927).

HEMB/★ D16 05538C/04 ★DT 2814-663
Rapid fermentation reactor - whose prods. are distilled into condenser program controlled by revolving disc

HEMBERGER P 05.04.78-DT-814663
(17.01.80) C12b-01

A distn. system includes a totally enclosed still with internal heating which feeds the alcohol vapours to a dephlegmator condenser. All functions are automatically controlled by a clockwork driven disc with seven concentric control paths. This system requires no labour and is there

More not subject to human error.

Specifically the still includes a gear motor and paddle mechanism and a manhole. A spirit tube branches out into a pipe (I) for the first and last runnings, and a pipe (II) for the main spirit fraction. Distiller's wash is extd. through a pipe and heating/cooling coils are mounted in the lower half. A thermometer and a pressure gauge are connected. The condenser has a central tube for steam heating, with concentric tubes around it for the vapours from pipe (I), for air cooling and for the vapours from pipe (II). 20.6.78 as 814663 (23pp39)

DAVI- ★ D16 05540C/04 ★DT 2826-907
Seed germination acceleration e.g. in malting - by treating seed or cereal grain with oxygen

DAVIDSON MLTD 20.06.78-DT-826907
(17.01.80) A01n-21/02 C12c-01/04

New process for treatment of seeds or cereal grains comprises treatment with a gas whose major component is oxygen. Used for chitting or pregermination of seeds or cereals and also useful for mass germination of cereal grains (e.g. barley) in malting.

Appts. for germination of seeds or cereal grains comprises a container for a layer of seed or grain. The container is attachable to an oxygen or gas container, so that the gas can be passed through the layer of seed or grain. The container is also connected to a water supply to soften the seed or grain layer and to a drying device.

The new process gives uniform and rapid germination, so that in the seedlings are at a vulnerable stage for a shorter time, and the total time of the crop in the soil is reduced. In malting, the time for the malting process is reduced. 20.6.78 as 826907 (22pp280)

FRES- ★ D16 05560C/04 ★DT 2828-512
Reaction of body fluid constituents with enzymes - by contacting body fluid e.g. blood with enzyme soln. across a semipermeable membrane

FRESENIUS E CHEM-PH 29.06.78-DT-828512
B04 P34 (17.01.80) A61k-37/48 A61m-01/03

Substances dissolved in a body fluid are reacted with enzymes, by feeding the body fluid to one side of a semipermeable membrane at the other side of which is located at least one enzyme. The new procedure enables enzymes to be used for therapeutic purposes by extracorporeal circulation of a body fluid (esp. blood) through the appts. It is also possible to devise a system for carrying out the process within the body.

The enzyme is advantageously dissolved or suspended in a liquid, and is advantageously passed continuously through the enzyme reactor. Components of the enzymatic reaction may be added to the body fluid. 29.6.78 as 828512 (21pp280)

KERJ ★ D16 05572C/04 ★DT 2828-982
Aerobic and/or anaerobic tests on microorganisms - are carried out simultaneously in instrument contg. tube inserted in pipette absorbing test medium

KERNFORSCHUNGS JULICH 01.07.78-DT-828982
(17.01.80) C12k-01/04

A tube is inserted into a pipette for taking up the test medium. The external dia. of the front of the tube, facing the neck of the pipette, is at least as large as the internal dia. of the neck. The length of the tube is proportioned so that the other front is sealed off with the surface of the test medium or projects above it.

An aerobic and an anaerobic test can take place simultaneously, e.g. using a Pasteur pipette fitted with a capillary tube. 1.7.78 as 828982 (10pp200)

ALPH- ★ D16 05675C/04 ★DT 2924-744
Plasminogen activator urokinase purificn. - by affinity chromatography on immobilised aprotinin (NL 3.1.80)

ALPHA PATENT LTD 30.06.78-CH-007197
A96 B04 (17.01.80) C07g-07/02 C12n-09/72

In the prodn. of urokinase of high concn. and activity from urokinase crude soln. obtd. by pre-purificn. and concn. in a known manner, (a) the crude soln. is contacted in a medium of pH < 6 with a porous solid matrix of high specific surface on the surface of which aprotinin is immobilised by means of covalent chemical bonds, (b) the carrier soln. is sepd. off, and (c) the adsorbed urokinase is eluted

by an eluant at pH > 4.5 p.

Immobilised aprotinin shows good affinity for urokinase (even though it does not inhibit urokinase in soln. at normal concns.), and maintains constant activity for prolonged operation times. The carrier for the aprotinin is pref. a polysaccharide resin or a resin based on a copolymeric addition product of a polyacrylamide and agarose. 20.6.79 as 924744 (19pp280)

BIER- D16 16150B/09 =EP ---6-887
Pressurised beer tank fitting - combines charging, discharging and vent valve in one unit (NL 13.2.79)

BIER-DRIVE AG 11.08.77-DT-736281
Q34 Q39 (23.01.80) *DT2736-281 B67d-01/04

D/S: E(FR)

8.8.78 as 900081 (WP 7900091)

BIER- D16 16151B/09 =EP ---6-888
Beer tank charging system - with storage tank and pump for gas other than air on road tanker (NL 13.2.79)

BIER-DRIVE AG 11.08.77-DT-736282
A92 Q34 Q39 (23.01.80) *DT2736-282 B65d-83 B67d-01/04

D/S: E(FR)

8.8.78 as 900082 (WP 7900092)

NATR D16 29725B/15 =EP ---6-916
Increasing the immunogenicity of an antigen - by combination of an antigenic material with the antigen

NATIONAL RES DEV CORP 28.09.77-GB-040339
B04 C03 (23.01.80) *WP7900-160 A61k-39

D/S: E(CH, DT, FR, GB, SW)

27.9.78 as 900128

BOEF D16 91310B/51 =EP ---6-998
Serum thyroxine binding index diagnostic determination - using enzyme-labelled thyroxine and immobilised anti:thyroxine antibody

BOEHRINGER MANNHEIM GMBH 12.06.78-DT-825650
B04 R16 (23.01.80) *DT2825-650 G01n-33/78

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, SW).

In the determination of the serum thyroxine binding index (TBI), (A) the serum sample to be examined is treated with a certain amt. of thyroxine and a certain amt. of a determinable enzyme covalently bound to thyroxine, (B) the resulting soln. is contacted with anti-thyroxine antibodies in the solid phase, (C) the liq. is sepd. from the solid phase, and (D) the activity of the determinable enzyme is measured in one of the phases.

A test kit for carrying out the above procedure contains (a) thyroxine, (b) enzyme-labelled thyroxine, (c) antithyroxine antibody bound to a solid, (d) buffer, (e) reagent for determination of the enzyme activity, and, opt., (f) stabilizing agents and additives promoting immune reactions.

Determination of TBI is used in the clinical diagnosis of thyroid disorders.

6.6.79 as 101785 (15pp280).

(G) ISR: DT2736527; DT2719836; US4043872.

BOEF ★ D16 05764C/04 ★EP ---7-058
Glycerol determination using glycerol dehydrogenase - in presence of zinc salt for more rapid reaction

BOEHRINGER MANNHEIM GMBH 18.07.78-DT-831580
B04 E17 R16 (23.01.80) C12q-01/32 G01n-33/92

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, SW).

In a process and reagent for determining glycerol using glycerol dehydrogenase (GDH), an electron transfer agent, NAD and a tetrazolium salt, a zinc salt (pref. ZnCl₂) is added in an amt. of ≥ 1 µg Zn per 50 U of GDH.

The Zn activates the GDH so that max. reaction speed is rapidly attained (e.g. after 4-5 mins.; c.f. 14 mins. without Zn). This allows analysis to be carried out more rapidly (e.g. 1/3 saving in time) and easier automation. The process can be used for analysis of glycerol (and derivs.) in biological fluids and other samples, esp. in the determination of triglycerides (after enzymatic or alkaline hydrolysis) and also e.g. in determination of phospholipids; glycerol ethers and esters (e.g. malates and

citrates used as flavouring agents and odorants); and acetin and butyric (also used as odorants).

3.7.79 as 102246 (10pp941).

(G) ISR: DT2742699; DT2512267; DT2512266; 4 Journal References.

CHEM-★ D16 05806C/04 ★EP---7-133
Fermenter for microorganism cultivation - contains tubular membrane filters for metabolism products discharge
CHEMAP AG 19.07.78-CH-007774
(23.01.80) C12m-01/12
D/S: E(CH,DT,FR,OE).

A fermenter for the aerobic cultivation of microorganisms uses built-in membrane filters for the separation of the products of metabolism. The tubular membrane filters are fitted with a tubular collector for the discharge of the permeate.

This requires no pumps which may damage delicate microorganisms. A continuous operation is now ensured under maintained sterile conditions. The capital investment required is less. Cooling of conventional pump circuits is also saved.

4.7.79. as 200362 (14pp39).

(G) ISR:—

CETU-★ D16 05828C/04 ★EP---7-176
Epoxide or glycol prodn. - by contacting olefin with halogenating enzyme, oxidising agent and halide ion source to form halohydrin, and converting this to prod.

CETUS CORP 29.05.79-US-042219 (12.06.78-US-914384)

E13 (23.01.80) C07d-29 C07d-301 C12p-07/04 C12p-17/02

Intermediate Priority: 8.9.78-US-940638.

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Epoxides or glycols are made by introducing an olefin into a medium contg. a mixt. of a halogenating enzyme, an oxidising agent and a halide ion source and maintaining the olefin in contact with the medium for a sufficient time to convert the olefin to a halohydrin, and converting the halohydrin to an epoxide or glycol. The halogenating enzyme used is pref. a peroxidase derived from the microorganism *Caldariomyces fumago*, seaweed, milk, thyroid, leucocytes or horseradish.

The process is relatively safe, low in cost and low in energy requirements compared with known processes (e.g. direct oxidn. of ethylene to ethylene oxide using pure O_2 and supported silver oxide catalyst at $\approx 270^\circ C$).

11.06.79. as 301097 (33pp513).

(E) ISR:—

GALL-★ D16 05862C/04 ★EP---7-244
Prodn. of nicotine from *Nicotiana tabacum* or *rustica* - with an auxin and a cytokinin in culture medium

GALLAHER LTD 19.07.78-GB-030381

C02 E13 (D18) (23.01.80) C12n-05/02 C12p-17/12

D/S: E(BE, CH, DT, FR, IT, LU, NL, OE, SW).

Nicotine (I) is obtd. by cultivating a strain of *Nicotiana tabacum* or *rustica* in suspension culture under sub-maximal growth conditions that do not inhibit (I) prodn., in presence of an auxin (II) and a cytokinin (III).

(I) is obtd. in good yields. When isotopically labelled (I) is required, suitable precursors are included in the culture medium, e.g. NH_4 and NO_3 are labelled with nitrogen-15 to give radioactively labelled (I).

17.7.79 as 301412 (9pp1248)

(E) ISR:—

GENE=★ D16 05926C/04 ★FR 2421-943
L-homoserine prepn. by fermentation - of *Brevibacterium flavum* B-1006 or *Corynebacterium glutamicum* B-1505

GENETICS & IND MICR 04.04.78-SU-601783

B05 E16 (07.12.79) C12d-13/06

L-Homoserine prepn. involves deep culture of threonine-dependent *Brevibacterium flavum* or *Corynebacterium glutamicum* under aerobic conditions, in which the strains used are *B. flavum* B1006 or *C. glutamicum* B-1505. The new mutants give higher yields of about 20g/litre and a cheaper prod. on cheaper media.

B. flavum B-1006 is obtd. by UV. light and ethylene-

imine-induced mutation of *B. flavum* ATCC 14067; *C. glutamicum* B-1505 is obtd. by nitrosoguimidine- induced of *C. glutamicum*, ATCC 13032. The prod. is produced on both synthetic and natural complex media, such as molasses, protein hydrolysates etc. 4.4.79 as 008456 (17pp288).

ESAC-★ D16 05927C/04 ★FR 2421-944
Treatment of champagne bottles i.e. inclination, vibration, rotation - by machine allowing desired movements to be effected by simple manoeuvre on many bottles simultaneously

ESAC AUTOMATION SA 04.04.78-FR-010178

Q39 (07.12.79) B67c-05 C12g-01/06 C12l-11

Appts. for treating bottles of champagne to eliminate deposits and impurities incorporates a mechanism by which rotation, progressive inclination and vibration can be executed on the bottles in sequence. The vibration is obtd. by a vibrating motor and a structure mounted on silence blocks. The inclination is carried out by a handle and a pinion gearing by swining of the structure supporting the bottle containers. Rotation is effected in sequence of 45° by a system of rods acting on neck supports which have fluted conical sockets allowing the bottle to be held and drawn in its rotary movement by the capsule fitted in the neck.

Appts. allows the desired operations, rotation, inclination, vibration, to be executed by a simple manoeuvre on a large number of bottles simultaneously. 4.4.78 as 010178 (7pp1192).

ANAG/★ D16 06035C/04 ★GB 2025-457
Spiral plating of inoculum on growth medium - using inoculator mounted on pivoting arm biased onto medium

ANAGNOSTOPOULOS G D 13.06.78-GB-026794 (08.06.79-GB-020118)

(23.01.80) C12m-01/10

An inoculator for a spiral plating appts. is mounted on the end of a counter balanced arm. The arm is biased by magnets so that the inoculation needle exerts a predetermined tracking force on the growth medium while it follows its contours.

Pref. the inoculum is discharged by a micro-syringe which delivers paraffin oil to the inoculator at a predetermined rate. Pref. the rate is altered during the spiral coating operation as a function of the radial displacement of the inoculator.

The inoculator is biased to follow the contours of the growth medium. 8.6.79 as 020118 (18pp295).

TEIN-★ D16 C/04 ★IT 1035-207
High pressure aerobic fermentation

CIA TEC IND PETROLI 07.04.75-IT-048965

(20.10.79) C12b

MEIJ★ D16 06087C/04 ★J5 4154-701
Antibiotic SF-2049 - prepd. from a *Streptomyces* strain and esp. useful against rice blast

MEIJI SEIKA KAISHA 25.05.78-JA-061641

C03 (06.12.79) A61k-35/74 C07g-11 C12d-09/14

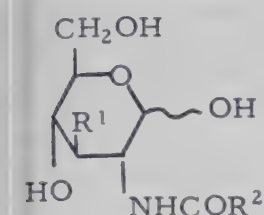
Antibiotic SF-2049 is new and has the following properties (1) Appearance: white powder. (2) M. pt. $205-210^\circ C$ (slowly turning brown after melting). (3) $[\alpha]_D^{25} + 58^\circ$ ($c=1$, $CHCl_3:MeOH = 1:1$). (4) UV: γ_{max} (MeOH): 224 nm ($E_{1\%}^{1cm}$ 679), 272 nm (333), 283 nm (shoulder, 309), 301 nm (shoulder, 239), 321 nm (shoulder, 182); no change in basic or acidic MeOH. (5) IR (KBr): ν_{max} 3330, 2990, 1680, 1520, 1450, 1300, 1180, 1080, 1050 cm^{-1} . (6) Elementary analysis: C 43.82%, H 4.26%, N 14.84%, S 12.84%. (7) Mol. weight: about 700 (vapour pressure). (8) Solubility: readily soluble in basic water, $CHCl_3$ -MeOH (1:1); soluble in MeOH, n-BuOH; practically insoluble in water, acidic water, Me_2CO , EtOAc, PhH, Et₂O. (9) Colour reaction: positive to $KMnO_4$, Ehrlich, H_2SO_4 ; negative to ninnyarin, $AgNO_3$, etc. (10) Amino acid analysis (hydrolysis with 5N-HCl in a sealed tube at $105^\circ C$ for 15 hrs): contains aspartic acid, threonine, proline, glycine and 3 other unidentified peaks. (11) TLC (silica gel): Rf 0.67 ($CHCl_3:MeOH = 1:1$), 0.15 ($CHCl_3:MeOH = 2:1$), 0.39 (n-BuOH:MeOH:H₂O = 4:1:2). (12) Stability (at $100^\circ C$ for 10 mins): unstable in acids and alkali, stable in neutral conditions.

Antibiotic SF-2049 has an antimicrobial action against plant pathogenic moulds, particularly effective against rice blast (*Pyricularia oryzae*) as active as commercially available chemicals for rice blast at 200 ppm). 25.5.78 061641 (6pp52).

★ D16 06091C/04 ★ J5 4154-713
Glucosamine derivs. - useful as antimicrobials and plant growth regulators

FUJISAWA PHARM KK 24.05.78-JA-062704
B03 C02 (06.12.79) A61k-31/70 C07h-05/06

Glucosamine derivs. of formula (I), are new (where R¹ = OH or imino; R² = amino or a bond when R¹ = OH, R² = amino; when R¹ = imino, R² is a bond, and R¹ is linked with R²).



(I)

(I) are produced, e.g. by a strain of *Streptomyces aburaviensis* subspecies *rufus* No.

4 (FERM-P 4296), which may be cultured on a medium contg. e.g. soluble starch (10 g/l), gluten meal (6 g/l), yeast (1.2 g/l) and CaCO₃ (1.0 g/l) (total 170 l), at 30°C for 3 days. A chemical route to (I) is also described.

Typically, N-carbamoyl-α-D-glucosamine and N-carbamoyl-β-D-glucosamine show MIC of 12.5 μ/ml (agar dilution) against *Proteus vulgaris* IAM-1025. Acute toxicity of (I) in mice (i.v.) is > 14 g/kg. 24.5.78 as 062704 (7pp52).

★ D16 06269C/04 ★ J5 4155-890
Enzymatic fractional determ. of water-soluble aldehyde(s) - involves addn. of alcohol dehydrogenase to reaction soln., for rapid, sensitive assay

TOYOTA CENT RES & DEV 29.05.78-JA-064802
E19 J04 R16 (08.12.79) G01n-33

The method comprises (a) adding 0.1-10 units of alcohol dehydrogenase to about 2 ml. of a reaction soln., or adding aldehyde dehydrogenase to a reaction soln., to treat water-soluble aldehydes other than formaldehyde with nicotinamide adenine dinucleotide (NADN), and determining water-soluble aldehydes other than formaldehyde by the change in the amt. of reduced NADN, and (b) adding 100-1000 units of alcohol dehydrogenase to about 2 ml. of reaction soln. to treat all water-soluble aldehydes with NADN, and determining all water-soluble aldehydes from the decrease of reduced type NADN. The water-soluble aldehydes and NADN are treated with alcohol dehydrogenase or aldehyde dehydrogenase in aq. medium, and the change in the amt. of reduced type NADN is determined by the measurement of absorbance.

Water-soluble aldehydes can be fractionally and rapidly determined with high sensitivity without being affected by interfering substances. Automatic analysis can be carried out by the method, and secondary environmental pollution is not caused by the reagents used. 29.5.78 as 064802 (5pp50).

★ D16 06270C/04 ★ J5 4155-891
Selective adsorbent comprising fixed sheep erythrocyte membrane which does not adsorb lymphocyte B alone of human leukocyte fraction

ASAHI CHEMICAL IND KK 30.05.78-JA-063874
A97 B04 P31 R16 (08.12.79) A61b-10 B01d-15 G01n-33/16
selective distinctive cell adsorbent which comprises fixing erythrocyte membrane of sheep or protein obtained from the erythrocyte membrane onto an insoluble carrier to form a selective adsorbent which does not adsorb lymphocyte B alone of human leukocyte fractions.

Method for selectively obtaining lymphocyte B floating in aq. which comprises contacting human leukocyte floating in aq. with the selective adsorbent. A separator for lymphocyte B is obtd. by filling the adsorbent into a column having an inlet and an outlet.

Insoluble carrier is e.g. agarose derivative, dextran derivative, cellulose derivative, polyacrylamide derivative, etc.

According to the use of the column filled with the selective adsorbent, lymphocyte T, monocyte and granulocyte in human leukocyte fractions are adsorbed on the adsor-

bent, and lymphocyte B alone can be recovered and identified. 30.5.78 as 063874 (5pp50).

★ D16 06538C/04 ★ J5 4157-501
Antibiotic BN 229-A - prepd. by culturing microorganism of *Pseudomonas* genus

MEIJI SEIKA KAISHA 30.05.78-JA-063919
B04 (12.12.79) A61k-35/74 C07g-11 C12d-09/20

Novel antibiotic BN-229-A (I) has specified characteristics including: Appearance: white powder, m. pt.: 175-176°C. Found: C, 51.17%; H, 4.80%; N, 7.89%; Al, 4.83%; O, 31.31% (difference). Mol. weight: 489 (High resolving power of mass spectroscopy). Molecular formula: C₂₁H₂₄N₃O₆Al and specific rotation: (α)_D²⁰ 0° (C=0.5, methanol).

(I) is prepd. by culturing suitable fungi of *Pseudomonas* genus. 30.5.78 as 063919 (6pp69).

★ D16 06539C/04 ★ J5 4157-502
Antibiotic A-10947 used as growth accelerator for animals - obtd. by culturing *Actinoplanes* microorganism in medium contg. carbon source, nitrogen source, etc.

TOYO JOZO KK 30.05.78-JA-065225
B04 (12.12.79) A23k-01/17 A61k-35/74 C07g-11 C12d-09/14

Novel antibiotic A 10947 and its salts, are new. It has a molecular weight of 1272 (by titration) and an analysis of C, 48.54%; H, 4.37%; N, 10.08%; S, 9.64%. It has a pKa of 7.4 (in 80% aq. DMF soln.) and specific rotation, (α)_D²⁵ = +64.1° (C=0.66%, CHCl₃). Antibiotic has specific UV, IR and NMR spectra.

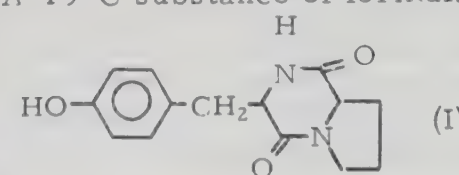
It is positive to KMnO₄ decolouration; negative to Fehling's reaction, Mohrlich reaction, ferric chloride reaction, Ninhydrin reaction, biuret reaction and Dragendorff reaction, and is soluble in acetic acid, DMSO, pyridine, chloroform and methanol; insol. in benzene, n-hexane, CCl₄, petroleum ether and water. Its m. pt. is 205-220°C (brown discolouration-decomposition) and is white-pale yellow.

Antibiotic A 10947 is prepd. by inoculating antibiotic A 10947-producing fungi into culture medium contg. assimilating carbon source, nitrogen source and inorganic substance to culture, and removing antibiotic A 10947 from the culture substance. Fungi is esp. of *Actinoplanes* genus. 30.5.78 as 065225 (10pp69).

★ D16 06585C/04 ★ J5 4157-598
Plant growth regulating A-19-C substance - obtd. by culturing *Bacillus licheniformis* A-19

KAYAKU ANTIBIOTIC RES 01.06.78-JA-066225
C02 (12.12.79) A01n-05 C07d-487/04 C12d-09/20

A-19-C substance of formula (I) is new. Prepn. of (I)



(I)

comprises culturing *Bacillus licheniformis* A-19, and recovering A-19-C substance from the culture.

Since (I) has the homologous structure with

L-prolyl-L-leucineanhydride, L-prolyl-L-valineanhydride and L-prolyl-L-phenylalanineanhydride which have the activity to inhibit the germination and growth of root, it is expected to have the plant growth regulating activity.

In an example, *Bacillus licheniformis* A-19 is cultured in advance for 24 hours at 30°C in a medium contg. 0.5% glucose, 1.0% peptone, 0.5% meat extract, 0.3% edible salt and 0.03% yeast extract, under shaking. The obtd. culture is inoculated to a medium having the same compsn. and cultivation is conducted for 48 hours at 30°C. 1.6.78 as 066225 (5pp108).

★ D16 78797T/50 = J7 9043-595
Glucose-isomerase prodn - by microorganism culture adding glycine (and ammonium nitrate) to medium to increase yields

CPC INTERNATIONAL INC 20.05.71-US-145351
E16 + R16 (20.12.79) *DT2223-864 C12b-01/20 C12d-13/10

The amt. of glycine added to the culture medium for the glucose-isomerase producing microorganisms, typically *S. olivochromogenes* ATCC 21114 or *B. stearothermophilus* is 0.5g/100 ml medium. Alternatively a synergistic mixt. of 0.1-0.25 g glycine and ≤0.5g. NH₄HO₃/100ml culture medium can be added.

The enzyme produced is used to obtain laevulose preps from starch hydrolysates and dextrose solns. 19.5.72 as 049263 (clg. 20.5.71-US-145351) C12b-1/20, C12d-13/10 (20.12.79) CPC INT INC (11pp) (J4 7043387)

NATR **D16** 46856U/33 = J7 9043-597
Biochemical reaction with magnetisable active component carrier - with polymer coating for attaching to active component
NATIONAL RES DEV CORP 27.08.71-GB-040297
J04 (20.12.79) *J48033-088 + C12d-13

The reaction is performed by catalysing the reaction medium with the biologically active organic substance adhering to a strongly magnetic solid carrier. Method comprises magnetising the carrier to separate the biologically active organic substance from the medium.

The active substances are various enzymes (protease, dehydrogenase, oxidase, amidase, kinase, etc.), enzymatic cofactors (NAD, ATP, riboflavin, coenzyme A, etc), organophosphorus cpds. antigens or antibodies. Magnetic carrier is Fe, Co, Ni and their oxides, alloys or various ferrites (e.g. Sr ferrite). The carrier is used as particles pref. of size 10-100 μ .

Pref. the biologically active substance chemically adheres to an organic polymer (e.g. nylon, polyurethanes, cellulose derivs., etc.) coating the magnetic carrier. In a batch method the medium can be removed while the carrier is maintained in a magnetic field after the catalytic reaction. In a continuous process, the carrier can be fixed in a reactor held in a magnetic field, through which the medium is passed. 21.8.72 as 083565 (clg. 27.8.71-GB-040297) C12d-13/00, 13/10 (20.12.79) NATIONAL RESEARCH DEVELOPMENT CORP (4pp) (J4 8033088)

FARB **D16** 54021U/37 #J7 9043-599
Saccharase inhibitors - prepd by cultivation of actinoplanaceae se50 in a starch-free nutritive medium

BAYER AG 01.03.72-DT-209834 (23.03.73-JA-033362)

B04 (20.12.79) *BE-795-996 A61k-35/66 C08b-37 C12d-13/04 + C07g-11

Title cpds. are prepd. by cultivation of SE 50 or its mutants and variants in a starch-free nutritive medium and separation of the inhibitors by classical methods.

Other conditions which favour the formation of saccharase inhibitors and suppress formation of amylose inhibitors are addn. of maltose to the medium and interruption of the culture at the point where, or a little before the optimal quantity of saccharase inhibitor has been produced. The saccharase inhibitors are used in the treatment of adiposity hyperlipemia (atherosclerosis), diabetes, pre-diabetes and caries. 23.3.73 as 033362 C12d-13/04, A61k-35/66, C07g-11/00, C08b-37/00 (20.12.79) BAYER AG (-pp) (J4 9118885)

SHIO **D16** 44311V/24 = J7 9043-600
Antibiotic A-300 prepd. from *Streptomyces hygroscopicus* - shows activity against Dematophytes

SHIONOGI KK 05.06.72-JA-055800

B04 (20.12.79) *J49014-691 + A61k-35/74 C12d-09/14

Novel antibiotics, A-300-I and -II, effective against Dematophytes, were produced by a new isolate *Streptomyces hygroscopicus* A-300, FERM-P 1312, (I). Novelty of A-300-I (acid $C_{17}H_{22}O_3N_2$) and A-300-II /neutral, $(C_{17}H_{21}O_3N_2)_3Fe \cdot 3H_2O$ was determined by m. pt. sp. rotation, UV and IR absorption spectra, solubility, colour reaction, and antimicrobial spectrum.

In an example, seed (I) was cultured in a jar fermentor at 28° for 88 hrs. in a medium (pH 7) contg. potato starch 2, soybean powder 1, glycerol 0.5, corn steep liquor 0.5, NaCl 0.3 and $CaCO_3$ 0.5%. A-300 were extd. twice with 22 and 14 l. EtOAc from 80 l. culture filtrate, washed with pet. ether extd. $CHCl_3$, dissolved in EtOAc, and adsorbed on polyamide column ($\sim$ 10 times vol. A-300-I was eluted with EtOAc and purified with silica gel thin layer chromatog. ($\sim$ 103 mg) and A-300-II was eluted with $CHCl_3$ and crystd. from MeOH ($\sim$ 30 mg). 5.6.72 as 055800 C12d-9/14, A61k-35/74 (20.12.79) SHIONOGI & CO. LTD (6pp) (J4 9014691)

AGEN **D16** 60144Y/34 = J7 9044-7
Biochemical decomposing agent for polyester cpds. - contains pure or crude lipase or lipase-producing microorganism, or culture product contg. lipase, as active ingredient

AGENCY OF IND SCI TECH 26.12.75-JA-159530

A35 (A23) (27.12.79) *J52082-773 B29c-29 C07c-31/20 C07g-7/02 C081-67 + C12b-01

The agent contains lipase, crude lipase, lipase-contg. substance, lipase-producing microorganism, its colony or the cultured prod. contg. lipase, as the effective ingredient.

Suitable lipase include lipase, esterase and (lyso)phospholipase, which can be prepd. e.g. by *Pseudomonas mephitica* lipolytics (FERM P-520), *Achromobacter iophagus* and *Candida paralyolitica*. Pref. buffer agent is combined in the reaction mixt. to maintain an optimum pH range, and surfactant to enlarge the contacting surface of lipase and polyester.

Prior to decompsn. the polyesters are cut into fine fibres or powders to increase surface area. The decompsn. is pref. effected at 20-60°C at pH 5-8 in liq. or solid phase, with a suitable amt. of water.

Aliphatic polyesters, aromatic polyester, alicyclic polyesters, polyesters, contg. heteroatom other than O, copolymerised polyesters and polycarbonic acid esters can be decomposed by this method. 26.12.75 as 159530 C12b-1/00, B29c-29/00, C07c-31/20, C07g-7/02, C081-67/00 (27.12.79) AGENCY OF IND SCI TECH (5pp5)(J5 2082773)

AJIN **D16** 24052A/13 = J7 9044-75
Estimating amino acid(s) in blood, urine etc. - using three-part kit comprising ampoules of culture medium, standard amino acid solution and bacteria e.g. *Lactobacillus arabinosis*

AJINOMOTO KK 23.07.76-JA-088523

B04 J04 R16 (27.12.79) *J53015-485 C12k-01

Kit comprises (a) ampoules of culture medium prepd. by sealing a prescribed amt. of liq. medium not contg. the amino acid to be assayed in ampoules and sterilising them; (b) ampoules of standard amino acid soln., prepd. by sealing different amts. of standard amino acid soln., and sterilising them; and (c) ampoules of suitable bacteria.

A series of (b) is added to ampoules of (a) and a prescribed amt. of the test sample is added to ampoules of (c). Ampoules (c) are then allowed to stand at room temp. for restoring, and the bacteria are dispersed in water or salt soln. A prescribed amt. of the suspension is inoculated in the ampoules obtd. in (a) and (b) resp. and the ampoules are, after covering with Al foil, etc., cultured at a constant temp. The multiplication degree of the bacteria can be measured optically by turbidimetric analysis.

Amino acids in blood, urine, etc. can be determined simply and rapidly with high reproducibility, and the results can be utilised for diagnosis. Suitable bacteria are *Leuconostoc citrovorum* ATCC 8081, *Leuconostoc mesenteroides* P-60 ATCC 8042, *Streptococcus faecalis* R ATCC 8045, *Lactobacillus arabinosis* 17-5 ATCC 8014 and *Lactobacillus fermenti* ATCC 9338. 23.7.76 as 088523 C12k-1/00 (27.12.79) AJINOMOTO KK (9pp) (J5 3015485)

AJIN **D16** 24053A/13 = J7 9044-751
Mass-screening analysis for amino-acids - involves impregnating into filter paper, coagulating protein, cutting into strips and treating with culture medium

AJINOMOTO KK 23.07.76-JA-088524

B04 J04 R16 (27.12.79) *J53015-486 C12k-01

Blood samples to be analysed and standard blood gp. contg. the amino acid to be tested, of which amt. is changed continuously, are impregnated in filter paper in disc-form having a prescribed area, and the filter paper is dried. The filter paper is either heat-treated or treated with a protein coagulant. The filter paper is then cut into discs and the discs are further cut into pieces having similar area.

The pieces are put in test tubes, and culture medium for testing bacteria, which does not contain the amino acid to be analysed, is poured into test tubes to dissolve out the components impregnated in the pieces of the filter paper in the culture medium. Previously a prescribed amt. of the testing bacteria is poured in ampoules and they are freeze-dried, sealed and preserved in a refrigerator. The testing bacteria is restored at room temp. and a testing bacteria

suspension is prepd. by suspending the restored testing bacteria in water or physiological salt soln. The testing bacteria suspension is poured in test tubes and they are cultured under the constant condition. After culture the multiplication degree of the testing bacteria is measured by turbidimetric analysis, and the amino acid content in the blood to be tested can be known.

The amino acid content in blood can be determined easily and rapidly. Applicable bacteria are *Leuconostoc mesenteroides* P-60 ATCC 8042, *Leuconostoc citrovorum* ATCC 3081, *Streptococcus faecalis* R ETCC 8043, *Lactobacillus arabinosus* 17-5 ATCC 8014 and *Lactobacillus fermenti* ATCC 9338. 23. 7. 76 as 088524 C12k-1/00 (27. 12. 79) AJINOMOTO KK (6pp) (J5 3015486)

SAKA/ D16 22805Y/13 = J7 9044-752
Yeast microbial cell components extrn. - using as cytolysis accelerator a substance produced by cultivating a strain belonging to genus *Streptomyces*

SAKAIT 13.08.75-JA-098915
(27.12.79) *J52021-384 C12c-11/26 C12d-13/10
The extrn. is conducted using (a) a substance which accelerates cytolysis of the yeast cell wall which is produced by cultivating a strain belonging to Genus *Streptomyces*, specifically *Streptomyces* SP 429 (Deposit No. 1939) and an enzyme for cytolysing the yeast cell wall, e.g. those derived from microorganisms belonging to Genera *Streptomyces*, *Rhizopus*, *Flavobacterium*, *Pellicularia*, etc. or imperfect fungi and snail enzyme.

The extrn. is effected in a shorter time than the conventional method thereby diminishing deactivation of the enzyme and increasing its rate of utilisation. The amt. of oxygen required for cytolysing a given amt. of microbial cells can greatly be decreased. Used e.g. for extracting saccharides, proteins and nucleic acid from a living yeast. 13. 8. 75 as 098915 C12c-11/26, C12d-13/10 (27. 12. 79) SAKAI, T (6pp) (J5 2021384)

SAKA/ D16 22806Y/13 = J7 9044-753
Cytolysis of living yeast cells e.g. of genera *Saccharomyces* - using polyene type antibiotic, azalomycin F and cytolysis enzyme

SAKAIT 13.08.75-JA-098916
(27.12.79) *J52021-385 C12c-11/26 + C12d-13/10
The cytolysis is conducted using (1) a polyene type antibiotic such as Nystatin, Amphotericin B, Tricomycin, Pimaricin, etc. (at a concn. of ≥ 1 mcg/ml. for Nystatin and Amphotericin B; ≥ 2.5 mcg/ml for Tricomycin; ≥ 20 mcg/ml for Pimaricin) and/or (2) ≥ 25 mcg/ml of Azalomycin F and (3) a cytolysis enzyme such as those obtd. from microorganisms belonging to Genus *Streptomyces*, *Rhizopus*, imperfect fungi, *Flavobacterium*, etc. or from snail (snail enzyme) at 30-50°C.

The cytolysis is effected in a short time, diminishing deactivation of the enzyme and increasing the rate of utilisation of the enzyme. The amt. of oxygen required to cytolysate a given amt. of microbial cells can greatly be decreased. The cells may be in either a logarithmic or stationary phase and may be e.g., those belonging to Genera *Pichia*, *Hansenula*, *Endomyces* and *Candida*, etc. 17. 2. 77 as 021385 C21c-11/26, C12d-13/10 (27. 12. 79) SAKAI, T (5pp) (J5 2021385)

RIKA D16 75196Y/42 = J7 9044-754
Cultivation of an arthrobacter bacteria - using epsilon-caprolactam polymer as carbon and nitrogen source

INST PHYS CHEM RES 08.03.76-JA-024740
A97 C03 (A23 D13) (27.12.79) *J52108-081 C12k-03 + A23k-01
Method comprises culturing the bacterium from Arthrosent in the culture medium as the carbon and nitrogen source at pH 9-11.5 and recovering the bacteria.

Method utilises ϵ -caprolactam polymer obtd. from the prepn. of nylon as a by-product. Obtd. bacteria body can be used as feed for animals and fish, etc.

The microorganism, capable of utilising ϵ -caprolactam polymer is novel and is designated *Arthrobacter* ϵ -C-N (FERM-P 3463) (from soil in Saitam Prefecture). In culture the control of pH is partic. important, and the culture is pref. practised at pH 9-11.5 at 30°C for 70 hrs. by submerged culture. 8. 3. 76 as 024740 C12k-3/00, A23k-1/00 (27. 12. 79) INST PHYS CHEM RES (4pp5) (J5 2108081)

NISB D16 11591A/06 = J7 9044-755
Medium for tissue culture - esp. of plant belonging to *Nicotiana* genus, contains DMSO

JAPAN TOBACCO & SALT PUB 22.06.76-JA-072780
(27.12.79) *J52156-989 C12k-09

Medium for tissue culturing plant belonging to *Nicotiana* genus contains 0.05-1v/v% DMSO.

In culturing callus derived from tobacco plant using Murashige-Skoog (MS) medium or known liq. medium many clumps are formed and the number of single cells is relatively small. In this process relatively many free single cells are obtd. by DMSO to the medium in a fixed concn. Addn. of DMSO is also effective in the growth and multiplication of cell. 22. 6. 76 as 072780 C12k-9/00 (27. 12. 79) JAPAN TOBACCO & SALT PUB (3pp) (J5 2156989)

RIKA D16 27592Y/16 = J7 9044-756
Substrate-specific endonucleases - isolated from extracts of *Bacillus* microorganisms

RIKAGAKU KENKYUSHO 08.10.75-JA-121671
B04 (27.12.79) *DT2645-548 C12d-13/10

Endonucleases which selectively cleave the phospho-diester bonds in specific nucleic acids to form fragments with a specific mol. wt. are obtd. from a cell-free extract of *Bacillus* IAM 1522 or ATCC 23845.

The enzymes are highly substrate-specific, e.g. cleaving only certain bacteriophages and then only at certain sites. They are thus useful as biochemical reagents in DNA research and gene cloning. 8. 10. 75 as 121671. C12d 13/10 (27. 12. 79) RIKAGAKU KENKYUSHO (7pp) (J52047980)

MITN D16 81621X/44 = J7 9044-757
L-dextro-rotatory-tartaric acid and salt prepn. - by enzymatic hydrolysis of cis-epoxy-succinic acid or salts

MITSUBISHI GAS CHEM IND 15.12.75-JA-149394

A97 E17 (27.12.79) *DT2616-673 C12d-01/02 C12d-13/10

Process for prepn. of L(+)-tartaric acid and its salt takes place by allowing an enzyme to act on cis-epoxy-succinic acid, (I), or its salts (I'), under hydrolysis and opening of epoxy gp., pref. at pH 4-10 and $\leq 65^\circ\text{C}$, and then separating the L(+)-tartaric acid formed or its salts. The cis-epoxy-succinic acid hydrolase (II) is pref. obtd. from a micro-organism of *Acetobacter* species, pref. *Acetobacter curtus* no. 4, no. 10 or no. 21, of *Corynebacterium* species pref. of *Corynebacterium* S-13, Pref. enzymatic reaction takes place at $< 70^\circ\text{C}$, pH 4-10 using (II) derived from microorganisms enclosed in a gel.

Cis-epoxy-succinic acid hydrolase is new. L(+)-tartaric acid is used as an additive to pharmaceuticals and food and as an industrial raw material. Process can be carried out on an economical, industrial scale, with good yields and selectivity. 15. 12. 75 as 149394 C12d-13/10, 1/02 (27. 12. 79) MITSUBISHI GAS CHEM IND (8pp) (J5 2072878)

MAZN D16 82597T/52 = J7 9044-758
Oxychlororaphin prodn - by fermentation

MARUZEN OIL KK (MARK) 25.03.71-JA-016865

B02 C02 (27.12.79) *J47029-585 + A01n-09/22 C12d-09/20 C12d-13

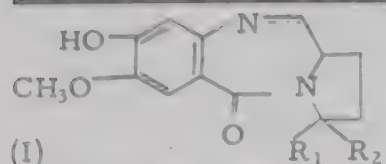
Method comprises cultivating bacteria of the genus *Pseudomonas* and are capable of producing oxychlororaphin and also have the ability to utilise hydrocarbon (principally n-paraffins) in culture medium under aerobic conditions, accumulating oxychlororaphin in the culture broth, then recovering same. Oxychlororaphin, a deriv. of phenazine, has antibacterial activity against phytopathogenic microorganisms and can be used as an agricultural drug. 25. 3. 71 as 016865 C12d-13/00; A01n-9/22, C12d-9/20 (27. 12. 79) MARUZEN OIL CO LTD (5pp) (J4 7029585)

ZAID D16 12856Y/08 = J7 9044-759
Neothramycins A and B and methylneothramycins - antitumour agents active against leukemia L-1210 cells which have antibacterial and antifungal activity

ZH BISEIBUTSU KAGAKU KEN 15.10.75-JA-123256

B02 (27.12.79) *BE-847-372 A61k-31/55 C07d-487/04 C12d-09/14

Neothramycins of formula (I) and their salts are novel cpds. (where one of R_1 and R_2 are H and the other is hydr-



oxy or methoxy). The four cpds. are ceothramycin A (R_1 is CH, R_2 is H), neothramycin B (R_1 is H, R_2 is CH) methylneothramycin A (R_1 is OCH₃, R_2 is H) and methylneothramycin B (R_1 is H, R_2 is OCH₃).

The cpds. are prepd. by submerged aerobic cultivation of *Streptomyces* ATCC 31123 at 25-29°C and pH 6-8. 15.10.75 as 123256 C12d-9/14, A61k-31/55, C07d-487/04 (27.12.79) ZAISAN HOJIN BISEIB (16pp) (J5 2047992)

ASGE= ★ D16 06800C/04 ★SU-603-297
Tomato plant microbiological protection agent - contg. specified passivated tobacco mosaic virus mutant strain to increase immunogenicity

AS USSR GEN GENETIC 22.06.76-SU-374394
C03 (25.08.79) A01n-15 C12k-01/04

Tomato plant vaccination against tobacco mosaic virus is based on plant treatment with passivated mosaic virus mutant strain B-69 to give high genetic stability and longer lasting immunogenic. Strain V-69 is practically non-pathogenic towards tomato (mutation frequency in pathogenic form is 0.3%). Only 0.35-4% of vaccinated plants show symptoms of viral disease after 2 months. The protective effect is developed in 75-90% of treated plants 1 month after continuous infection.

Sukhov, K.S., Izvekova, L.I., Podyapolskaya, T.S. et al. Bul. 31/25.8.79. 22.6.76. as 374394 (3pp114)

BIOL= ★ D16 06808C/04 ★SU-646-763
Labelling live microorganisms for measuring their concn. - using phosphorus-32 radioactive isotope in di:sodium phosphate, used in medical and veterinary research

BIOL IND RES TECHN 28.02.73-SU-904844
B04 C03 (15.08.79) C12k-01

Microorganisms are labelled for measuring their concn. in a sample by incubating them with a 32-P isotope in the form of Na₂HPO₄. Incubation is carried out at 2-8°C for 18-24hrs. and the cells are then seprd. from the supernatant.

The labelling process is simple and highly accurate measurements of concn. may be obtd. The method is esp. useful in veterinary medicine for labelling e.g. *Brucella* microorganisms.

Peredereev, N.I., Pukhov, V.A. 18.2.73. as 904844
Bul 30/15.8.79 (3pp314)

LEBE/ ★ D16 06873C/04 ★SU-661-294
Dissolved gases determ. appts. - has casing with semipermeable walls immersed into liquid contg. gases and using inert gas to collect diffused gas

LEBEDEV DP 17.11.77-SU-544080
J04 R16 (05.05.79) G01n-07/10

Device for determining the content of dissolved gases in liquids, directly in the technological appts. e.g., in the medical, fermenting, chemical and microbiological inds. comprising a container with semi-permeable walls, connected by a valve to a gas-analyser. The measurement accuracy is increased, by making the container as a casing held together by a general flange, with pipes for introducing inert gas and guiding nozzles. Inside the casing is a tubular-collector for removing the gas and distributing fins arranged along the line of the apparatus. On the front surfaces of the fins electrical spirals are wound. The tubular collector is connected to the gas analyser.

Lebedev, D.P., Denisov, V.A. Bull 17/5.5.79. 17.11.77 as 544080 (2pp29)

FORE- D16 12818Y/08 =SU-662-017
Brewing beer of better storage stability - using strain of barley with very low anthocyanogen and catechine content

FORENEDE BRYGGERIER 15.10.75-DK-004640
E13 (15.05.79) *BE-847-191 C12c-11/04

Method comprises forming a wort from a strain of barley which shows an inherent complete or partial genetic blocking of the synthesis of anthocyanogens (subst. 3,4-flavandiols) or catechines (other subst. hydroxy flavans).

The clouding of beer on storage arises from the presence of these cpds. Removal of these cpds. in the beer e.g. by silica gel or polyvinylpyrrolidone absorption requires a large amt. of additive and involves a further fil-

tration. By use of the above, the stability of the beer is improved without any treatment process.

Wetstein, D.H. Ven., Larson, B.A., Barbo, I. et al. Bul. 17/5.5.79. 15.10.76. as 412403 (3pp)

UHDE D16 40329X/22 =SU-662-018
Protein prodn. by fermentative process - carried out in rotating paddle reactor with reduced energy demand and with higher yields (NL180576)

UHDEFGMBH 16.11.74-DT-454443
(15.05.79) *DT2454-443 +C12d-13/06

The fermentative conversion of a nutrient mixture by microorganisms in presence of oxygen is effected by a phase transformation of the mixture and the gas at a density of under 0.3. The reaction takes place in a closed reactor which is fitted with a distributor, designed as a revolving horizontal shaft with perforated paddles. For the same boundary conditions as conventional fermentation processes, the new method has a much higher productivity as regards energy balance, a higher oxygen yield and a higher final concentration. It is suitable for continuous or batch production.

Faust, U., Knecht, R., Lautenschleger, W. et al. Bul 17/5.5.79. 11.11.75. as 193952 (3pp)

SITE= ★ D16 06902C/04 ★SU-662-043
Breaking down cellular film of chlorella - by using *Bacillus subtilis* 43 or *Bacillus mesentericus* 56 as fermenting agent

SIBE TECHN INST 27.12.76-SU-434564
P13 (15.05.79) A01h-13

The chlorella is subjected to a fermenting hydrolysis induced by *Bacillus subtilis* No 43 or *Bacillus mesentericus* No. 56 in quantities of 2-3% of the coagulated mass. The process is carried out at pH 7-8 temp. of 40-50°C, in a thermostat for 60-70hrs. This ensures hydrolysis of up to 60% of albumin.

The strain is created by the dry grass method for *Bacillus subtilis* and dry potato method for *Bacillus mesentericus*. The created culture from the drying methods is adapted as an agent contg. live cells of chlorella, forming the sole source of carbon and nitrogen.

Levin, E.D., Sorokina, G.I., Ryazanova, T.V. et al. Bul. 18/15.5.79. 27.12.76. as 434564 (2pp118)

UYGO= ★ D16 06911C/04 ★SU-662-071
Estimating distance between adjacent shotgun pellet entry points - by culturing *Actinomyces* microbial spores on damaged body tissue, used in forensic medicine

GORKI UNIV CHEM RES 06.12.77-SU-552963
P31 (15.05.79) A61b-10 C12k-01

The distance between adjacent shot which has entered tissue from a smooth bore shot-gun is measured by (a) sterilising the sample tissue, (b) impregnating it with a suspn. of *Actinomyces* spores, (c) contracting the sample with a filter paper impregnated with nutrient medium, (d) incubating, and (e) observing the zones of *Actinomyces* growth.

The Pb from the shot and the gunpowder residues at the point of entry inhibit growth and so the distance between adjacent shot entry points can be very accurately measured. The technique is useful in forensic science. Tumanov, A.A., Postnov, I.E., Bochkareva, E.V. et al. Bul. 18/15.5.79. 6.12.77. as 552963 (2pp314)

MOEP= ★ D16 06922C/04 ★SU-662-104
Soluble antigen for differential whooping cough diagnosis - prepd. by extrn. of dry microbial biomass with aq. sodium chloride soln., pptn. with alcohol, heating and formalin addn.

MOSCEPIDENIOLOGY 07.12.77-SU-558971
B04 (15.05.79) A61k-39/02

Soluble microbial antigen for differential diagnosis of whooping cough and its para-whooping cough is extd. from dry microbial biomass with aq. salt soln. and pptd. from aq. NaCl extract with alcohol.

A high specificity two-component para-whooping cough erythrocytic diagnosis antigen is obtd. by extrn. of dry biomass with 0.85% NaCl soln. and pptn. of prod. with 4.5-5.5 vol. excess of alcohol. The prod. is then repptd. from aq. alcoholic soln. with 1.5-2.5 volumes of alcohol, heated for 15-45 mins. on a water bath and treated with formalin.

Samsonova, V.S., Bakulina, N.A., Mamaeva, E.A. et al. Bul. 18/15.5.79. 7.12.77. as 558971 (2pp938)

CH= ★ D16 06951C/04 ★SU-662-141
Microbial cells disintegration unit - has a connector for continuous feed of cell suspension through centre of working chamber bottom
LENGD CHEM-PHARM 20.04.77-SU-479172
P41 (25.05.79) B02c-15

Compact microorganisms disintegrator claimed in Parent Patent 440153, ensuring a high efficiency of the continuous process has an inlet pipe for the suspension. The pipe is in the centre of the working chamber bottom, and blades are fitted in the upper and lower surface of the delivery disc which is held in the cover of the housing.

The delivery disc as well as the horizontal surfaces of the massive plate and sleeve operate similarly to a centrifugal pump, while the inlet pipe feeding the microorganisms suspension in the cover is blocked by the plug. Glass or synthetic balls of 0.5mm. dia. are loaded as the grinding medium, and the working chamber is filled with the suspension till drops appear from the discharge connector. With the inlet closed, the cooling agent is admitted and the motor ensures the working disc peripheral velocity of 20 m/sec. After 3-4 min., the microorganisms suspension continuous feed is turned on, the rate selected empirically.

Maloshin, V.G. and Elinov, N.P. Bul. 18/15.5.79. 20.4.77. as 479172 Add to 440153 (4pp89)

HAL= ★ D16 06954C/04 ★SU-662-149
Potassium flotation enrichment of sylvinitic ore - using Chlorella algae as depressor and octadecylamine hydrochloride as collector
BELO HALLURGY RES 29.11.76-SU-424370
E34 J01 P41 (E16) (18.05.79) B03d-01/02

KCl is extd. and conc. from sylvinitic ore (I) by flotation. The ore is ground to 0.8mm. and treated with a 10-20% soln. (sic) of Chlorella algae (3-5 kg/tonne) as depressor reagent and octadecylamine hydrochloride (100g/tonne) as collector.

Typically, a concentrate contg. 84.6% KCl is obtd. with 98.5% extn. of K from (I). For the same ore, 94.5% of the KCl was removed by flotation with Phyllophora red algae (300g/tonne) and pine oil (10g/tonne).

Makhlyankin, I.B., Vinogradova, I.N., Laryutina, E.A. et al. Bul. 18/15.5.79. 20.11.76. as 424370 (2pp1360)

YDR= ★ D16 07120C/04 ★SU-662-556
Laminated lignin microbiological sorbent prepn. - by treating hydrolysed lignin with ammonium hydroxide in presence of ammonium sulphite
HYDROLYSIS IND RES 16.12.77-SU-554768
(15.05.79) C07g-01

Amino-gps. contg. lignin derivs. are used as sorbents in microbiological industry for clarification of microbial culture medium after microbiosynthesis of physiologically active cpds.

These cpds. are prepd. by the amination of hydrolysed lignin at elevated temp. The starting lignin derivs. are treated with ammonium hydroxide in the presence of ammonium sulphite at 150-200°C for 5-15 hrs.

Raskin, M.N., Ostrovskii, D.I., Samsonova, A.P. et al. Bul. 18/15.5.79. 16.12.77. as 554768 (3pp938)

MOSU ★ D16 07121C/04 ★SU-662-557
Stabilised complexes of oxido-reductase enzymes prepd. - by reaction in soln. with quaternised acrolein and vinyl-pyridine copolymers, used on solid supports in chemical and biochemical synthesis

MOSCOW LOMONOSOV UNIV 30.09.76-SU-408226
A97 B04 (A14) (15.05.79) C07g-07/02

Oxidoreductases (I), e.g., formate dehydrogenase, are stabilised by coupling to a water-sol. polymer, e.g. a

quaternised copolymer (II) of acrolein (III) and 4-vinylpyridine, (prepd. by radical copolymerisation in DMF for 5-6hrs. at 60°C, followed by quaternisation of 20-95% of the N atoms with Me₂SO₄). It contains 5-30% (III) units.

(I) (1 pt. wt.) is coupled with (II) (1-30 pts. wt.) in phosphate buffer at pH 7-8, pref. in presence of an enzyme co-factor or substrate. The coupling prod. still contains -CHO gps. which can be used to immobilise it on a solid base, e.g. aminosilanised silica. Alternatively, its cationic gps. allow it to bind to anion sites, e.g. in porous glass. (I) contains -SH gps. whose reducing action is enhanced by metal ions coordinated to quaternary N.

Berezin, I.V., Egorov, A.M., Osipov, A.P. et al. Bul. 18/15.5.79. 30.9.76. as 408226 (4pp1360)

WIEN- ★ D16 C/04 ★SW 7904-854
Composting process - with airflow shared between several stacks
WIENER BRUCKENBAU E 02.06.78-OE-004037
(14.01.80) C05f-09/04

Composting is effected in two phases; in the second longer phase from fresh to ripe compost, instead of sucking air through a stack and blowing out again, through the same stack, then letting it rest, the air is sucked through one stack and blown out through another. 1.6.79 as 004854 (-pp1429)

KYOW D16 40795A/23 =US 4183-786
(L)-Serine microbiological prodn. from glycine - using Nocardia mutants with reduced serine decomposing capacity and/or with resistance to metabolic antagonists

KYOWA HAKKO KOGYO 20.12.76-JA-153024 (30.11.76-JA-143748)
B05 E16 (15.01.80) *DT2753-422 C12d-13/06

Prodn. of L-serine (I) comprises converting glycine to L-serine in an aq. medium contg. glycine in the presence of microbial cells of a mutant (II) belonging to the species Nocardia butanica having a resistance to ≥ 1 metabolic antagonist selected from those of glycine, serine, methionine, glutamine, histidine, leucine, isoleucine, valine, purine, pyrimidine or folic acid. (I) is accumulated in the medium and recovered.

Pref. (II) are N. butanica NRRL 11059, NRRL 11187, NRRL 11188, NRRL 11190, NRRL 11191, NRRL 11192, NRRL 11193, and NRRL 11194. High yields are achieved. 28.11.77 as 855328 (+ 8.12.76 (2) -JA-147389, 147390) (9pp936)

ICIL D16 46447X/25 =US 4183-787
Aerobic fermentator for liquid/gas separation - with aerated uptake, separator and downtake spaces at specified velocities (BE040676)

IMPERIAL CHEM INDS LTD 04.12.74-GB-052430
J01 (15.01.80) *DT2554-440 C12b-01/14

A gas and liquid mixture are continuously circulated in a system which has a riser connected at both its upper and lower ends to a downcomer. A gas disengagement section connects the upper parts of the riser and the downcomer.

The lower part of the riser has a greater cross-section than the upper part. In use gas is injected into the liq. in the lower part of the riser and is disengaged from downwardly flowing liq. in the gas disengagement section. The downward velocity of the liq. in the section does not exceed 0.2 m/sec.

Pref. the liq. is a culture of aeroline microorganisms and the gas is an O₂-contg. gas. 25.10.77 as 845410 (+1.12.75-US-636612) (7pp1376)

See Also

D14 SU 407457 D14 SU 449523 D15 US 4183809

D17: SUGAR; STARCH

WMAC- ★ D17 05487C/04 ★BE-878-300
Centrifuge with closable outlet in basket bottom - in which closure is moved downwards from outlet by sleeve axially displaceable along centrifuge shaft by lever

WESTERN STATES MACH 17.08.78-US-934477
J01 P41 Q66 (17.12.79) B04b F16k

Centrifuge basket is mounted on a base support spaced beneath the bottom wall of the basket and fixed to the lower end of the centrifuge shaft. An opening in the bottom wall surrounds the shaft to allow centrifuged solid material to be removed. The closure moves between the opening and the base support, pref. against the action of a spring on

the support. The sleeve extends upwardly from the top of the closure and has at its upper end an annular channel formation engaged by rollers on the lever.

The lever is forked, with a roller at the end of each arm of the fork, and is pivoted at one side of the shaft. A drive mechanism, e.g. a hydraulic ram, turns the lever, thus displacing the sleeve and with it the closure, downwards. This opens the opening, allowing the solid material to escape.

Centrifuge is used in the sepn. of solids from liqs., e.g. in the extn. and refining of sugar, dextrose and other crystalline materials. The closure is fully supported in both its operative positions, reducing wear, and rotates with the basket, while the lever and drive mechanism are fixed and are sufficiently small not to affect the operation of the centrifuge. 17.8.79 as 878300 (18pp1395).

STRA- D17 27825T/18 = DS 2115-126
Purifying sugar solns - pretreated with carbonate exchanger by treatment over cation exchanger

STRAKOSCH ZUCKERFAB (SUGC) 16.10.70-OE-009364
(17.01.80) *DT2115-126 C13d-03/14

Removal of non-sugar substances from technical sugar solns. comprises pretreatment of the soln. with carbonate and/or bicarbonate exchangers and with an ammonium exchanger or weak acidic cation exchanger in H form, and (partial) removal of any NH_3 and CO_2 present. The soln. obtd. in a following evapn. and crystallisation stage is treated with a cation exchanger (I) in H form and then re-cycled to the (bi)carbonate exchanger.

(I) removes residual cations, aminoacids and betaines from the soln. Method yields a soln. contg. 90-98 wt. % sugar, based on solids content. 29.3.71 as 115126 (4pp927)

TATL D17 30990W/19 = DS 2449-870
6,6'-Dichloro-6,6'-dideoxy-sucrose prodn - in high yields by reaction of sucrose in DMF with methane sulphonyl chloride

TATE & LYLE LTD 26.10.73-GB-049985
E13 (17.01.80) *DT2449-870 C07h-05/02

6,6'-Dichloro-6,6'-dideoxy-saccharose (I) is prepd. by (a) adding methanesulphonyl chloride to a soln. of saccharose in N, N-DMF at -40 to -15°C and warming the mixt. to 60-70°C; (b) acylating the chlorinated saccharose obtd. from stage (a) completely and isolating the acylated prod. contg. the hexaacetate of (I) and (c) recovering the hexaacetate of (I) from the crude prod. and then deacetylated.

Pref. the acylated prod. from stage (b) is completely hydrolysed, salt-like cpds. removed from the hydrolysis prod. and the hydrolysis prod. again acetylated, the hexaacetate isolated and passed to stage (c). Cpd. (I) is prepd. in good yield and is a valuable intermediate for other saccharose derivs. 21.10.74 as 449870 (3pp068).

VBEN/ ★ D17 05582C/04 ★ DT 2829-149
Powder sugar mfr. - in disintegrator above fluidisation hopper for instant packaging

VON BENNIGSEN-MACKI 03.07.78-DT-829149
(17.01.80) C13f-03 C13h-03

Powder sugar is mfd. from refined crystallised sugar by pulverising it in a disintegrator which is mounted above a discharge funnel with filter walls for the air outlet. The powder sugar is passed from the funnel to a fluidisation section where air is admitted. After 60 mins. the fluidisation ceases and the sugar is discharged.

This treatment ensures that the powder sugar cannot form any lumps so that it can be immediately packed into the final packages. It also enables the pneumatic transport system to be used. 3.7.78 as 829149 (12pp39)

VBEN/ D17 05582C/04 = EP ---7-037
Powder sugar mfr. - in disintegrator above fluidisation hopper for instant packaging

VON BENNIGSEN MACK 03.07.78-DT-829149
(23.01.80) *DT2829-149 C13f-03

D/S: E(BE, FR, GB, LU, NL, SW).

Powder sugar is made from refined crystallised sugar by pulverising it in a disintegrator which is mounted above a discharge funnel with filter walls for the air outlet. The

powder sugar is passed from the funnel to a fluidisation section where air is admitted. Pref. after 60 minutes the fluidisation ceases and the sugar is discharged.

The treatment ensures that the powder sugar cannot form any lumps so that it can be immediately packed into the final packages. It also enables a pneumatic transport system to be used for the free-running powder sugar.

27.6.79 as 102143 (15pp39)

(G)ISR: DT2028470; US3381901; US3063158.

MASW ★ D17 05980C/04 ★ GB 2025-26
Ring for sugar cane mill roll - formed of corrosion resistant material with wear resistant granular coating

MASCH BUCKAU R WOLF 15.07.78-DT-831214
P41 (23.01.80) B02c-04/30

Wear-resistant ring is mounted on a steel tubular roll for use in a sugar cane mill. The ring consists of a corrosion-resistant material e.g. stainless steel, and is coated on its working face with a granular material which shows high resistance to wear.

Pref. the coating is either of industrial diamonds or a mixt. of 87% WC and 13% cobalt. The coating pref. has a thickness of 0.05-1.0mm. and a roughness depth of 20-200µ.

The roll is provided at mfr. with a depth of roughening to lengthen the period of use. The roll has a prolonged useful life and also can be made thinner than previously known rings. 16.7.79 as 024713 (8pp295).

FOOD= ★ D17 06958C/04 ★ SU -662-153
Rotor of vaned centrifugal screen - contg. discharge chamber between two supporting discs, cantilever arched vanes and central distribution cone

FOOD IND STARCH 13.06.77-SU-498957
P41 (18.05.79) B04b-03

Increased rigidity of the supporting discs and of the screening surface in the vaned centrifugal screen for separating free starch from cellular tissue, and dewatering the latter, as well as for use in sugar, canning or ore-mining inds. is ensured. The installation contains second supporting disc with cantilever-wise mounted vanes fixed to the hub parallel to the main supporting disc, and connected by inner and outer rims, the latter with openings, forming circular channel between the discs. The distribution head contains coaxially mounted dividing cone the opening inlet of which has an area equal one half of the area of inlet opening of the distribution head, so that equal volumes of the suspension are fed on both sides of supporting discs to screens on the arched vanes whose external side is closed by thin walled discs.

Bukhtoyarov, Yu.A., Dudukalov, A.A. Bul.
18/15.5.79. 13.6.77. as 498957 (4pp135)

NATT D17 74669B/41 = US 4183-96
Cold water swelling starch prodn. - by two-stage crosslinking of starch with sodium tri:metaphosphate, useful as thickener for foodstuffs

NAT STARCH & CHEM CORP 20.03.78-US-888382
A11 (A97 D13) (15.01.80) *NL7900-914 A231-01/19

A foodstuff is prepd. contg. a cold water swelling starch as a thickening agent, characterised by its resistance to Brabender viscosity breakdown on heating from 30-95°C

The prepn. is a dual derivatising process by reacting a granular starch base in a prim. cross-linking step with sodium trimetaphosphate in an aq. slurry at pH 10-12 and at a temp. low enough to maintain the starch in an unswollen granular state. The slurry is neutralised to pH 5-6.5 and the prim. crosslinked granular starch recovered. The starch obtd. is reslurried in water to pH ≥ 7.5 and additional sodium trimetaphosphate added. The resultant slurry is drum-dried to effect a sec. crosslinking reaction in situ, and the dried cold water swelling starch prod. recovered.

Foodstuffs such as fruit pie filling may be prepd. using an amioca starch base; and tomatoe sauce prepd. using a corn starch base. 20.3.78 as 888382 (4pp931)

See Also

D11 US 4183972

D13 DT 2925988

D18: SKINS; HIDES; LEATHER; TOBACCO

AMBS D18 16414Y/10 =GB 1559-507
Dilation process and appts. for cigarette tobacco - to increase filling capacity of the cut material

AMERICAN BRANDS INC 05.09.75-US-610740 (05.09.75-US-610736)

P15 (23.01.80) *BE-845-742 A24b-03/18

The filling capacity of tobacco is increased by entraining a thin layer of conditioned tobacco in a hot gas stream for an interval not greater than 5 secs. The tobacco is conditioned by shredding and heating up to $\geq 130^{\circ}\text{F}$, and raising the moisture content to 15-35%. The gas temp. is above that of the conditioned tobacco.

The gas flow is pref. non-turbulent and may take place in a venturi throat. The max. conditioning temp. is pref. 250°F and the gas stream is from $300-600^{\circ}\text{F}$. Tobacco can be re-constituted without break-up. 29. 8. 76 as 035434 (10pp1376).

BARN-★ D18 05966C/04 ★GB 2025-199
Artificial tobacco leaf with raised vein pattern - printed on using tobacco contg. ink, esp. for cigar wrappers

BARNES & HUMBY LTD 06.08.79-GB-027315 (30.05.78-GB-024166)

A97 G02 P15 (23.01.80) A24b-03/14

Prod'n. of artificial tobacco leaf comprises printing, by die stamping or gravure printing, a raised vein pattern of a tobacco-contg. ink onto a paper made of tobacco waste.

Esp. the ink contains tobacco powder and a cellulose base (esp. a nitrocellulose lacquer) and opt. chalk at about the same vol. as tobacco powder. Pref. it has viscosity 200-700P at 25°C . Suitably a reversed line plate pretreated with a silicone is used for gravure printing.

Used esp. as cigar wrappers. By providing a vein pattern a more natural appearance is given to the wrapper. 6. 8. 79 as 027315 (3pp1251).

RETO D18 48509T/30 =SU -661-994
Tobacco treatment process - using impregnated organic vapour to expand it

REYNOLDS LEASING 28.04.71-US-138039

P15 (08.05.79) *BE-777-252 A24b-03/18

Tobacco treatment process is according to Parent patent with the addition of modification which comprises introducing the tobacco into an impregnation zone, simultaneously introducing, so as to contact the tobacco a vapour current of a compound (I) (pref. an opt. halogenated hydrocarbon) with a b.p. at atmospheric pressure of -50 to $+80^{\circ}\text{C}$, the temp. of the tobacco and the vapour being respectively lower and higher than the b.p. of (I) at the pressure in the zone. The speed of introduction of (I) into the zone is regulated with reference to the ratio of introduction of the tobacco so that the wt. ratio of (I) in the impregnated tobacco is 5-200 pts. wt. (I)/100 pts. wt. tobacco (dry wt.). The impregnated tobacco is then sharply expanded pref. by contact with a stream of warm gas. This process is quicker than that of the Parent patent, (which used a liquid for impregnation) and allows the amount of (I) used to be more accurately determined. Muir, A.G., Newton, D.A. Bul. 17/5.5.79. 14.4.72. as 772591 (4pp)

ASRA=★ D18 07073C/04 ★SU -662-500
Double sulphate of titanium and ammonium prodn. - from mixt. of titanium sulphate, ammonium sulphate and sulphuric acid for use in leather and chemical industries

AS USSR RARE ELEMEN 21.05.75-SU-136539

E32 (15.05.79) C01g-23

Titanium ammonium sulphate is prepd. by pptn. from mixed solns. of titanium and ammonium sulphates and sulphuric acid.

The purity of the prod. can be increased if the pptn. is carried out at a total content of free ammonium sulphate and sulphuric acid in the soln. of 300-430 g./l., these two cpds. being in the ratio of 5-38: 35-5 by wt.

The improved method reduces the impurity content 2-10 times.

Motov, D. L., and Petrov, V.B. Bul. 18/15.5.79. 21.5.75. as 136539 (2pp815)

LIGG★ D18 07165C/04 ★US 4183-362
Decreasing burn rate of tobaccos - by treatment with salt which undergoes endothermic reactions

LIGGETT GRP INC 13.02.78-US-877583 (29.08.74-US-501763)

E12 P15 (E31 E33) (15.01.80) A24b-15 A24d-01

A smoking tobacco compsn. contains 15-30 wt. % of reconstituted and/or burley tobacco, which are the fastest burning components of the blend. These fast burning components have deposited on them 0.1-5 wt. % of a salt, (based on total wt. of salt and tobacco) which on heating from ambient to burning temp. exhibits a secession of endothermic reactions in the range $100-500^{\circ}\text{C}$. The salt is $\text{Mg} \cdot \text{Cl}_2 \cdot 6\text{H}_2\text{O}$, $\text{FeNH}_4 \text{ Cit.}$, $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$, $\text{FeSO}_4 \cdot 9\text{H}_2\text{O}$, $\text{MgH} \cdot \text{Cit.}$, $\text{Na}_3 \text{ Cit.} \cdot 2\text{H}_2\text{O}$, $\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$ (Cit = citrate).

The burning rate of the tobacco is reduced. The effect on smoke compsn. is small and there is no significant alteration in the taste. 13. 2. 78 as 877583 (+22.4.76-US-680637) (6pp955)

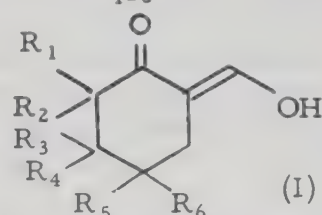
GIVA★ D18 07166C/04 ★US 4183-363
2-Hydroxy methylene-cyclohexan-1-one(s) - as additives for improving and enhancing tobacco organoleptic properties

GIVAUDAN CORP 25.07.78-US-927800

E15 P15 (15.01.80) A24b-03/12

Organoleptic properties of tobacco prods. are improved enhanced, or modified by addn. of a 2-hydroxymethylene-cyclohexanone deriv. of formula (I).

In (I), R_1 is H, (m)ethyl, propyl, butyl or allyl; and R_{2-6} are each H or (m)ethyl, provided that the total no. of C's in R_{1-6} is 5. Addn. of (I) improves the aroma of fresh



tobacco, and the aroma and taste during smoking. Thus treated cigarettes provide, on smoking, a smoother, mellow-er, more rounded taste.

25. 7. 78 as 927800 (5pp478)

GUMU/★ D18 07167C/04 ★US 4183-364
Refining tobacco giving prod. free of tars resin and nicotine - by steeping in hot aq. potassium metabisulphite immersing in boiling aq. potassium sulphate and nitrate and drying

GUMUSHAN OH 07.12.76-US-749959

P15 (15.01.80) A24b-15/02

Tobacco is refined by (a) steeping fresh shredded tobacco in a hot aqueous soln. of 0.1-0.3 % potassium metabisulphite for 3-6 hrs. then extracting the soln. from the tobacco; (b) immersing the tobacco in a boiling aqueous soln. contg. 1-3 wt. % potassium sulphate and 1-3 wt. % potassium nitrate for 1-3 hours, then extracting the soln. from the tobacco, and (c) drying at $35-50^{\circ}\text{C}$.

Tars and nicotine are removed. In tests, tar and resin were eliminated, and the nicotine content reduced to 0.01-0.02 %, Quality classification and age-curing are not required; all the tobacco harvested can be used, including fragments and microorganisms are destroyed. 7.12.76 as 749959 (4pp955)

See Also

D16 EP---7244

D21 FR 2421870

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

ESSO D21 69649R/38 =DS 2011-163
Preparation of alcohols ether or ether- - alcohols

EXXON RES & ENG CO 19.03.69-US-808692 (19.03.69-US-808673)

E17 G02 (17.01.80) *BE-747-459 + C07c-33/02 C07c-43/14

In the prepn. of unsatd. alcohols, e.g. 1-octa-2,7-dienol, a homogeneous liq. mixt. of an aliphatic conjugated 4-6C diolefin, water and a solvent, from which dissolved oxygen has been removed, is treated with an organic isonitride or phosphine as activator in the presence of a catalyst contg. an aivalent palladium complex and pref. an organic or inorganic base as cocatalyst.

Suitable solvent is isopropanol, catalyst tetrakis(triphenylphosphine)palladium and as cocatalyst, a quat. ammonium hydroxide. Activator may be triphenyl phosphine. The unsatd. alcohols may be hydrogenated and used to prepare plasticisers. 10.3.70 as 011163 (5pp068).

ESSO D21 65714U/44 =DS 2217-043
Bacteriostatically active 1,3-diols - and their esters for use in soaps, shampoos and shaving lotions

EXXON RES & ENG CO 08.04.72-DT-217043

E17 + P34 (D22) (17.01.80) *DT2217-043 C11d-09/50

High quality soaps, shampoos and shaving lotions with bacteriostatic properties contain 0.05-5.0 (pref. 0.1-0.5) wt. % of an aliphatic diol or diol ester (I) which has 4-15C in the aliphatic diol chain and in which the OH or ester gps. are on the 1st and 3rd C atoms.

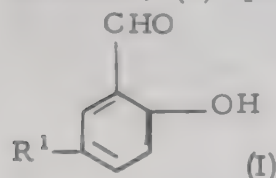
Pref. soaps contain a Na salt of a 10-22C fatty acid. Pref. (I) is 1,3-octanediol, -heptanediol or -nonanediol, or 1,3-butanediol-1-monooctanoate or 1,3-octanediol-1-monopropionate. Cpd. (I) are active against both Gram-negative and Gram-positive bacteria and are non-toxic, in contrast to the usual antibacterials such as hexachlorophene which they replace. 8.4.72 as 217043 (5pp927).

SCHW-★ D21 05529C/04 ★DS 2830-497
Hair-dyeing compsn. for yellow and brown shades - contains salicyl-aldehyde or 2,5-di:hydroxy benzaldehyde in soln.

SCHWARZKOPF H GMBH 12.07.78-DT-830497

E24 (17.01.80) A61k-07/13

Hydroxybenzaldehydes of formula (I) (where R¹ is H or OH) are used in a human hair-dye compsn. contg. (a) (I) in soln., (b) opt. an oxidising agent, (c) opt. a hair-dye precursor, (d) opt. a direct dye and (e) standard additives.



Compsns. can be used as hair-dyes, e.g. for white hair, tints, tint-reinforcers and colour-rinses. Light-yellow to yellow and brown to red-brown shades

are obtd. (I) are non-toxic, non-irritant and can be used alone, in soln. In an example, a soln. contg. 1% salicyl-aldehyde at (i) pH 4 or (ii) pH 10, dyed hair in (i) light yellow, (ii) yellow shades, whereas no colour was achieved with a protocatechualdehyde control. 12.7.78 as 830497 (7pp200).

DORA/★ D21 05590C/04 ★DT 2829-435
Breath and mouth deodorising compsn. - contg. glucose, fructose, chlorophyll, castor oil and menthol

DORA 05.07.78-DT-829435

(17.01.80) A61k-07/26

Breath and mouth deodorising compsn. comprises 30-40% glucose, 30-40% fructose, 20-30% chlorophyll (50%), 1-2% hydr. castor oil (sic.) and 0.01-0.02% menthol.

The compsn. was tested in people who had: (a) eaten raw onion; (b) eaten garlic; (c) drunk 1 l. of beer; (d) drunk 1 l. 40° whisky, and (e) smoked a strong cigar.

15-20 Mins. after taking the compsn. no unpleasant breath odour could be detected. 5.7.78 as 829435 (3pp903)

LIEB/★ D21 05651C/04 ★DT 2830-092
8-14C n-alkane mixts. - used as hair lotions and scalp care compsns.

LIEBERT E 08.07.78-DT-830093

E17 (17.01.80) A61k-07/06

8-14C n-alkane mixts. are used as scalp treating compsns. against psoriasis, for preventing hair loss and as hair lotions. A pref. compsn. contains 20% each of the 8-12C n-alkanes.

Mixts. are pref. used as emulsions in ethanol or isopropanol and perfumes are pref. added. 8.7.78 as 830093 (4pp903)

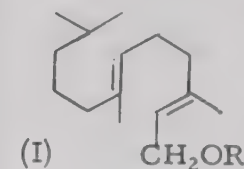
UNIC-★ D21 05688C/04 ★DT 2926-267
Cosmetic compsn. increasing skin moisture retention capacity - contains 3,7,11-tri:methyl-2,6,10-dodeca-tri:en-1 ol ethyl ether and/or acetate

UNI-CHEMIE AG 06.07.78-CH-007374

E17 (17.01.80) A61k-07 C11d-03/48

Cosmetic face-, and body-care compsns. contain a cpd. (where R is Et or Ac), pref. 0.3-12 (1-3) wt.% of the

3,7,11-trimethyl-2,6,10-dodecatrien-1-ol ethyl ether and/or acetate or another simple deriv. with analogous properties. Pref. compsns. are hair shampoos, liq. skin cosmetics, foam bath additives, decorative and protective compsns. esp. lip-sticks, lip-salves, liq. make-up or sun-protective compsns. (I) smooth wrinkles, normalise skin fat, increase skin elasticity, tissue tension and moisture retention. 29.6.79 as 926267 (15pp200)



GCDE-★ D21 05690C/04 ★DT 2926-405
Dental silicone compsns. curable at room temps. - for taking impressions to obtain plaster models

G-C DENTAL IND CORP 30.06.78-JA-078745

A96 P32 (17.01.80) A61c-09 C08k-03/08 C08l-83/04

Compsns., contain (a) an organopolysiloxane contg. ≥2 vinyl gps. in the molecule, (b) an organohydrogen-polysiloxane contg. H atoms linked to ≥2 Si atoms in the molecule; (c) a catalyst accelerating the addition reaction of the H atoms linked to Si atoms, with vinyl gps.; and (d) hydrophobic fillers and opt. the usual additives.

Additionally, the compsn. contains (e) ≥0.5 ppm. finely divided Pd and/or finely divided Pd alloy contg. ≥10% Pd, calc. on the total amt. of (a)-(d). Generally (b) and (c) are stored separately, and (a), (d) and (e) are admixed in any order, before or during use.

Used for taking smooth surfaced dental impressions which are uniform and pore-free, from which highly accurate plaster models may then be made. 29.6.79 as 926405 (14pp4)

JETC- D21 15961B/08 =EP ---6-881
Dental prosthesis working model prodn. - using device with jaws and ribs to hold model

JET-CERAMIC DENTAL 01.08.77-GB-032133

P32 (23.01.80) *WP7900-076 A61c-09

D/S: E(FR)

26.7.78 as 900068

FARB★ D21 05786C/04 ★EP ---7-100
Two-step formose soln. hydrogenation to poly:hydric alcohol mixt. - comprises acidifying after first hydrogenation and basifying before second step hydrogenation

BAYER AG 19.07.78-DT-831656

A41 C03 E17 (23.01.80) C07c-29/14 C07c-31 18 C08g-18 32 C08g-63/48

D/S: E(BE, DT, FR, GB, IT, NL).

Low mol. wt. polyhydric alcohol prepn. comprises metal-catalysed hydrogenation of formose solns. in 2 steps. In the 1st step (A), a >20% soln. of prod. to be reduced at

H 7.5-12.5 is charged batchwise to a reactor so that the content of reducible gps., determined as CO gps., inside the reactor is ≤ 2 wt.%, and hydrogenated batchwise in the presence of a total catalyst quantity of 10^{-4} to 5×10^{-2} w.r.t. total quantity of starting prod. to be reduced. The catalyst remains stationary in the reactor. After lowering the content of the reducible gps. to ≤ 1.5 wt.%, the reaction prod. is drawn off intermittently and adjusted to pH 1-6.

In the 2nd step (B), the reaction prod. from (A) is charged batchwise to a 2nd reactor, after setting to pH 7.5-12.5, and hydrogenated intermittently in the presence of 10^{-4} to 5×10^{-2} wt.% catalyst, w.r.t. pre-hydrogenated prod. of (A). The catalyst remains stationary in the reactor. After a dwelling-time of 5 min. to 4 hrs., the reaction prod. is drawn off intermittently.

The alcohol mixts. are used as (i) starting components for the prepn. of polyether- and/or polyester-polyols, (ii) in the prepn. of nonionic surfactants by reaction with fatty acids, fatty acid derivs., long-chained aliphatic monoisocyanates or by partial oxyethylation, (iii) in the prepn. of opt. foamed polyurethanes by additional reaction with (a) polyisocyanates, (b) cpds. having mol. wt. 400-10000 and contg. ≥ 2 active H atoms and opt. (c) blowing agents, catalysts and standard additives and (iv) as moisture retainers in cosmetics, as antifreeze cpds. and in plant protectants.

12.07.79. as 102406 (51pp200).

(G) ISR: DT2025314; FR-853752; GB-514693; FR1263298; FR--73391; US3471580; DS1084725; US2419300; US2759024; FR1335323; FR1234335; DS-830951; US2271083; DT2639083; DT2639084; DT1543178; EP---912; EP---2473.

ARB ★ D21 05787C/04 ★EP---7-101
Polyhydric alcohol prepn. by formose hydrogenation - over precious metal catalyst, used in opt. foamed polyurethane prepn.
BAYER AG 19.07.78-DT-831659
A41 C03 E17 (23.01.80) C07c-29/13 C07c-31/18 C08g-18/32
D/S: E(BE, DT, FR, GB, IT, NL).

(A) Hydrogenation of formose to a polyhydric alcohol mixt. is effected using Ru, Rh, Re and/or Ir, or mixts. of these metals with Pd, Ag, Os, Pt and/or Au and/or cpds. of these elements, opt. mixed with co-catalysts or promoters, as the catalyst.

(B) Prepn. of opt. foamed polyurethanes by reacting (a) polyisocyanates with (b) cpds. contg. ≥ 2 active H atoms having mol. wt. 32-400, (c) cpds. contg. ≥ 2 active H atoms having mol. wt. 400-10000 and opt. (d) blowing agents, catalysts and standard additives, is effected using the mixts. of low mol. wt. polyhydric alcohols obtd. in (A), at least partly, as the crosslinking components (b).

The polyhydric alcohols may also be used in the prepn. of polyether-alcohols, branched polyesters contg. OH gps., OH gp.-contg. esters, surfactants, as moisture-retainers in cosmetics, as anti-freeze cpds., and in plant protective compsns. The catalysts allow quick formose hydrogenation under protective conditions, at pH < 7.5 .

12.07.79. as 102407 (41pp200)

(G) ISR: DS1069135; GB1497318; DT2536416; DT2639084; US3260759; DS-888096; US2775621; DS-830951; FR-835752; US2271083; DS1543178; DT2639083; US2224910; US3055840; 2 Journal References.

ARB ★ D21 05788C/04 ★EP---7-102
Polyhydric alcohol prepn. by two/step formose hydrogenation - first in alkaline medium and then in neutral to acid medium using different catalyst
BAYER AG 19.07.78-DT-831719
A41 C03 E17 (23.01.80) C07c-29/14 C07c-31/18 C08g-18/32 C08g-63/48
D/S: E(BE, DT, FR, GB, IT, NL).

Low mol. wt. polyhydric alcohol prepn. comprises metal-catalysed hydrogenation of formose solns. in 2 steps. In the 1st step (a), a $\geq 20\%$ formose soln. at pH 7.5-12.5 is charged batchwise into a reactor, so that the content of reducible gps., calculated as $> \text{CO}$ gps., in the reactor is ≤ 2 wt.%, and hydrogenated intermittently in the presence

of 10^{-4} to 5×10^{-2} wt.%, w.r.t. total starting material quantity, of catalyst (A). Catalyst (A) remains stationary in the reactor. After lowering reducible gp. content to < 1.5 wt.%, the prod. is drawn off intermittently and adjusted to pH 3-7.

In the 2nd step (b), the prod. of (a) is charged batchwise into a 2nd reactor and hydrogenated batchwise in the presence of a total quantity of catalyst (B) of 10^{-5} to 10^{-1} wt.% of active metal, w.r.t. total quantity of initial prods. to be reduced. Catalyst (B) remains stationary in reactor. After a dwell-time of 5 min. to 4 hrs., the reaction prod. of step (b) is drawn off intermittently.

The alcohol mixts. are used as (1) starting components for the prepn. of polyether- and/or polyester-polyols, (2) in the prepn. of nonionic surfactants by reaction with fatty acids, fatty acid derivs., long-chained aliphatic monoisocyanates or by partial oxyethylation, and, at least partly, as (3) crosslinking components in the prepn. of opt. foamed polyurethanes by further reaction with (i) polyisocyanates, (ii) cpds. having mol. wt. 400-10000 and contg. ≥ 2 active H atoms and opt. (iii) blowing agents, catalysts and standard additives. The cpds. may also be used as moisture-retainers in cosmetics, as anti-freeze components and in plant-protective compsns.

12.07.79. as 102408 (55pp200).

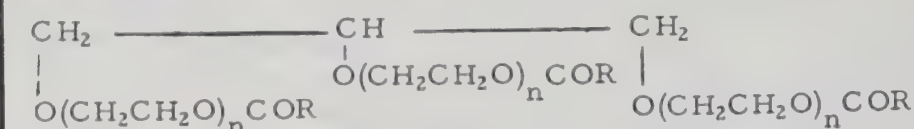
(G) ISR: DT2025314; FR1263298; US3471580; DS1069135; US3055840; GB1497318; US2759024; FR1335323; FR1234335; DS-830951; US2271083; DT2639083; DT2639084; DT1543178; EP---912; EP---2473

CHSC-★ D21 05797C/04 ★EP---7-120
hand-washing emulsion for industrial use - comprising continuous oil phase, dispersed aq. phase, buffer system, glycerine, carrageenate, and specific emulsifying system

CHEM ADVIES SCHREUD 30.06.78-NL-007077
A97 (23.01.80) A61k-07/50 C11d-07/24

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Handwashing compsn. comprises (a) a continuous oil phase consisting mainly of 10-30C straight or branched paraffinic oil fractions; (b) a dispersed aq. phase (emulsified phase); (c) a buffer composed mainly of lactic acid and triethanolamine, for warranting the normal pH of the outer skin tissue layers; (d) glycerine (emulsion stabiliser); (e) carragheenes, opt. modified by esterification of the sulphonic acid residues by lower alcohols; and (f) an emulsifying system consisting mainly of mono- and di-glycerides of the higher natural fatty acids, and ethoxylated glycerine, esterified by fatty acid, according to the formula:



where $n = 20-45$, esp. 30-35; and R is an (un)satd. fatty acid residue derived from animal or vegetable oils, such as palmitic, lauric, oleic or linoleic acid, the R's having same or different values in one molecule).

The compsn. is used for washing hands which have been in contact with paints, lacquers, glues, adhesives, printing inks, metal compsns., rusty metal accessories, cement, infected material, etc.

8.6.79. as 200297 (20pp914).

(E) ISR: GB-763102; FR2262692; FR2208644; GB-844929; US3659025; FR1196246; FR1501837; FR2097333; FR2104997; FR2302775; FR2326914; DS-647523; DT1934913; DT2646434; US2118566; US3634265; CH-283429; CH-375820; BE-808588.

BEEC ★ D21 05825C/04 ★EP---7-170
Inhibiting corrosion of aluminium tooth-paste tubes - by fluoride contg. tooth-paste with silica thickener, by addn. of sodium or potassium hydroxide or carbonate

BEECHAM GROUP LTD 12.07.78-GB-029588
E34 (23.01.80) A61k-07/16 C23f-11

D/S: E(BE, DT, GB, IT, NL, OE, SW).

Corrosion of aluminium tubes is inhibited by gel tooth-pastes comprising a fluoride source and a silica thickener.

The toothpaste incorporates ≥ 0.01 wt.% (on the toothpaste) of NaOH, KOH, Na_2CO_3 or K_2CO_3 so that the pH of the toothpaste is ≥ 8.5 .

Addn. of the Na or K hydroxide or carbonate reduces the corrosion of aluminium tubes by gel toothpastes contg. fluoride ion source and silica, despite the high pH of the final material. This overcomes gas formation in the tubes and fading of the dyes used in the waste, and enables uncoated aluminium to be used for making the tubes.

04.06.79 as 301047 (10pp513)

(E) ISR: US3115248; GB1308483; FR2134532; GB1271994; FR2251309; FR2364658.

UNIL ★ D21 05835C/04 ★EP---7-191
Particulate basic aluminium chloride poly:hydroxy cpd. complexes - with improved antiperspirant activity

UNILEVER LTD 23.06.78-GB-027754

E12 (23.01.80) A61k-07/38 C07f-05/06

D/S: E(DT, FR, GB)

Particulate basic aluminium chloride/polyhydroxy cpd. complexes (I) of formula $\text{Al}_2(\text{OH})_{6-a}\text{Cl}_a(\text{H}_2\text{O})_x\text{R}_y$ are new. R is a polyhydroxy cpd. with ≥ 2 C atoms, each of which is linked to an OH gp; $a = 0.8-4.0$; $x = 0.5-2.5$; $y = 0.2-5.0$. The complex has $\geq 15\%$ of the total Al in the Band III fraction and $< 10\%$ of the total Al contained in polymers having a size exceeding $100\text{\AA}$.

(I) are antiperspirant cpds. which have enhanced antiperspirant activity and are soluble in alcohol.

21.6.79 as 301204 (21pp513)

(E) ISR: US3420932; US3359169; US3507896, US3472929; FR2278319; FR2259587.

OSTE- ★ D21 05878C/04 ★EP---7-287
Fibre-reinforced bone cement based on plastics, esp. PMMA - contains carbon fibres and non:resorbable mineral, including apatite to increase compatibility

OSTEO AG 14.06.79-EP-810049 (29.06.78-EP-810005)

A96 P32 (A14) (23.01.80) A61f-01

D/S: E(BE, IT, LU, NL, OE, SW).

Fibre-reinforced bone cement is based on self-polymerising plastics, esp. PMMA and derivs. It contains carbon fibres (I) and finely-divided nonresorbable minerals (II) to form a honeycomb structure, (II) contg. 1-30 wt.% of the mineral components of natural bone tissue (apatite).

The cement has increased mechanical strength and improved compatability, due to redn. of the chemico-toxic immunological reaction.

14.6.79 as 810049 (12pp016).

(G) ISR: US4064567; FR2243915.

ARON/ ★ D21 05890C/04 ★FR 2421-605
Non-foaming compsn. for cleaning the hair and scalp - contg. aluminosilicate and saccharose fatty acid ester

ARONBRUNETIERE R R 03.04.78-FR-009750

(07.12.79) A61k-07/06

The compsn. comprises 25-35% of ≥ 1 aluminosilicate; about 5% of ≥ 1 ester of a fatty acid and saccharose; 60-70% of pref. deionised water and an effective amt. of a preservative. The compsn. is prepd. by mixing with other apt. additives until a homogeneous paste is obtd.

Unlike most shampoos the compsn. does not provoke seborrhea as a result of too intensive detergent activity. It is non-irritating and the ester agent has remarkable detergent and solubility properties and also has anti-dirt redeposition properties. 3.4.78 as 009750 (9pp597).

HAGU/ ★ D21 05891C/04 ★FR 2421-609
Skin cream contg. lanolin and Lanovaseline (RTM) - also contains natural orange jelly, avocado oil and honey

HAGUENAUER G 06.04.78-FR-010258

(07.12.79) A61k-07/48

Skin cream comprises: (a) natural orange jelly, (b) avocado oil, (c) honey and lanolin and Lanovaseline in equal proportions. A pref. compsn. contains 75g (a), 25 ml. (b), 25ml. (c) and 60ml. cornflower water.

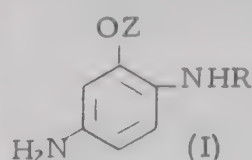
It pref. also contains e.g. 10ml. of distilled water to make it more fluid. It may be perfumed e.g. with ambergris extract. 6.4.78 as 010258 (3pp903).

OREA ★ D21 05915C/04 ★FR 2421-8
Substd. para-phenylene:di:amine cpds. for hair dyeing compsns giving various shades fast to light, washing and weathering

L'OREAL SA 06.04.78-FR-010213

E24 (07.12.79) A61k-07/13 C07c-93

Phenylene diamines of formula (I) and their salts are new



(where R and Z are hydroxy-, alkoxy-, amino-, monoalkyl-amino, dialkylamino-, carbalkoxyamino-, mesylamino- or ureido-alkyl, the alkyl contg. 1-4 and R can also be unsubstd. 1

alkyl). The salts are pref. sulphate, hydrochloride, phosphate or tartrate.

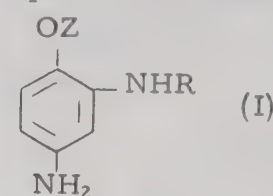
(I) are used in association with couplers in hair dyeing compsns. to produce various shades having good stability to light, washing and weathering. 6.4.78 as 010213 (21pp)

OREA ★ D21 05916C/04 ★FR 2421-8
Meta-phenylene di:amine derivs. - useful as couplers in dyeing compsns for keratinic fibres, hair, fur etc., giving light wash and weather-fast shades

L'OREAL SA 06.04.78-FR-010215

A97 E24 F06 (D18) (07.12.79) A61k-07/13 C07c-93

Cpds. of formula (I) and their salts are new: (where R and



Z are hydroxy-, (1-2C)alkoxy-, mesylamino-, acetylaminol, ureido-, carbethoxyamino-, carbamyl-, amino-alkyl with 2-4C alkyl). Pref. (a) R and Z are β -hydroxyethyl, (b) R is carbamyl methyl and Z is hydroxyethyl,

(c) R is β -hydroxyethyl and Z is mesylaminoethyl or (d) R is β -hydroxyethyl and Z is β -methoxyethyl.

(I) are used as couplers in the presence of oxidation bases such as p-phenylene di:amines or p-aminophenols, in dyeing compsns. for keratinic fibres, hair or furs. The shades have good fastness to light, washing and weathering. 6.4.78 as 010215 (34pp950).

UNIL ★ D21 05973C/04 ★GB 2025-22
Hair setting compsn. contg. anionic and cationic resins - forming precipitable complex with calcium ions, and opt. volat conditioner

UNILEVER NV 26.07.79-GB-026084 (18.05.78-GB-020489)

A96 (23.01.80) A61k-07/06

Hair-treatment compsn. contains (a) cationic (I) and (b) anionic (II) water-soluble, film-forming resins and (c) water. (I) and (II) interact in presence of water to form an anionic-cationic complex precipitable onto hair in presence of Ca ions.

Esp. (I) is an O-alkyltrimethylammonium chloride substd. polymer or a condensate of adipic acid and diethylenetriamine. (II) is esp. K polymethacrylate. (I) and (II) together comprise 0.2-5 (1-3) wt. % of the compsn. The compsn. may also contain a source of Ca ions and a volatile hydrophobic conditioner, esp. a polydimethylsiloxane or hydrocarbon, esp. at 0.1-5 wt. %.

The compsns. provide significant hold even if the hair is rinsed after application. When a conditioner is included setting and conditioning may be provided by a single treatment. 26.7.79 as 926084 (6pp1251).

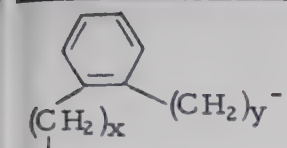
OREA ★ D21 06019C/04 ★GB 2025-4
Compsn. for treating greasy skin and hair - contg. gem-di:thioeth derivs., and opt. a cosmetic resin e.g. PVP

L'OREAL SA 12.07.78-FR-020801

A96 E19 (23.01.80) C07c-149/24 C07d-317/50

Compsn. for treating hair and/or skin comprises, in a vehicle, ≥ 1 cpd. of formula $\text{R}_2\text{R}_3\text{C}(\text{SR}_1)_2$ (I) or its salts. In (I) R_1 is $-\text{CH}(\text{COOH})$, CH_2COOH or $\text{CH}_2\text{CH}_2\text{NR}'\text{R}''$. R' and $\text{R}'' = \text{H}$, 2-hydroxyethyl, 2-hydroxypropyl or 2,3-dihydroxypropyl. R_2 is CH_3 , COOH , (p-methoxy)phenyl, 3,4-methylenedioxyphenyl, 2- R_4O -phenyl or 3-methoxy-4- R_5 -phenyl. R_4 is carboxymethyl or acetyl. R_5 is OH, methoxy, butoxy or carboxymethoxy. R_3 is H or CH_3 , or R_2+R_3 are together $(\text{CH}_2)_m$ or a gp. (II):

$m = 3-5$; x and y are O or an integer



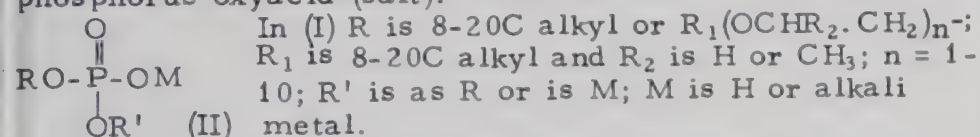
and $x+y = 2-5$. The compsn. may also include a cosmetic resin e.g. PVP.

(I) are new cpds. provided that (a) (II) when $R_2 = \text{CH}_3$, $R_3 = \text{H}$; (b) when $R_2 = (\text{p-methoxy})\text{phenyl}$ or COOH , $R_3 = \text{CH}_3$; (c) when $R_2 + R_3$ are gp. (II), then $y = 0$ and $x = 2-5$.

(I) reduce/eliminate the greasy appearance of skin and hair. 11.6.79 as 024168 (19pp1251).

KAOS ★ D21 06033C/04 ★ GB 2025-451
Soap contg. tri:chloro-hydroxy-di:phenyl ether antibacterial - and phosphorus oxyacid or alkyl-phosphate to prevent discolouration
KAO SOAP KK 22.12.78-JA-159628 (13.07.78-JA-085379)
A96 E19 (23.01.80) C11d-09/04

Antibacterial soap contains 2,4,4'-trichloro-2'-hydroxy-diphenyl ether (I) at 0.05-5 wt. % and, as discolouration-preventing agent (A) >1 P-contg. cpd. of formula (II), or phosphorus oxyacid (salt).



(A) is pref. an oxyacid (salt) at 0.01-10 wt. % or an ester at 0.1-20 wt. %. Specified (A) are ortho-, pyro-, tri-, tetra-, trimeta-, tetrameta- or hypo-phosphoric acids, H_3PO_3 or 8-20C monoalkyl phosphates.

Used for skin and hair treatment. (I) is an effective antibacterial and (A) prevents discolouration of soaps contg. (I) when exposed to sunlight. 10.7.79 as 923933 (6pp1251).

OREA ★ D21 06066C/04 ★ GB 2025-613
Assessing surface oxidn. of keratin fibres - esp. human hair, with test paper contg. buffered iodide-starch soln.
L'OREAL SA 12.07.78-FR-020847
R16 (23.01.80) G01n-21/29

The state of surface oxidn. of keratin fibres is assessed by applying to the wet fibres a porous support pre-impregnated with an indicator soln. 0.2-10(2-6)N in iodide ion and contg. 20-200(50-150)g/l. solubilised starch in a buffered acid medium. Opt. a strong acid developer is applied to the support while in contact with the fibres, then the support removed and examined for change in colour.

The developer is esp. NHCl and the fibres and support are pref. in contact for 1-20 sec. Used esp. for assessing the state of human hair to check whether oxidising agents (used in bleaching, permanent waving, etc.) have been completely removed. Simple and rapid test sensitive to all oxidising agents commonly used in cosmetics down to the ppm. level. 11.7.79 as 024167 (4pp1251).

COLI/ ★ D21 C/04 ★ IT 1035-042
Cosmetic for elimination of dandruff
COLIZZA S 12.11.71-IT-054031
(20.10.79) A61k

LIOC ★ D21 06260C/04 ★ J5 4155-691
Packing material for preventing dental caries - comprising alpha-cyano-acrylate, silica filler coated with amino-cpd. catalyst and basic amine hardener
LION DENTIFRICE KK 30.05.78-JA-064688
A96 (A14) (07.12.79) A61k-05

Packing material consists of; (a) α -cyano acrylate (pref. ethyl ester); (b) a filler of SiO_2 powder having grain size of 1-100 μm contg. 25-70wt. % of particles of grain size of 1-30 μm , and coated with solid catalyst comprising ≥ 1 cpd. of amino acids and acid amino gp. cpds. (e.g. acetamide) with weak activity to the α -cyanoacrylate; and (c) a basic amine cpd. (e.g. N, N-dimethyl paratoluidine) as a setter with strong activity to α -cyanoacrylate and with pK_b in water of 1-12.

The agents (a) and (b) are mixed to form a thixotropic compsn. which is applied to the diseased part, then the compsn. is instantaneously hardened by adding the agent (c) causing polymerisation reaction. 30.5.78 as 064688 (5pp30).

ZENY ★ D21 06322C/04 ★ J5 4156-018
Aminoacid soap contg. extract of alkanet root and gamma oryzanol - which prevents discolouration of soap, pharmaceutical cream, ointment, suppository or cosmetic
ZENYAKU KOGYO KK 31.05.78-JA-065496
B05 (D25) (08.12.79) C11d-01/10 C11d-03/20 C11d-10/02

Gamma-oryzanol is blended (pref. as 0.5-2.0wt. %) with aminoacid soap contg. extract of alkanet (I) root. (I) is *Lithospermum officinale* Linné var. *enthorrhizon* Maxim.

Discolouration of soaps, pharmaceuticals, creams, ointments, suppositories and cosmetics (e.g. milky lotion, hair tonic) contg. extract of alkanet root, caused by sunlight and heat, is prevented effectively by the blending of gamma-oryzanol. 31.5.78 as 065496 (4pp170).

NISA- ★ D21 06689C/04 ★ J7 9044-007
Prod'n. of coloured, patterned bar of soap - by forcing colourant into small perforations in the surface using a vacuum
NIPPON SANGYO KIKAI 00.00.75-JA-108550
(24.12.79) C11d-13 C11d-17

A solid bar of soap, having a coloured decorative pattern on the outer surface, is produced by forming a set of numerous small perforations in the bar by needling, applying a coating of colouring material to the perforated area, and forcing the colouring material into the individual perforations by vacuum. 14.1.75 as 108550 C11d-13/00, 17/00
NIPPON SANGYO KIKAI KK; OSE, S (4pp47) (J5 1102003)

KAOS D21 36653Y/21 = J7 9044-727
Toothpaste compsn. for chemical removal of plaque - contains montmorillonite or hectorite (NL 9.5.77.)
KAO SOAP KK 07.11.75-JA-133892
E37 (27.12.79) *DT2649-449 A61k-07/16

A toothpaste contains 0.5-5 wt. % alkali phosphate (I) and 0.5-13 wt. % montmorillonite (II) or hectorite (III). (II) has the compsn. (based on the anhydrous substance): SiO_2 60-70 wt. %, MgO 2-5 wt. %, Fe_2O_3 0-2 wt. %, Al_2O_3 20-30wt. % and Na_2O , 2-5 wt. % while (III) has the compsn.: SiO_2 50-65 wt. %, Na_2O 2.5-5 wt. %, Fe_2O_3 , 0-2 wt. %, MgO , 20-30 wt. %, Li_2O , 0.6-2 wt. %.

The paste enables dental plaque to be removed chemically without the known disadvantages of mechanical polishing.

Pref. (I) is the Na or K salt of ortho-/meta-/phosphoric acid or of linear/cyclic polyphosphoric acids and is pref. used in amts. of 1-3 wt. % (II) and (III) are pref. used in amts. of 1-6 wt. %. The usual other components may be present, e.g. 15-60 wt. % of a polishing agent 10-30 wt. % of a swelling agent, 0.3-5 wt. % of a foaming agent, 0.3-5 wt. % of a bonder, 0.01-10 wt. % of a sweetening agent and 0.01-10 wt. % of a preservative. 7.11.75 as 133892 A61k-7/16 (27.12.79) KAO SOAP KK (8pp) (J5 2067339)

MOSK/ ★ D21 06915C/04 ★ SU -662-097
Deep acute caries dental treatment - include use of cobalt chloride, calcium hydroxide, glycerophosphate and opt. vitamin(s)
MOSKETI K V 04.08.75-SU-163527
B05 (15.05.79) A61k-05

Stomatological treatment of acute deep caries includes removal of dead tissue, treatment of dental cavity and filling the tooth. The treatment is improved if the cavity, after dead tissue removal, is irrigated with cobalt chloride soln. and lined with paste contg. cobalt chloride, calcium glycerophosphate and calcium hydroxide, prior to filling the tooth.

The paste may additionally contain vitamins, e.g. vitamin B_1 and vitamin C. The procedure may also be used in the prevention of carigenic tissue formation during the dental treatment.

Mosketi, K. V., Olshanskaya, L. M. Bul. 18/15.5.79. 4.8.75. as 163527 (2pp938)

CURT- ★ D21 07168C/04 ★ US 4183-366
Henna hair treatment compsn. - contg. nonionic surfactant, soluble polymer and quaternary ammonium salt
CURTIS HINDS INC 19.10.77-US-843581
A96 P24 (A14 A25) (15.01.80) A45d-07

The compsn. comprises 75-95 wt. % henna powder, 1.5-5 wt. % nonionic surfactant, 2.5-15 wt. % water-soluble polymer, and 0.5-5 wt. % quaternary ammonium salt.

The powder readily forms a paste with water, and is easily rinsed from the hair. The compsn. does not cause the hair to accumulate a high static charge. The henna may be the colour-imparting type i.e. that derived from plants of the genus *Lawsonia* or the so-called 'neutral' henna derived from the lotus tree. 19.10.77 as 843581 (4pp955)

AMCY ★ D21 07169C/04 ★ US 4183-367
Fluorinated cationic and amphoteric surfactants - in aq. compsns. for reducing drying time of hair

AMERICAN CYANAMID CO 21.11.77-US-853712 (17.06.76-US-693582)

E19 P24 (15.01.80) A45d-19/16

Method for enhancing the drying of hair when H_2O or an aq. compsn. is applied consists of applying an aq. soln. contg. β . 05-5% of a cationic or amphoteric cpd. (I) $(C_nF_{2n+1})-R-Q$ (where $n = 4-18$; $R = X, Y-O-Z, Y-S-Z, Y-NH-Z$; $X = (CH_2)_x$; $Y = (CH_2)_y$; $Z = (CH_2)_z$ attached to Q; $x = 1-6$; $y = 0-3$; $z = 1-3$; $Q = \begin{array}{c} \text{NR}_1\text{R}_2\text{R}_3 \\ | \\ \text{N}^+ \begin{array}{c} \text{CH}_2\text{CH}_2\text{OH} \\ \text{CH}_2\text{CO}_2^- \end{array} \end{array}$ (sic)

$\text{NR}_1\text{R}_2\text{CH}_2\text{CO}_2^-$, or

$\text{NR}_1\text{R}_2\text{CH}_2\text{CH}_2\text{CO}_2^-$

and $R_1R_2R_3 = 1-4C$ alkyl).

The compsns. effectively reduce the amt. of H_2O picked up by hair and retained in the capillary spaces between hairs, and hence decreases the hair drying time.

21.11.77 as 853712 (5pp478)

LIFF/ ★ D21 07281C/04 ★ US 4183-898
Liquid make-up compsn. esp. simulating blood - based on water, cellulose deriv. paraben cpd., chlorine dioxide and phosphoric acid

LIFF LJ 25.05.78-US-909576

A96 (15.01.80) A61k-07/02

A liquid make up base consists of 96.48 % water, 2.0% cellulose, 0.15% ethylparaben and propylparaben, 1.34% chlorine dioxide and 0.03% phosphoric acid. Pref. the compsn. is coloured by addn. of about 0.1 wt. % of a permitted food dye.

Compsn. suitably coloured, is esp. useful as imitation blood e.g. for use by children. It is storage stable, non-toxic, soft, inexpensive and has a consistency close to that of real blood. 25.5.78 as 909576 (3pp955)

COLG D21 54491W/33 = US 4183-911
Antiperspirant compsns contg microencapsulated surfactant - are non-staining, non-irritant and feel dry on application

COLGATE PALMOLIVE CO 18.09.73-GB-043699

E33 (15.01.80) *GB1403-139 + A61k-09/32 B01j-13

A non-staining antiperspirant spray powder is prepd. in a valved container and comprises 1-7% of an unencapsulated powdered aluminium, zinc or zirconium antiperspirant salt of particle size 2-200 microns, 0.1-3% of an encapsulated surface active material, and a propellant fluid under pressure,

The surface active material is an anionic, nonionic, cationic or amphoteric surfactant. Pref. the antiperspirant powder is aluminium chlorohydrate, the encapsulated surface active material is nonionic, and the compsn. is encapsulated by a coating material which is insoluble in the propellant.

Compsns. are dispersed without causing mucous membrane irritation or causing staining of clothing in contact with the antiperspirant. 25.4.74 as 472975 (4pp931)

GAFF/ D21 79129B/44 = US 4183-914
Magnesium poly:carboxylate complex anti:tartrate compsns. - contain a poly:carboxylate chosen from maleic acid or anhydride copolymers, sulpho:acrylic oligomers or tri:carboxy-oxa-butanol or pentano

GAFFAR A (COLG) 19.12.77-US-861795

A96 B05 (A14 B04) (15.01.80) *BE-877-226 + A61k-07/16 A61k-09/68

Mg polycarboxylate complex used as anticalculns agent, comprises a dental cream, mouthrinse, troche or lozenge, chewing gum, dental tablet or powder or mouthspray contg. as anticalculus agent, a complex of a Mg cpd. and a poly:carboxylate in a ratio of 1 : 40 to 4 : 1 and having pH 4.5-7.8.

The polycarboxylate contains ionisable carboxyl gps. and is a copolymer of maleic acid (anhydride) and a $\geq 2C$ olefin. The polycarboxylate is ionically bound to the Mg cpd. The Mg cpd. is present in an amt. of 0.01-5 wt. % and the polycarboxylate in an amt. of 0.1-10 wt. % of the compsn. 19.12.77 as 861795 (9pp982)

COLG D21 80873B/45 = US 4183-915
Stable aq. compsn. for re-mineralising dental enamel - contains sources of calcium, phosphate and fluoride, and anti-nucleation agent

COLGATE PALMOLIVE CO 13.10.78-US-951893

B05 (15.01.80) *BE-877-516 + A61k-07/16

A stable aq. remineralising soln. contains (i) sources of calcium and phosphate ions which effect remineralisation of dental enamel, (ii) a cpd. providing fluoride anticaries agent, and (iii) an antinucleating agent selected from acids and acceptable water-soluble salts consisting of (a) diamine tetramethylenephosphonic acids of formula $(M_2O_3PH_2C)_2N(CH_2)_nN(CH_2PO_3M)_2$ (where n is 1-10), (b) phosphonoacetic acid or salt of formula $M_2O_3PCH_2COOM$, (c) peroxy-diphosphate of formula $M_4P_2O_8$, and (d) oligomers of formula $MO_3S[CH(R^1)-C(Xa)(R^2)-CH(R^3)-C(Y)(R^4)]_bH$ (where M is H or an acceptable cation; R^{1-4} are each H or (m)ethyl; Y is ≥ 1 hydrophilic member of the gp. $-COOM$, $-CONH_2$ and $-CH_2OH$; X is ≥ 1 hydrophobic member of the gp. $-CN$, $-COOR$, $-COOR^5OR$, $-CONHR$ and $-COONHR^4COR$, in which R is 1-8C alkyl and R^5 is 1-4C alkylene; a is 0-7 and $a + b$ is 4-15. Pref. the soln. has a pH of 5-9 (6.8-7.5).

Subsurface carious lesions of dental enamel can be re-mineralised, and the soln. can be prepd. as a dental mouthrinse and can also be incorporated into other dentifrice compsns. 13.10.78 as 951893 (6pp990)

BEEC D21 75699B/42 = US 4183-916
Oral hygiene compsn. for control of dental plaque and gingivitis - contg. bis:guanide or quat. ammonium cpd. together with malic acid

BEECHAM INC 31.03.78-US-892276

B05 E16 (15.01.80) *EP---4-719 A61k-07/22

An oral compsn. useful for controlling dental plaque and gingivitis and for preventing caries comprises 0.1-1.0% w/w of a cationic antimicrobial agent (I) comprising a bisbiguanide or quaternary ammonium cpd., and 0.1-10.0 (0.1-1.0)% w/w or w/u of malic acid to inhibit staining of teeth by (I), in combination with an acceptable carrier. Pref. the pH of the compsn. is 5.0-8.0, and (I) is e.g. 1,6-bis(2-ethylhexyl diguanido hexane)-dihydrochloride [alexidine dihydrochloride].

The compsn. is e.g. in the form of a mouthwash, oral rinse or gargle, a dose of 15-20 ml. for adults and ~ 10 ml. for children generally being sufficient when used on a daily basis. 31.3.78 as 892276 (3pp990)

LIOC D21 12937B/07 = US 4183-917
Hair-conditioning compsn. - comprising water-oil emulsion of high molecular oil, cationic and nonionic surfactants and liq. ester oil

LION DENTIFRICE KK 02.06.77-JA-065150 (25.12.76-JA-157202)

A96 (15.01.80) *J54002-345 A61k-07/06

Hair conditioner compsn. in the form of an oil-in-water emulsion comprises 1-50 wt. % of a high molecular synthetic oil of mol. wt. > 1500 selected from polyalkylene glycol monoalkyl ethers, their phosphates and alkylene oxide polyol adducts; 0.05-5 wt. % cationic surfactant; 0.5-10 wt. % nonionic surfactant and balance water.

Pref. the compsn. further comprises 0.1-10 wt. % of a hg ester oil having good compatibility with the cationic surfactant. Pref. the wt. ratio of nonionic surfactant to cationic surfactant is 5 : 1 - 1 : 5. Pref. the nonionic surfactant is a mixt. of polyoxyethylene alkyl ethers.

The compsn. produces good emulsion and excellent stability. It has good hair fixability and good feel 4.11.77 as 848691 (8pp964)

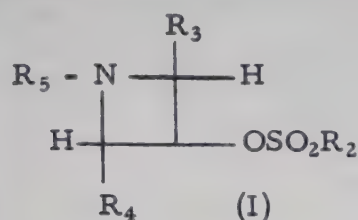
SCHE ★ D21 07294C/04 ★ US 4183-923
3-Alkane-sulphonyloxy-azetidine derivs. - useful for treatment of psoriasis, mycosis and vitiligo

SCHERING CORP 07.11.77-US-849362

B03 (15.01.80) A61k-31/58

Psoriasis is treated by admin. of a 3-alkylsulphonyloxy-

azetidine deriv. of formula (I) or its acid-addn. salts.



In (I) R_5 is H, 3-18C alkyl, 5-15C cycloalkyl, 1- or 2-adamantyl, Ph_2C , Ph-CH_2 , dihydroxybenzyl, dialkoxybenzyl, dibenzyloxybenzyl, 3- (5 α -androstan-17-one) or 3-(5 α -cholestane); R_2 is 1-18C alkyl, benzyl or

polyalkyl; and R_3 and R_4 are H or 1-4C alkyl. Cpd. (I) are new when R_5 is 3-(5 α -androstan-17-one) or 3-(5 α -cholestane).

(I) are useful for topical treatment of psoriasis, mycosis, and vitiligo and for oral admin. to cause remission of psoriatic lesions. Dose is 0.01-5, g/kg. daily. 3 α -(3-methanesulphonyloxy-1-azetidinyloxy)-5 α -cholestane hemimalate (II) is specifically claimed. 7.11.77 as 849362 (Bpp1248)

MICH/ ★ D21 07303C/04 ★ US 4183-952
Antimicrobial compns. for inhibition of body odour - contg. alkylsulphobetaine, alkylamine-N oxide, and acid
MICHAELS E B 18.12.75-US-641729
E16 (15.01.80) A61k-31/20

Broad-spectrum antimicrobial compns. comprises (a) 0.1-40 pts. wt. of a betaine $\text{RNMe}_2^+-\text{CH}_2\text{SO}_3^-$ (I); (b) 0.1-40 pts. by wt. amine oxide $\text{R}_1\text{NMe}_2 \rightarrow \text{O}$ (II), $\text{R}_1\text{N}(\text{CH}_2\text{CH}_2\text{OH})_2 \rightarrow \text{O}$ (III) or $\text{R}_1\text{CONH}(\text{CH}_2)_3\text{NMe}_2 \rightarrow \text{O}$ (IV); and (c) a protonating agent to give pH 4-5.5. In the formulae R is 10-18C alkyl and each R_1 is 10-18C alkyl.

(I) - (IV) have low toxicity, but enhanced activity against a range of Gram +ve and Gram -ve bacteria, fungi and yeasts. Compns. contg. (I) - (IV) are partic. effective for the prolonged control of body odour and topical

infections (dandruff, crotch itch, anthletes foot etc.) In addn., the compns. are less irritating to skin and eyes than soap. 18.12.75 as 641729 (5pp478)

DESP ★ D21 07309C/04 ★ US 4183-959
Prilled urea bath bead compsn. - contg. oily perfume and water-soluble polyalkylene ether emollient
DESOTO INC 01.05.78-US-901855 (26.11.75-US-635282)
E16 (E17) (15.01.80) A61k-07/46 C11b-09

Emollient-contg. urea bath bead compsn. consists of urea prills (I) which contain assorbed oily perfume (II) (0.2-2%) and an H_2O soluble polyalkylene ether emollient (III) (0.3-2%). (III) is an adduct of an 8-22C aliphatic alcohol with 6-12 mol. of ethylene oxide.

Non aggregating, free flowing, non-toxic compsn. provides good emolliency without irritating skin. In addn., in bath water the compsn. does not form an oily scum even though little or no foam is produced. 1.5.78 as 901855 C.i.p. 4093745 (+25.6.76-US-699982) (4pp478)

SOLD/ ★ D21 07352C/04 ★ US 4184-039
Chloro-substd. benzothiadiazine 1,1-dioxide(s) - useful for stimulating hair growth
SOLDATIG 01.12.77-US-856497
B02 (15.01.80) C07d-285/22

6-Chloro-3-dimethylaminoethoxymethyl-2H-1,2,4 benzothiadiazine, 1,1,oxide (Ia), and 6-chloro-3-cyclohexanyloxy-3,4-dihydro-2H-1,2,4-benzothiadiazine 1,1-dioxide (IIa) are new.

(Ia) and (IIa) stimulate hair growth and are applied intraperitoneally, orally or topically and the hair growth is confined to the area of application such as the scalp. 1.12.77 as 856497 (3pp957)

D22: BANDAGES; DRESSINGS

DSOP ★ D22 05519C/04 ★ BE-878-408
Polyamide thread for surgical body implant - contg. antibacterial prep. and prepd. by washing process
DSOPHARMACHIM 24.08.79-BE-878408
A96 F01 P34 (A23) (17.12.79) A611

The thread contains 0.1-5% of an antibacterial prep. and is fabricated from polyamide fibres of 5-10 μ thickness, comprising 500 twists per m. of fibre, the size of the cells of the thread being up to 1-1.5 x 1.2-2.0mm.

The thread is prepd. by first treating it twice with a non-ionogenic washing cpd. at 20-90°C for 5-30 mins., then treating first with boiling water for 5-30 min. followed by treating with water at 1-30°C. It is then treated with alcohol or acetone at ambient temp. for 5-30mm., followed by washing with distilled water and then draining to a 50% max. moisture content. It is then treated with solns. of antibacterial preps. at 20-90°C for 5-120 min. followed by water washing at 5-30°C for 5-30 min. and drying at 20-100°C to a 2-5% moisture content.

The thread is compatible with the organism and sufficiently stable for the recovery period, unlike previous threads which often provoke suppuration. 24.8.79 as 878408 (7pp597).

MERI D22 11126T/07 = DS 2136-067
Fluorinated alanines - antibacterial agents
MERCK & CO INC 03.06.71-US-149814 (03.08.70-US-060645)
B05 C02 E16 (17.01.80) *BE-770-888 C07c-101/10 +A61k-31/19

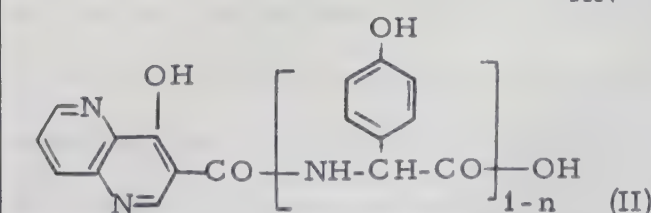
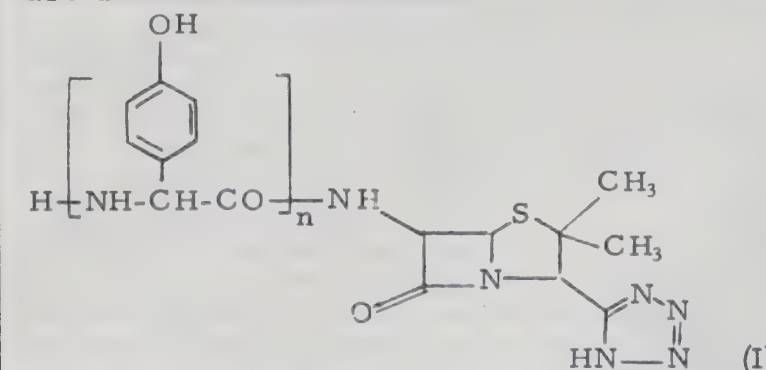
3-Fluoro-D-alanine and 3-fluoro-D-alanine-2-d (i.e. the deuterio analogue) and their salts are new. They are antibacterial agents, active against both Gram-positive and Gram-negative bacteria, including antibiotic-resistant strains, such as Escherichia coli, Salmonella schottmuelleri, Proteus vulgaris, Pseudomonas aeruginosa, Staph. aureus and Streptococcus pyogenes.

The cpds. can be administered orally in doses of e.g. 250-500mg. 2-4 times a day for adults. They are also suitable for injection, and can also be added to animal

feedstuffs. The cpds. can be prepd. by treating D-alanine or the corresp. deuterated D-alanine with fluroxytrifluoromethane under the influence of light, ionising radiation or microwaves. 19.7.71 as 136067 (4pp927).

PFIZ D22 14581Y/09 #DS 2636-966
(6)-Acylamino-(3)-tetrazolyl-penam useful as antibacterials - with alpha substd. (4)-hydroxyphenyl-acetamido acyl gp.
PFIZER INC 16.04.76-US-677725
B02 C02 (17.01.80) *BE-845-520 C07d-499

6-(D-2-[4-Hydroxy-1,5-naphthyridin-3-carboxamido]-2-[4-hydroxyphenyl]-acetamido)-2,2-dimethyl-3-(5-tetrazolyl)-penams and their pharmaceutically acceptable salts, are used as antibacterials.



(I)
Normal parenteral doses are 10-400 mg/kg/day. They can be administered with other antibacterials e.g. intra-

tramuscularly, subcutaneously, interperitoneally, intravenously.

The cpds. are prepd. by acylating an amine (I) (where n is 0 or 1) or its tetrazolyl-protected deriv. with an activated deriv. of a carboxylic acid (II), and the opt. protecting gp. removed. 17.8.76 as 636966 Add to 2449863 (9pp913).

PFRJ ★ D22 05630C/04 ★DT 2829-871
Sterilisable medical equipment pack - consists of unstretched polypropylene and polyethylene backing laminate edge-sealed to lined plastics or aluminium foil
PFRIMMER J CO 07.07.78-DT-829871
A96 Q34 (A17) (17.01.80) B65d-85

In medical equipment pack consisting of 2 edge-sealed plastics and/or Al foils, at least 1 of which exhibits a deep-drawn trough for taking up the article to be packed, the bottom-side of the packaging material consists of a laminated foil of unstretched polypropylene with an external polyethylene backing. The top-side consists of an external plastics or Al carrier foil, internally lined with a weldable layer facing the polypropylene to which it is to be sealed.

The material can be used for packaging surgical suture material. The pack can be sterilised with γ -rays or with gaseous ethylene oxide. 7.7.78 as 829871 (10pp200)

CIBA ★ D22 05699C/04 ★DT 2926-790
Proofing, wool, pelts and furs against insects - with aq. or organic baths contg. para phenoxy:benzyl alpha-phenyl-alpha-isopropyl acetate

CIBA GEIGY AG 06.07.78-CH-007381

E14 F06 (17.01.80) D06m-03 D06m-13/16

Keratinous and keratin-contg. material is protected against damage by insects by treating with phenoxybenzyl α -Ph- α -isopropyl acetates of formula Ar-CH(CHMe₂)-COO-CHR₃-m-C₆H₄-OPh (I), (where Ar is phenyl opt. carrying 1 or 2 substits. chosen from F, Cl, Br, 1-4C alkyl, and 1-4C alkoxy; or a methylenedioxy gp. bridging adjacent ring C.

Compsns. contg. ≥ 1 (I) are used for protecting finishing wool or wool-contg. textiles and carpets, furs and pelts against the attack of moths and larvae. (I) are active against Lepidoptera and Coleoptera larvae. 3.7.79 as 926790 (21pp200)

VORH- D22 01868B/01 =EP ---6-861
Contraceptive biologically compatible tampon sponge - formed by foaming contraceptive surfactant and prepolymer mixture

VORHAUER LABS INC 28.04.78-US-900864 (27.06.77-US-810109)

A96 B07 E14 P32 P73 (23.01.80) *WP7900-014 A61f-05/46 B01d-47/16 C08j-09/16

D/S: E(CH, DT, FR, LU, SW)

27.6.78 as 900025

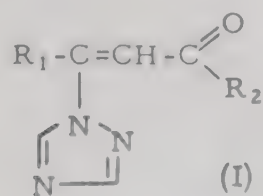
FARH D22 01804C/02 =EP ---7-010
3-(1,2,4-Triazolyl)-cinnamic and crotonic acid derivs. - used as pesticides and fungicides for plant protection and plant growth regulators esp. for cereals

HOECHST AG 19.06.78-DT-826760

C02 E13 F09 (23.01.80) *DT2826-760 C07d-249/08 +A01n-43/64

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

1,2,4-Triazole derivs. of formula (I) are new



(R₁ is Me or Ph, opt. substd. by halogen, 1-4C alkyl, (pref. Me or Et) or by 1-4C alkoxy (pref. MeO or EtO);
R₂ is R₃O- or R₄R₅N-
R₃ is alkyl with pref. 1-8C and opt. substd. by halogen, pref. Cl or Br, by 1-4C alko-

xy or alkoxy carbonyl, pref. contg. 1-5C; or R₃ is alkynyl with pref. 2 or 3C, cycloalkyl with pref. up to 6C and opt. substd. by 1-4C alkyl, or R₃ is Ph opt. substd. by halogen and/or CF₃;

R₄ is H or 1-4C alkyl opt. substd. by alkoxy carbonyl pref. contg. up to 5C;

R₅ is 1-4C alkyl or Ph opt. substd. by halogen, CF₃, 1-4C alkyl, 1-4C alkoxy, PhO or halophenoxy).

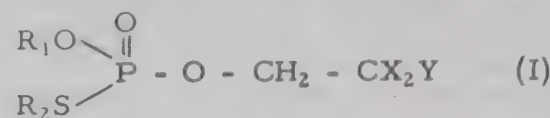
(I) are pesticides for the protection of plants, and can also be used as plant growth regulators. (I) are fungicides and are effective against disease-causing fungi which have already penetrated the plant tissue.

13.6.79 as 101917 (28pp1401)

(G)ISR: US4113465; DT2407143; GB1511956; DT2638470; DT2634511.

NITN ★ D22 05746C/04 ★EP ---7-020
O-Poly:haloalkyl-O,S-di:alkyl phosphono:thiolate derivs. - useful as insecticides, acaricides and nematocides
NIHON TOKUSHU NOYAKU SEI 05.07.78-JA-080934
C01 (23.01.80) A01n-57/12 C07f-09/16
D/S: E(BE, CH, DT, FR, GB, IT, NL).

Phosphates of formula (I) are new:



(R₁ and R₂ are each 1-4C alkyl;

X = halo;

Y = 1-4C haloalkyl).

(I) are insecticides, acaricides and nematocides more active than known cpds. of similar structure. They are useful in plant protection, in veterinary medicine (against ectoparasites), for protecting foodstuffs and for hygienic applications. Their toxicity towards warm-blooded animals is very low.

20.6.79 as 102038 (34pp125f).

(G)ISR: DT2630561; DL-107581; FR2359846; 2 Journal References.

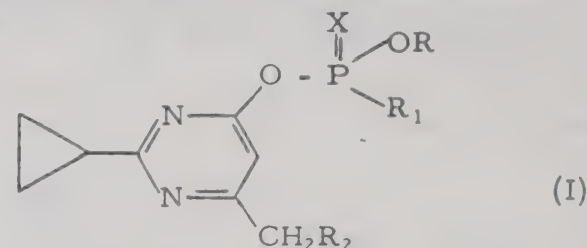
FARB ★ D22 05760C/04 ★EP ---7-053
2-Cyclopropyl-pyrimidinyl phosphoric and phosphonic acid derivs. and sulphur analogues useful as insecticides and acaricides

BAYER AG 13.07.78-DT-830766

C01 E11 F09 (23.01.80) A01n-09/36 C07d-239/36 C07f-09/65

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

Pyrimidine derivs. of formula (I) are new:



(R = alkyl;

R₁ = alkyl, alkoxy, alkylthio, alkylamino or phenyl;

R₂ = alkoxy or alkylthio;

X is O or S).

(I) are insecticides and acaricides and are more active than known cpds. of similar structure. They can be used for plant protection, in hygienic applications, to protect stored goods and to control ectoparasites, and have excellent residual activity on wood and clay and high stability on white-washed surfaces.

2.7.79 as 102222 (27pp1251).

(G)ISR: US4012506; FR1063067; FR2378791; EP---887

PROC D22 33107Y/19 =GB 1559-71
Laminated disposable diaper - comprises upper fibrous layer, absorptive layer and lower impermeable layer, joined by hot melt adhesive

PROCTER & GAMBLE CO 30.10.75-US-627406

F07 P21 + P32 P73 (23.01.80) *DT2649-039 B32b-05/26 B32b-27/32 B32b-29/02

Porous fibrous web is continuously bonded to a substrate by passing the web over a source of a controlled flow of hot-melt adhesive so that the web wipes up adhesive to form globules on its surface, then passing web and substrate through a roll nip present to a gap size which deforms the globules but avoids excessive press-through of adhesive through the web.

The method is partic. for mfr. of disposable diapers, where the web is the topsheet which is bonded directly to parts of the backsheet outside the area of the absorbent core, and opt. also to the core. The adhesive is pref. pumped through a slot nozzle at a rate to give a layer 0.0002-0.0010 inch thick on a non-porous web. 27.10.76 as 044688 (9pp1358).

ALKU D22 40702A/23 =GB 1559-716
Regenerated cellulose fibres with high liq. absorbing capacity - mfd. by incorporating alkali metal or ammonium salt of copolymer of an alkyl-vinyl-ether and unsaturated di:carboxylic acid
AKZO NV 29.11.76-US-745934
A11 F06 +P32 P34 (23.01.80) *DT2750-900 C08I-01/02 C08I-35/08

A new fluid-absorbent wet-spun regenerated cellulosic fibre contains an alkali metal or ammonium salt of a copolymer of an alkyl vinyl ether and an unsatd. aliphatic dicarboxylic acid or anhydride. Pref. the copolymer has a mol. wt. of 1000,000-1,500,000 and esp. it is methyl vinyl ether/maleic anhydride. The fibre pref. contains 2-35 wt. % of the copolymer based on the wt. of cellulose.

The fibre has improved water and body fluid absorbency and is used e.g. in the mfr. of wiping cloths, surgical bandages, nappies, tampons and sanitary napkins. 29.11.77 as 049593 (7pp990).

ANPR-★ D22 05974C/04 ★GB 2025-229
Chlorine based sterilising soln. contg. phosphate buffer - to reduce corrosion and tissue irritation, pref. stored in compartmented package

ANPROSOL INC 12.07.78-US-924018
E34 (E33) (23.01.80) A01n-25/34 A01n-59

Liq. sterilising system contains a Cl-contg. sterilising agent (I) and ≥ 1 (≥ 5)wt. % phosphate per 100ml. liq. The phosphate is esp. KH_2PO_4 and K_2HPO_4 , and (I) is esp. an alkali(ne earth)hypochlorite, partic. 0.02-1 wt. % NaOCl . Pref. the system is buffered to pH 7-8 and may include a compatible surfactant, specifically dimethyl laurylamine oxide (II) and/or Na chromate.

The phosphate reduces corrosion and tissue irritation of (I). The surfactant enhances both sterilising and anti-corrosion actions and the use of a compartmented package minimises error during prodn. of the soln. and, if a colour indicator is included, allows visual detection of leakage. The solns. remain active against standard test organisms for >24 hr. 12.7.79 as 024300 (20pp1251).

KURE★ D22 06092C/04 ★J5 4154-719
Preventing para-di:chlorobenzene agglomeration - by adding di:ethylene glycol deriv(s). and benzyl alcohol and/or its deriv(s).

KUREHA CHEM IND KK 24.05.78-JA-061045
C03 E14 (06.12.79) C07c-17/42 C07c-25/08

The process comprises adding (a) ≥ 1 diethylene glycol deriv. of formula $\text{R}_1\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{O}-\text{R}_2$ (I) (wherein R_1 and R_2 are H, $\text{C}_n\text{H}_{2n+1}$, cyclohexyl, phenyl, benzyl, o-, m- or p-tolyl, $\text{C}_m\text{H}_{2m+1}\text{CO}-$, benzoyl or o-, m- or p-toluoyl; $m = 1-20$; and $n = 1-30$) and (b) ≥ 1 of benzyl alcohol and its derivs. of formula $\text{Ar}-\text{CH}_2\text{OH}$ (II) (wherein Ar is Ph or tolyl), in an (a):(b) ratio of 1:0.5-5 and in an amt. of 0.01-0.3%wt. (based on p-dichlorobenzene) of (a) and (b).

Caking of the cpd. may be prevented and tableting and granulation of it becomes easy. 24.5.78 as 061045 (6pp68)

KURE★ D22 06093C/04 ★J5 4154-720
Mfg. fine para-di:chlorobenzene particles - by addn. to warm water contg. suspending agent, stirring and rapidly cooling

KUREHA CHEM IND KK 27.05.78-JA-062854
C03 E14 (06.12.79) C07c-17/38 C07c-25/08

Prodn. of fine particles of p-dichlorobenzene (p-DCB), comprises (a) adding 1 pt. vol. p-DCB to 0.5-5 pts. vol. water including 0.002-0.1%wt., based on p-DCB, of suspending agent, (b) stirring the liq. mixt. at 55-80°C to disperse p-DCB in warm water, (c) rapidly cooling the mixt. to $<31^\circ\text{C}$., so that p-DCB is solidified to fine particles, (d) washing the particles with water, and (e) removing the particles from the liq. and drying.

The fine particles of p-DCB do not agglomerate, and problems of tableting p-DCB, are obviated. The tablets obtd. are useful as insecticides and anti odorants. 27.5.78 as 062854 (5pp68).

KYOG★ D22 06422C/04 ★J5 4156-809
Lining material for interior walls - having resin coating contg. slowly released cpd. inhibiting fungal growth and microorganisms
KYOWA LEATHER CLOTH 26.05.78-JA-063147
A82 E19 F09 (F06) (11.12.79) D06m-15 D06n-03 D21h-05/22

The material is produced by coating a fibrous base sheet such as paper or textile fabric with a synthetic resin compsn. contg. a compsn. composed of 3-48 wt. % disinfectant chemical, 2-10 wt. % surfactant and 50-95wt. % xylene. The disinfectant being released slowly to the surface (and into the base sheet) to inhibit growth of mould fungi and pathogenic microorganisms.

As the disinfectant, dichlorophene, alpha-bromo-cinamaldehyde, p-chloro-metaxyleneol, etc., are esp. useful. The disinfectant is dissolved in xylene to ensure uniform distribution in the synthetic resin compsn. Addition of the surfactant promotes dissolution of the disinfectant in the solvent, and controls release of the disinfectant.

In an example, 100 pts. of PVC, 50 pts. of DOP, 15 pts. of tricresyl phosphate, 3 pts. of stabiliser and 20 pts. of colourant were mixed to prepare a PVC resin compsn. 100 pts. of the compsn. were mixed with 10 pts. of disinfectant compsn. (3wt. % dichlorophene + 10wt. % polyoxyethylene nonylphenol ether + 87wt. % xylene). A paper sheet was coated with a 6mm thick layer of the resulting disinfectant coating compsn., dried at 140°C in a forced-air oven, and then embossed to give a disinfectant embossed wall paper. 26.5.78 as 063147 (3pp173).

MITR★ D22 06450C/04 ★J5 4156-900
acrylic fibres having disinfectant properties - are formed by two-stage treatment with aq. soln. of sulphuric acid and formaldehyde and aq. soln. of quat. ammonium salt

MITSUBISHI RAYON KK 29.05.78-JA-064169
A14 F06 (11.12.79) D06m-03/18 D06m-13/46

Acrylic fibres with disinfectant properties are formed by connecting quat. ammonium ions to them. The fibres are treated with an aq. soln. containing sulphuric acid and formaldehyde so that carboxyl gp. occupies their outer layer. Pref. amt. of carboxyl gp. on the acrylic fibres is 25-2500 millimole per kilogram. Then, the fibres with the carboxyl gp. are treated with another aq. soln. contg. quat. ammonium salt. Thus, some or the whole of the carboxyl gps. on the fibres is connected to the quat. ammonium ion. Alkyl trimethyl ammonium ion or alkyl dimethylbenzyl ammonium ion can be used as the quat. ammonium ions.

The fibres can be knitted or woven into fabrics and can be used in the prodn. of socks, fishing rope, fishing net, etc. 29.5.78 as 064169 (4pp142).

SUMO★ D22 06566C/04 ★J5 4157-560
1-Tri:aryl:methyl:imidazole prepn. - from imidazole and carboxylate ester prepd. from acid anhydride and tri:aryl methanol
SUMITOMO CHEMICAL KK 01.06.78-JA-066339
E14 (12.12.79) C07d-233/62

Prepn. of 1-triphenylmethylimidazoles (I) comprises reacting a carboxylate ester with a 1-unsubst. imidazole, pref. imidazole. (I) are esp. 1-triphenylmethylimidazole or a 1-(halophenylbisphenylmethyl)imidazole, partic. 1-(o-chlorophenylbisphenylmethyl)imidazole, and are useful as antimicrobial agents. The ester is pref. a lower alkyl-carboxylate, esp. an acetate, or a halogenoalkylcarboxylate, esp. trifluoroacetate; of a triphenylmethyl alcohol, pref. triphenylmethyl alcohol or a halophenyldiphenylmethyl alcohol. It is pref. prepd. from the alcohol and the acid anhydride.

The reaction proceeds easily in the absence of an organic base as acid binder, and the desired cpd. can be obtd. in good yields. In partic. when the ester is triarylmethyl lower alkyl carboxylate or carbonate, the reaction solvent is merely distilled off under reduced press. to obtain the prod. as a single cpd.

In an example, triphenylmethylacetate (1.52g) and imidazole (340 mg) were added to acetonitrile (10 ml), and the mixture was refluxed for 2 hrs followed by cooling. The pptd. crystals were washed with acetonitrile and dried to obtain 1-triphenylmethylimidazole (1.28g, 82.6%, m. pt. 219-222°C). 1.6.78 as 066339 (5pp140).

NIVL★ D22 06627C/04 ★J5 4157-788
Liq.-absorbent bodies e.g. nappies, sanitary towels or tampons - composed of cotton-like pulp and absorbent hydrogel material
JAPAN VILENE CO (NICH-) 31.05.78-JA-066226
A96 P32 (12.12.79) A61f-13/18 B01j-01/22
Absorbent bodies are homogeneous mixts. of an absorbing

material (I) and cotton-like pulp. (I) is a hydrogel which is pref. an alkali metal salt of starch-polyacrylonitrile graft copolymer of particle size 30-200 mesh, bulk specific gravity ≤ 0.3 . The shape of the particles of (I) is irregular and scaly, and they have multiple projections. (I) absorbs ≥ 80 cc/g/hr.

The absorbent bodies are esp. useful as paper diapers, as sanitary napkins, tampons etc. By choosing suitable powder shapes and bulk specific gravities of the hydrogel-forming absorbing material, the body produced has a large initial absorbing rate, large absorbing capacity and improved form stability so there is no danger of leakage or flooding, and it can be worn very comfortably. 31.5.78 as 066226 (10pp55).

TOYJ D22 66027Y/37 = J7 9044-280
Bleaching powder with high concn. of available chloride - based on calcium hypochlorite

TOYO SODA MFG KK 03.02.76-JA-010044

E33 (25.12.79) *J52093-694 C01b-11/06

The method comprises (1) adding lime and/or water to an aq. soln. (A) contg. calcium hypochlorite and sodium chloride to obtain a slurry or a cake of dibasic calcium hypochlorite; (2) adding caustic soda to an aq. soln. (B) contg. calcium chloride and lower concn. of calcium hypochlorite than that of the hypochlorite of the aq. soln. (A) to chlorinate the aq. soln. (B) and ppte. sodium chloride therefrom and filtering the sodium chloride pptes. therefrom to obtain a filtrate; and (3) adding the filtrate from the process (2) to the slurry or the cake from the process (1) to chlorinate it and crystalline calcium hypochlorite, and sepg. the hypochlorite used as bleaching powder. 3.2.76 as 010044 C01b-11/06 (25.12.79) TOYO SODA MFG KK (8pp51) (J5 2093694)

KIRB- D22 74169T/47 #J7 9044-722
Adipic acid or salts - used in powder mixtures for effervescent chlorine forming tablet mfr

KIRBY H & T & CO (KIR -) 22.07.69-CH-011208 (24.09.69-JA-076136)

E17 (27.12.79) *CH-527-124 +A61k-09/46

GANS/ ★ D22 06803C/04 ★SU -626-496
Steriliser for objects having different dielectric permittivity - by immersing them in chamber partly filled with disinfecting liquid, using UHF heating energy

GANSHIN S N 13.04.77-SU-473119

P34 (30.06.79) A611-03

Device for sterilising objects having different dielectric permittivities, comprises a chamber, the lower part of which is filled with a disinfecting soln. heater and attachment for distributing the vapour. Sterilisation effectiveness is increased and a steady compatibility is guaranteed during the treatment of the different types of object, by placing a system of UHF energy generation in the lower part of the chamber, to heat up the objects being processed, together with the disinfecting soln. The coefficient of directivity of the UHF emission is regulated, by making each emitter as a funnel from radio-transparent material, plus a rod mounted coaxially inside it and capable of movement.

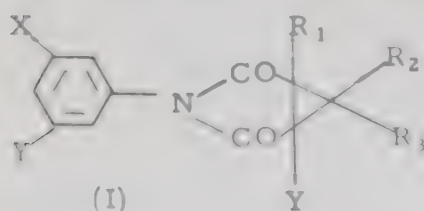
Ganshin, S. N., Kondratev, V. M., Popov, O. A. et al. Bul. 24/30.6.79. 13.4.77. as 473119 (3pp29)

SUMO D22 27167Y/16 = SU -661-992
(N)-Dihalophenyl-cyclopropane-dicarboximides - for use as agricultural and industrial fungicides

SUMITOMO CHEMICAL KK 15.10.75-JA-124670

C02 E13 (05.05.79) *BE-847-341 A01n-09/20 C07d-209/52

New cpds. are of formula (I):-



(where X and Y are Cl or Br; and R_1 - R_3 are H or Me).

(I) are systemic fungicides active against a wide range of phytophogenic fungi, e.g., Rhizoctonia, Botrytis, Verticillium and Piricularia spp. They can also be used as industrial microbicides, e.g. against Aspergillus and Chaetomium spp.

A typical cpd. is N-(3,5-dichlorophenyl)- α -chloro- β -methylcyclopropane-dicarboximide, e.h. from α -chloro-

β -methyl-cyclopropanedicarboxylic acid and 3,5-di-chloroaniline.

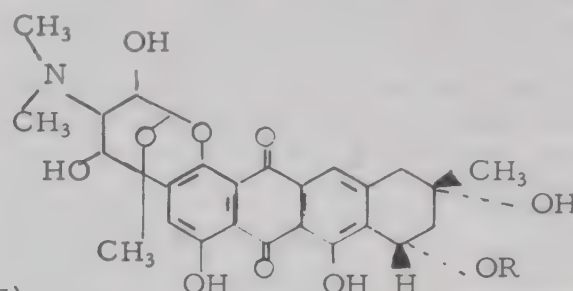
Kameda, N., Hisada, Y., Kato, T. et al. Bul. 17/5.5.79. 13.10.76. as 408803 (9pp)

UPJO ★ D22 07262C/04 ★US 4183-860
Antimicrobial and antitumour 7S-O-alkyl-nogaro(s) - prepd. by acidic alcoholysis of nogamycin

UPJOHN CO 17.07.78-US-924975

B02 C02 (15.01.80) C07d-319/08

Essentials pure 7(S)-O-alkylnogaro(s) of formula (I) (where R is 1-4C alkyl) and their acid addn. salts are new



Als new are the acylates of 7(S)-O-alkylnogaro(s) where the acyl gp. is 2-18C hydrocarbon carboxylic acid acyl which may be halo-, cyano-, amino-, or lower alkoxy-

substitd.

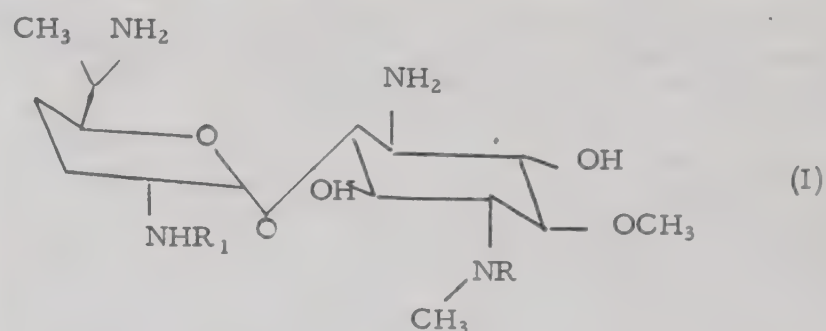
Cpds. are antimicrobial agents. They can be used e.g. to treat the breeding places of silkworms to prevent or minimise infection by Bacillus subtilis, and to minimise or prevent odour in fish and fish crates caused by B. subtilis. They can also be used to treat birds infected with Myco bacterium arium. They also exhibit activity against other bacterial species e.g. Streptococcus pyogines. The O-methyl cpd. is also active against the tumors L1210 in vitro : 1 D₅₀ 0.13 mcg/ml.; and P388 in vivo in mice: T/C 1.76 at 12.5 mg/kg. 17.7.78 as 924975 (5pp476)

ABBO D22 47153B/26 = US 4183-920
N-acylated fortimicin E derivs. - with broad-spectrum antibacterial activity, used e.g. as medicaments, preservatives or disinfectants

ABBOTT LABORATORIES 21.12.77-US-863010

B03 E13 (15.01.80) *BE-872-913 +A61k-31/71 C07h-15/22

Fortimicin E derivs. of formula (I) and acceptable salts are new.



In (I) R is H, acyl, aminoacyl, N-lower-alkylaminoacyl, N,N-di-lower-alkylaminoacyl, hydroxy substd. aminoacyl or aminoacid residue; and R_1 is H, acyl, aminoacyl, N-lower-alkylaminoacyl, N,N-di-lower-alkylaminoacyl, hydroxy substd. aminoacyl or aminoacid residue. Proviso is that R and R_1 are not both H.

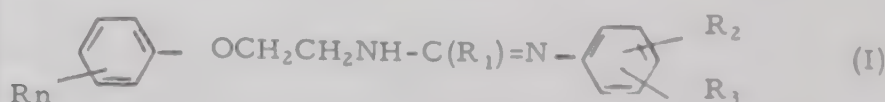
(I) are useful as antibiotics, as preservatives for industrial solns. in antibacterial scrub solns. etc. 21.12.77 as 863010 (10pp964)

DOWC ★ D22 07307C/04 ★US 4183-957
Antimicrobial 1-phenoxy ethyl-3-phenyl amidine derivs. - prepd. from N-phenoxy:ethyl alkanamide phosphorus oxychloride and substd. aniline, used for protecting wood and painted surfaces

DOW CHEMICAL CO 25.09.78-US-945158

C03 E14 F09 (15.01.80) A61k-31/15 C07c-123

1-Phenoxyethyl-3-phenylamidines of formula (I) are novel:



(where R is F, Cl or Br; R_1 is 1-6C alkyl; R_2 and R_3 are independently H, halogen or 1-3C alkyl; n is 0-3)

Antibacterial and antifungal agents, which may be used for protecting wood and painted surfaces. A specific cpd. is N¹-(4-Chloro-2-methylphenyl)-N-(2-(2,4-dichlorophenoxy) ethyl) ethan imidamide. 25.9.78 as 945158 (4pp916)

NFL ★ D22 07353C/04 ★US 4184-099
compsn. for slow release of volatile cpds. at high temps. -
comprising specific polyamide resins contg. volatile bactericide,
dorant, insecticide, perfume oil or animal repellent
INT FLAVORS & FRAGR INC 08.06.78-US-913698 (27.04.77-US-
791403)
A97 C03 R45 (A23) (15.01.80) C09f-05 H01j-05 H01j-21
Co-solvent free, alcohol free thermoplastic polyamide re-
in body consists of (a) 35-70% by wt. of a volatile sub-
stance (I); and (b) a fatty polyamide (II) of mol. wt. 9000-
2,000, and is a solid soln. (I) may be a perfume oil, in-
secticide, odourant, bactericide, or animal repellent.
(II) is the reaction prod. of polymeric fatty acids (III)

and ethylene diamine (1 equiv/equiv. of CO₂H) at 150-300°;
if softens over a 10-15° range when heated to 120-400°;
and it has a sharp decrease in viscosity at temps. > the
softening range. (III) are polymerised 8-24C monoarboxy-
lic acids, and have a specifically defined dimeric fatty
acid content, and a specifically defined trimeric : monom-
eric fatty acids ratio.

The rigid hard resin body prepd. from the specific (II)
contains high levels of (I), and allows controlled, uniform
concns. of (I) to be released over extended periods of time
but only when the resin is heated. The resin is suitable
e.g. for forming into a toroid which may be placed round
an electric light bulb. 8.6.78 as 913698 (9pp478)

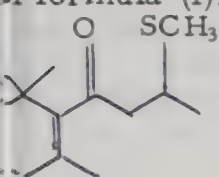
See Also

D15 J5 4155174

D21 DS 2217043

D23: OILS; FATS; WAXES

NFL D23 67315A/38 =DS 2808-710
Methyl-thio-butyl-tri:methyl-cyclohexene and cyclo hexadiene -
used as flavourants, prepd. by reacting damascone or
damascenone with methyl-mercaptan
INT FLAVORS FRAGRANCES 03.03.77-US-774055
E15 +P15 (D13) (17.01.80) *DT2808-710 A23I-01/22 A24b-
15/04 A61k-47 C07c-149/26 C11b-09
New cpds. are pure 1-[-3-(methylthio)-butyl]-2,6,6-
trimethylcyclohexene and its 1,3-cyclohexadiene analogue
of formula (I):



(where the dotted line represents a sing-
le or double C-to-C bond. (I) may be
prepd. by reacting methyl mercaptan
with the ketones β-damascone or β-
damascenone. (I) are useful as aromatic
essences for perfumes, foodstuffs,

chewing gum, chewing tobacco, medicines, toothpaste and
tobacco. 1.3.78 as 808710 (14pp068).

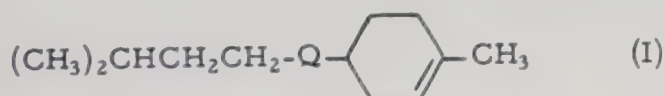
ADI ★ D23 05772C/04 ★EP ---7-076
Di:hydro-bisabolene and di:hydro-bisabolol derivs. - useful as
perfume components with flowery, green notes and good stability
towards air

BASF AG 14.07.78-DT-830971

E15 (23.01.80) A61k-07/46 C07c-13/16 C07c-33/05 C09d-07/12
C11d-03/50

S: E(CH, DT, FR, GB, NL).

Cyclohexene derivs. of formula (I) are new:



Q is -CH₂-C(=CH₂)-, -CH=C(CH₃)-, -CH₂-C(CH₃)= or -CH₂-C(CH₃)(OH)-; these

are attached to the cyclohexene ring by the right hand
bond(s)).

(I) are useful as perfume components and can be used
in cosmetics, washing and cleaning compsns., paints etc.
They have flowery and green notes and have superior
stability, esp. towards atmospheric O₂, than bisabolol.
p.7.79 as 102304 (16pp1251)

(G) ISR: US--29649; 5 Journal references.

LINO- ★ D23 05934C/04 ★FR 2421-985
Washing crude tall oil soap from paper pulp mfr. - by mixing hot
with the wash, then cooling and sepg. (SW 5.11.79)
LINOTEK OY 05.04.78-SF-001051
F09 (07.12.79) C11d-15 D21c-11/04

The soap, arising from the mfr. of paper pulp by the sul-
phate process, is mixed with the washing liquid at their
respective temps., then the mixt. is transferred into a
sepn. vessel in which a better sepn. of the soap and liq.
wash is obtd. by mixing and cooling.

The process enables satisfactory washing of the tall
oil contg. entrained black liquor at a high temp. for satis-

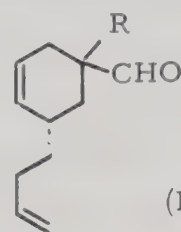
factory washing (60-80°C) and also enables satisfactory
sepn. as a result of the cooling. 28.2.79 as 005242(10pp)

TAKS ★ D23 06100C/04 ★J5 4154-733
Cyclohexenyl-aldehyde derivs. - useful in perfume compsns.
providing cedar leaf note

TAKASAGO PERFUMERY KK 25.05.78-JA-062562

E15 (06.12.79) A61k-07/46 C07c-45/02 C07c-47/45

5-(3-butenyl)-3-cyclohexenecarbaldehyde or 1-methyl-5-
(3-butenyl)-3-cyclohexenecarbaldehyde, of formula (I);



(where R is H or Me) are new. (I)
have a green-note perfume like in
leaves of cedar. In an example: 54 g.
(0.5 mol.) of 1,3,7-octatriene, 37 g.
(0.66 mol.) and 1 g of hydroquinone
were reacted in an autoclave of 300 ml-
capacity at 110°C for 7.5 hours. After
the reaction was completed, the reac-
tion soln. is subjected to distn., and

14 g. of the initial distillate fraction at a room temperature
-95°C/8mmHg. was removed, then 32 g. (yield 39.0% re-
lative to 1,3,7-octatriene) of 5-(3-butenyl)-3-cyclohexene-
carbaldehyde was obtained as the distillate fraction at
95-98°C/8mmHg. 25.5.78 as 062562 (3pp75).

CHUR- ★ D23 06182C/04 ★J5 4155-205
Stabilisation of fats and oils against oxidation - using combination
of miso and tocopherol

CHURIGOSHI KAISHA 29.05.78-JA-064058

(D13) (07.12.79) C09k-15/08 C11b-05

A method of preventing the oxidn. of fats and oils or
foods contg. fats and oils, e.g., liver oil, lard, fish oil,
whale oil, soybean oil, linseed oil, cotton oil, sesame
oil, castor oil, peanut oil, soybean lecithin, oil-soluble
vitamins, cheese, margarine, butter, mayonnaise, saus-
age, etc., is provided in which 0.01-1% of miso(bean
paste), a fermented seasoning powder mfd. from soybean,
rice, and barley using a microorganism, and a tocopherol,
e.g., dl-alpha-tocopherol, dl-beta-tocopherol, d-gamma-
tocopherol, or alpha-delta-tocopherol, are added to sub-
stance.

Stabilisation against oxidation including autoxidation,
rancidity, etc., is provided without the use of expensive
antioxidants in great quantities. 29.5.78 as 064058 (3pp).

GIVA D23 63014T/40 =J7 9043-586
Dimethyl octahydro-2-naphthalenone - used as a perfume additive

GIVAUDAN L & CIE SA 12.03.71-CH-003695

E15 (20.12.79) *DT2206-131 A61k-07/46

4a,8-Dimethyl-2,3,4,4a,5,6,7,8-octahydro-4-naphthal-
enone is added to known perfumes to which it imparts an
original note. It has a scent reminiscent of saffron and
light camphor and woody notes. 10.3.72 as 024072 (clg.
12.3.71-CH-003695) A61k-7/46 (20.12.79) GIVAUDAN &
CIE SA, L (3pp) (J4 7029541)

GIVA D23 01637U/02 = J7 9043-587
Use of 10-methyl-delta-1,9-octalone-2- as perfume component - esp suitable for mens cosmetic preps

GIVAUDAN L & CIE SA 23.06.71-CH-009148

E15 (20.12.79) *DT2226-781 A61k-07/46

Title cpd. has a balsamic, hay-like scent having the honey wood-, tobacco- and spruce-like components. It can also modify and enhance such scents as jasmin, rose, lily of the valley, etc., when added in an amt. of e.g. 5-10 wt. %. 14.6.72 as 059349 (clg. 23.6.71-CH-009148) A61k-7/46
GIVAUDAN & CIE. SA. L. (2pp) (J4 8013560)

SYNT= ★ D23 07106C/04 ★ SU-662-542
Citral intermediate prepn. for vitamin and scent mfr. - from dehydro-linalool by heating in organic solvent using organo-vanadium cpd. and di-carboxylic acid or deriv.

SYNTH NATUR PERFUME 30.12.77-SU-562132

E17 (17.05.79) C07c-45 C07c-47/20

Citral (I), useful as intermediate in chemistry of fragrant materials and in vitamin synthesis, is prepd from dehydro-linalool (II) by the rearrangement process at 140-160°C in organic solvent in the presence of poly-vanadium-organosiloxane catalyst. The final prod. is obtd. in high yield by conducting the process in presence of 0.005-0.016 mole dicarboxylic acid or its anhydride for each 1 mole of II and pref. in the presence of diphenyl-silanediol (III). The yield of citral is $\leq 98\%$.

Erman, M.B., Kron, A.A., Burdin, E.A. et al. Bul. 18/15.5.79. 30.12.77. as 562132 (3pp938)

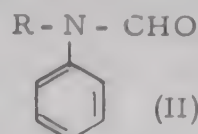
MITK D23 11545A/06 #US 4157-333
Piperonal prepn. - by reacting (1,2)-methylene-di-oxy-benzene with a (N)-alkyl-formanilide and a condensing agent

MITSUI TOATSU CHEM 23.06.76-JA-073109 (20.12.77-US-862392)

B02 C02 E13 (05.06.79) *J52156-867 C07d-317/44

Prepn. of piperonal comprises reacting 1,2-methylenedio-

xybenzene (I) with N-alkyl formanilide of formula (II) (where R is 1-4C alkyl) and a condensing agent of phosgene, thionyl chloride, thionyl bromide, sulphonyl chloride, sulphonyl bromide, PCl_3 or PCl_5 , and then hydrolysing the obtd. reaction prod.



Pref. the reaction is effected in the presence of an inert organic solvent.

Pref. R is (m)ethyl and the condensing agent is phosgene. Pref. the condensing agent is added to the reaction mixt. at 50-100°C and the reaction carried out at this temp.

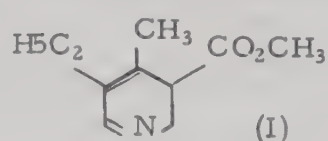
The prod. is obtd. in high yield in high selectivity and is useful in perfumes and as intermediate for agrochemicals and pharmaceuticals. 20.12.77 as 862392 (7pp924)

TAKS D23 01335B/01 = US 4183-83
Perfumes with natural aroma - contg. methyl 5-ethyl-4-methylnicotinate

TAKASAGO PERFUMERY KK 10.06.77-JA-067970

E13 (15.01.80) *NL7806-283 C11b-09

The naturalness of the fragrance of a perfume compsn. is improved by the addition of 5-ethyl 4-methyl-methylnicotinate of formula (I) to the compsn. in amt. 0.1-0.5 wt. % w.r.t. the total perfume compsn.



(I) is used in the preps. of natural jasmine-like or nerol-like perfume compsns. Compsns. are compared organoleptically with comparative compsns. prep.

in the same manner as the stated examples when (I) is not used.

The naturalness of the fragrance of the compsns. prep. are extremely high, esp. those of natural jasmine, natural nerol, natural gardenia, natural ylangylang and natural tuberose. 8.6.78 as 913927 (2pp931)

See Also

D13 SU 662545

D24: SOAP; SOAP DETERGENTS

KAOS D24 02660A/02 = J7 9043-522
Non-hygroscopic transparent soap prepn. - by addn. of hexylene glycol, polyethylene glycol or polypropylene glycol to the base materials

KAO SOAP KK 16.04.74-JA-042958

A25 E17 (20.12.79) *J50135-104 + C11d-09/26

Transparent soaps are prepd. by the addn. of hexylene glycol, polyethylene glycol (ave. mol. wt. = 300-600) or polypropylene glycol (ave. mol. wt. = 200-600) or their

mixts. to the base materials.

In an example, a typical prepn. consisted of 24% cattle fat soap (Na salt), 16% coconut soap (Na salt), 18.5% polypropylene glycol (mol. wt. = 200), sugar 16.5, H_2O 22.0 and EtOH 3.0% and small amts. of colourant and perfume. 16.4.74 as 042958. C11d 9/26 (20.12.79) KAO SOAP KK (4pp) (J50135104)

D25: OTHER DETERGENTS

RHON D25 41678Y/24 = DS 2655-551
Polyurethane with hydrophobic and hydrophilic gps. - used as antiredeposition, antisoiling and antistatic agent in detergent compsns.

RHONE-POULENC INDUSTRIES 09.12.75-FR-038233

A25 (A97) (17.01.80) *BE-849-185 C08g-18/10 C11d-03/37

Linear, hydrophilic polyurethanes with a relative viscosity of ≥ 2 are obtd. by reacting (A) 10-70 wt. % of a base polyester and (B) 90-30 wt. % of a prepolymer with terminal NCO gps. (A) consists mainly of terephthalic acid or one of its diesters with an OH no. $< 120\text{mg KOH/g.}$ and an acid no. $\leq 3\text{mg. KOH/g.}$ and has a mol. wt. of 1000-4000. (B) is obtd. by reacting ≥ 1 hydrophilic, non-ionic polyethylene glycol of mol. wt. 300-8000 with ≥ 1 diisocyanate. The ratio of NCO:all OH present is 0.8-1.

The base polyester pref. consists of a mixt. of terephthalic acid or one of its diesters and adipic acid or one of its diesters. The amt. of diisocyanate used is pref. 2-15 wt. % referred to polyurethane.

The polyurethanes are used at a rate of 0.1-5 wt. % pref. in the form of granules contg. 40-70 pts. wt. fillers, esp. SiO_2 , and 60-30 pts. wt. polyurethane in washing powders for textiles to prevent re-soiling and give an anti-

static finish to synthetic fibres. 8.12.76 as 655551 (8pp260)

HENK ★ D25 05614C/04 ★ DT 2829-697
Nonionic surfactant detergent compsn. - contg. ethoxylated fatty alcohol mixed with ethoxylated internal vicinal alkane-diol to prevent gelling on dilution

HENKEL KG AUF AKTIEN 06.07.78-DT-829697

A97 E19 (A25) (17.01.80) C11d-01/82

Detergent compsn. contains 40-60 wt. % ethoxylated fatty alcohol having formula $\text{R}_1\text{O}-(\text{C}_2\text{H}_4\text{O})_n-\text{H}$ (I) (where R_1 is an opt. unsatd. hydrocarbyl deriv. of a 6-18C fatty alcohol and n is 4-15) and 60-40 wt. % ethoxylated alkanediol of formula $\text{R}_2-\text{CHX}-\text{CHY}-\text{R}_3$ (II) (where R_2 and R_3 are 1-17C alkyl; C sum in R_2 and R_3 is 8-18; X is $-\text{O}-(\text{C}_2\text{H}_4\text{O})_p-\text{H}$ and Y is $-\text{O}-(\text{C}_2\text{H}_4\text{O})_q-\text{H}$; p and q are 0-15 and $p+q$ is 4-15).

The compsns. have reduced viscosity at room temp. The addn. of (II) prevents gel-formation on dilution with water. 6.7.78 as 829697 (10pp200)

HENK D25 05614C/04 =EP---7-049
Nonionic surfactant detergent compsn. - contg. ethoxylated fatty alcohol mixed with ethoxylated internal vicinal alkane-diol to prevent gelling on dilution
HENKEL KG AUF AKTIEN 06.07.78-DT-829697
A97 E19 (A25) (23.01.80) *DT2829-697 C11d-01/82
D/S: E(DT, FR, GB, IT).

Detergent compsn. contains 40-60 wt. % ethoxylated fatty alcohol having formula $R^1O-(C_2H_4O)_n-H$ (I) (where R^1 is an opt. unsatd. hydrocarb. deriv. of a 6-18C fatty alcohol and n is 4-15) and 60-40 wt. % ethoxylated alkane-diol of formula $R^2-CHX-CHY-R^3$ (II) (where R^2 and R^3 are 1-17C alkyl; C sum in R^2 and R^3 is 8-18; X is $-O-(C_2H_4O)_p-H$ and Y is $-O-(C_2H_4O)_q-H$; p and q are 0-15 and $p+q$ is 4-15).

The compsns. have reduced viscosity at room temp. The addn. of (II) prevents gel-formation on dilution with water.

1.7.79 as 102205 (11pp200).
(G) ISR: DT2331014; DT2327680.

ALKU ★ D25 06032C/04 ★GB 2025-450
Detergent contg. alkali carbonate and separate acid component - which dissolves before the alkali and forms soluble magnesium and calcium salts

AKZON NV 14.07.78-GB-029955
A97 E34 (23.01.80) C11d-07/60 C11d-17

Detergent compsn. comprises separately (A) as alkaline constituent an alkali carbonate present in excess over (B) an acid constituent which can form water-soluble Ca or Mg salts and/or complexes, and which dissolves more rapidly in the wash liquor than (A). (B) contains 5-30 wt. % (on total compsn.) of ≥ 1 acid of pK 2.8-4.8.

Esp. the compsn. is in the form of a sachet which is permeable to, or disintegrates in, water, esp. it is made of non-woven material and is divided into separate compartments for (A) and (B). Pref. the compartment contg. (A) becomes permeable (or disintegrates) only after 2-10 (3-6) min.; esp. it comprises a (co)polymer of methacrylic acid and/or methacrylate ester and may include hydroxypropyl methyl cellulose.

Phosphates can be replaced by carbonates without problems of accumulating incrustation. Incrustations formed in the preceding washing cycle are dissolved away by (B) before (A) is released to soften the water. 14.7.78 as 829955 (9pp1251).

FUJI ★ D25 06305C/04 ★J5 4155-986
Bleaching yellowed white woollen fibres or fabrics - using a soln. of sodium metasilicate, neutral washing agent and a hydrosulphide
FUJISAKI T 31.05.78-JA-065948
E34 F06 (08.12.79) C11d-03/39

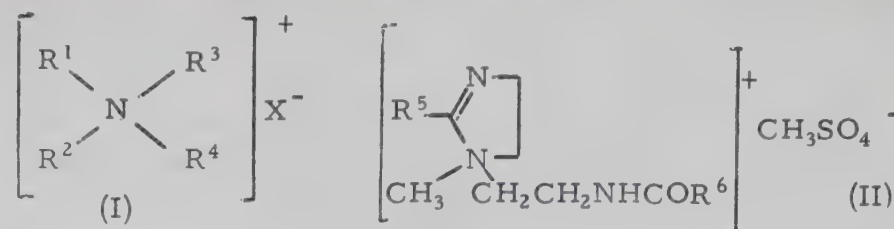
White woollen fibres or clothes are dried by leaving in the sun after washing and go yellow. They may be bleached by immersing in a soln. contg. Na metasilicate, a neutral washing agent, and a hydrosulphite.

In an example, 20 g Na metasilicate, 20 g neutral washing agent and 40 g hydrosulphite were mixed in a bucket. 2 l water and 1 l of warm water were added to the bucket to obtain a dissolved soln. at 40°C. The yellowed woollen fibres or clothes were immersed in the solution, and bleached to give pure white fibres or clothes. 31.5.78 as 065948 (2pp51).

LIOY ★ D25 06458C/04 ★J5 4157-109
Detergent compsn. giving good softness to cloth - comprises alkaline earth salt of an anionic surfactant, cationic quat. ammonium surfactant and inorganic alkaline earth salt
LION FAT & OIL KK 01.06.78-JA-066220
E19 (11.12.79) C11d-01/65

A detergent compsn. contains 5-40wt. % alkaline earth salt of an anionic surfactant having sulphonic acid gp. or sulphuric ester gp.; 0.5-10wt. % quat. ammonium salt type cationic surfactant of formula (I) (where R^1 - R^4 are alkyl, hydroxyalkyl, or benzyl gp., one or two being 8-22 C long chain alkyl; X is a halogen); and 8-80wt. % inorganic alkaline earth salt having >0.1 g solubility in 100 g

water at 25°C. (I) may be replaced by cpd. of formula (II)

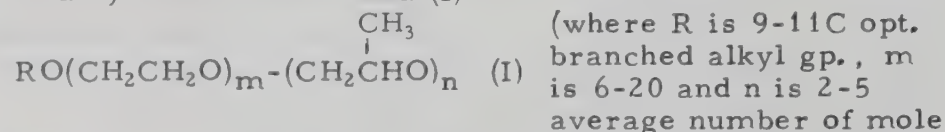


(where R^5 and R^6 are 8-20C long chain alkyl).

Detergent compsn. provides superior hand or softness to cloths after washing. 1.6.78 as 066220 (5pp126).

LIOY ★ D25 06459C/04 ★J5 4157-110
Heavy duty liquid detergent compsn. - contg. polyoxyethylene alkyl ether and anionic surfactant, e.g. higher alkyl-benzenesulphonate
LION FAT & OIL KK 01.06.78-JA-066221
A97 (A25) (11.12.79) C11d-01/83

A liquid detergent compsn. contg. block type polyoxyalkylene alkyl-ether of formula (I)



of added ethylene oxide), and anionic surface active agent. The weight ratio of block type polyoxyalkylene alkyl-ether to anionic surface active agent is 1/4-3/2.

Typical anionic surface active agent is (a) 10-14C alkyl-benzene sulphonate (II), (b) polyoxyethylene 11-15C alkyl-ether-sulphate (III) and 0.5-5 mole in average of added ethylene oxide, (c) 11-15C alkyl sulphate (IV), (d) a mixture of >2 kinds among (a), (b), and (c).

Cpd. (II) is a straight chain alkylbenzene sulphonate salt of Na, K, Mg, or triethanolamine. Cpd. (III) is polyoxyethylene alkyl-ether sulphate salt of Na, K, Mg or triethanolamine. Cpd. (IV) is alkylsulphate salt of triethanolamine.

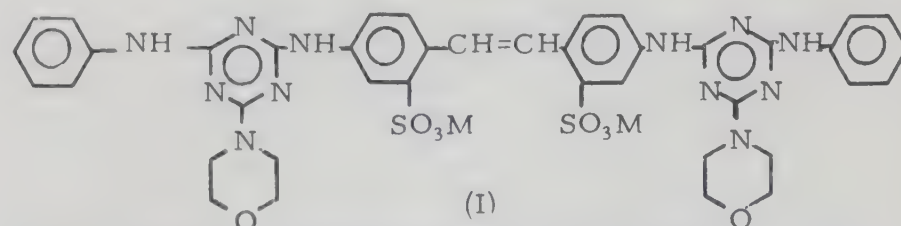
The compsn. has superior detergency and excellent rinsing effect. 1.6.78 as 066221 (5pp126).

STAU ★ D25 C/04 ★J5 4157-111
Alkaline detergent composition
STAUFFER CHEMICAL CO 31.05.78-US-911589
(11.12.79)
4.5.79 as 055189.

SUMO ★ D25 06575C/04 ★J5 4157-578
Conversion of alpha to beta-type bis:triazinyl:amino:stilbene derivs. - by heating in aq. salt soln., e.g. in aq. acetone with soda ash

SUMITOMO CHEMICAL KK 29.05.78-JA-064627
E13 (12.12.79) C07d-251 C07d-295 C07d-413/14

β -Type crystals of bistriazinylaminostilbene derivs. (I) (where M is cation) are prepd. by heating α -type crystals of bistriazinylaminostilbene derivs. in aq. solvent in the presence of $\geq 4\%$ soln. of inorganic salt(s).



(I) is useful as fluorescent white intensifier for detergent, showing high stability to water and excellent white intensifying potency.

In an example, 6000 pts. of water were added to soln. of cyanuric trichloride (184.5 pts.) in acetone (300 ml). Resultant suspension was condensed with 4,4'-diaminostilbene-2,2'-disulphonic acid (185 pts.) at 0-10°C and then with aniline (93 pts.) at 10-40°C. Morpholine (87 pts.) and NaCl (400 pts.) were added and the resultant mixture was heated at 80-95°C for 2 hrs, while acetone was evapd. Reaction was promoted by adding aq. soda ash to give pH 7.0 to slight alkalinity but regulated to pH 8-11 for β -type crystal formation. Mixt. was cooled at 50-60°C, filtered, washed with 1% aq. soda ash and dried at 80-90°C to give acicular crystals of β -type product (920 parts). 29.5.78 as 064627 (4pp104).

AKCH= ★ D25 07112C/04 ★SU-662-548
Ethoxy-ethylamine intermediate, solvent, plasticiser - prepd. by electro-catalytic reduction of mono:ethanol-amine vinyl ether using nickel coated electrodes

AS KAZA CHEM-METAL 09.01.78-SU-566574

A60 B05 E16 (17.05.79) A61k-31/13 C07c-93/04

Ethoxy-ethylamine is used in the synthesis of anti-diabetic drugs, detergents, emulsifiers, petroleum prods. oxidn. inhibitors, food fats oxidn. inhibiting agent, and also as solvents and plasticisers.

This cpd. is prepd. by electrocatalytic redn. of mono-ethanolamine vinyl ether, using nickel catalyst.

The process is accelerated and the yield of ethoxy-ethanolamine is increased if the electrolyser contains electrodes activated with Raney nickel catalyst satd. with hydrogen, and the process is conducted at 20-40°C using 20-60 A/dm² current density at 47 ml. H₂/min. rate. The yield of final prod. is 85-90%.

Kirilyus, I. V., Shostakovskii, M. F., Minbaev, E. U. et al. Bul. 18/15.5.79. 9.1.78. as 566574 (2pp938)

COLG D25 69974B/39 =US 4183-815

Detergent compsn. for washing powders contg. specified clays - and quat. ammonium softening compsn. contg. kyanite or halloysite

COLGATE PALMOLIVE CO 15.05.78-US-905622

E33 (E16) (15.01.80) *BE-876-230 D06m-13/50

A detergent compsn. is prepd. comprising a kyanite and a surface active anionic detergent in ratio of $\geq 0.3:1$, plus a builder salt and a quat. ammonium fabric softening agent. Pref. the compsn. is prepd. as a laundry detergent compsn. in proportion, 10-20% anionic surfactant, 20-35%

builder salt, 3-6% of softener and 12-20% kyanite clay material, opt., the clay material may consist of halloysite or a mixt. of smectite clay and metakaolin. The softening agent is pref. distearyl dimethyl ammonium chloride.

Compsns. prepd. have good detergency, fabric-softening effect and anti-static properties. The detergents prep. may contain any of the clay materials, opt. in mixt. 15.5.78 as 905622 (6pp931)

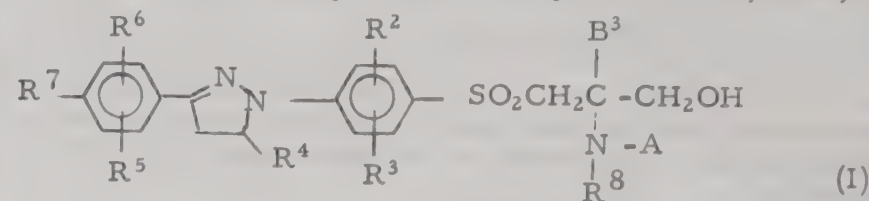
BADI D25 22679Y/13 #US 4183-85
Novel pyrazoline cpd.

BASF AG 11.11.75-DT-550548 (06.07.76-US-702975)

A60 E13 F06 (15.01.80) *J52021-031 C07d-231/06 C07d-401/1

Pyrazoline cpds. of formula (I): are new and useful as optical brighteners, e.g. for acrylonitrile polymers, wool and polyamides.

B³ is H or 1-4C alkyl. R², R³, R⁵, R⁶ and R⁷ are independently H, Cl, Br, F, CH₃, C₂H₅, CH₃O or C₂H₅O. R⁴ is H, 1-4C alkyl, benzyl, phenylethyl, or phenyl opt. substd. by Cl, Br, CH₃, C₂H₅, CH₃O, C₃H₅O, CN or hydroxysul-



phenyl. R⁸ is H, 1-4C alkyl or 2-3C alkyl substd. by OH or 1-4C alkoxy. A is 2-3C alkyl substd. by 1-4C dialkylamino, piperidino, pyrrolidino or hexamethyleneimino. 9.6.78 as 913949 Div. ex. 4129563 (33pp393)

SeeAlso

D15 DT 2829230

D21 J5 4156018

- ABBO 21.12.77 ABBOTT LABORATORIES B03 D22 E13 = US 4183-920
N-acylated fortimicin E derivs. - 47153B/26
- *ACHI= 21.02.73 ACHINSK ALUMINA D15 E33 *SU -662-503
Reagent for purificn. of circulating water - 07076C/04
- AGEN 26.12.75 AGENCY OF IND SCI TECH A35 D16 (A23) = J7 9044-749
Biochemical decomposing agent for polyester cpds. - 60144Y/34
- *AGEN 30.05.78 AGENCY OF IND SCI TECH D15 J04 *J5 4155-887
Continuous prepn. of water contg. slight amt. of dissolved oxygen - 06268C/04
- *AGEN 31.05.78 AGENCY OF IND SCI TECH D15 *J5 4156-341
Waste water treatment - 06384C/04
- *AGEN 31.05.78 AGENCY OF IND SCI TECH D15 *J5 4156-342
Treating waste water from thermal decomposition of waste - 06385C/04
- *AGEN 31.05.78 AGENCY OF IND SCI TECH D15 *J5 4156-343
Waste water treatment - 06386C/04
- *AIRP 18.01.78 AIR PRODUCTS & CHEM INC D13 J02 *US 4183-384
Fluid blending control appts. - 07172C/04
- AIRW- 26.06.78 AIRWICK AG A96 B07 C03 D25 (D15) = DT 2925-543
Pouch for uniform release of chlorinating agents etc. - 02267C/02
- AJIN 05.04.65 AJINOMOTO KK D13 = IT 1035-002
Beef extract replacement with more realistic - 43879R/25
- AJIN 23.07.76 AJINOMOTO KK B04 D16 J04 = J7 9044-750
Estimating amino acid(s) in blood, urine etc. - 24052A/13
- AJIN 23.07.76 AJINOMOTO KK B04 D16 J04 = J7 9044-751
Mass-screening analysis for amino-acids - 24053A/13
- AJIN 30.09.76 AJINOMOTO KK D13 (D12) = J7 9044-735
Sausage-like food prepn. from non-fibrous vegetable protein - 39541A/22
- AJIN 31.05.78 AJINOMOTO KK A89 B05 D16 J04 = J5 4156-692
L-aminoacid and carbon source determn. in fermentation broths - 03977C/03
- *AKCH= 09.01.78 AS KAZA CHEM-METAL A60 B05 D25 E16 *SU -662-548
Ethoxy-ethylamine intermediate, solvent, plasticiser - 07112C/04
- ALBR 26.05.78 ALBRIGHT & WILSON LTD D25 E19 = J5 4155-989
Prepn. of conc. surfactant mixt. forming liq. lamellar phase - 47415B/26
- ALKU 29.11.76 AKZO NV A11 D22 F06 = GB 1559-716
Regenerated cellulose fibres with high liq. absorbing capacity - 40702A/23
- ALKU 24.05.78 AKZO NV D15 M28 = NO 7901-700
Electrolytic removal of metal ions using fluidised bed - 86295B/48
- *ALKU 06.07.78 AKZO NV D13 *EP ---7-130
Agglomerating half peanuts - 05804C/04
- *ALKU 14.07.78 AKZO NV A97 D25 E34 *GB 2025-450
Detergent contg. alkali carbonate and separate acid component - 06032C/04
- ALME- 15.07.74 ALMER SANGYO KAISHA D15 J09 = DS 2531-589
Rotary furnace for drying waste sludges - 11547X/07
- *ALMG 21.02.73 ALUM MAGN ELECTR IND D15 E33 *SU -662-503
Reagent for purificn. of circulating water - 07076C/04
- *ALPH- 30.06.78 ALPHA PATENT LTD A96 B04 D16 *DT 2924-744
Plasminogen activator urokinase purificn. - 05675C/04
- ALPH- 30.06.78 ALPHA PATENT LTD A96 B04 D16 = NL 7905-045
Plasminogen activator urokinase purificn. - 05675C/04
- ALPI- 30.05.78 ALPI MILCHINDUSTRIE D13 = SW 7904-361
Preparing whey products equiv. to skimmed milk in protein - 71817B/40
- *ALST- 05.04.78 ALSTHOM-ATLANTIQUE D15 *FR 2421-671
Generator of bubbles in liq. medium - 05898C/04
- AMBS 05.09.75 AMERICAN BRANDS INC D18 = GB 1559-507
Dilation process and appts. for cigarette tobacco - 16414Y/10
- AMCY 19.04.74 AMERICAN CYANAMID CO A96 D22 F04 = IT 1035-318
Styptic surgical felt prodn. - 74394W/45
- *AMCY 17.06.76 AMERICAN CYANAMID CO D21 E19 *US 4183-367
Fluorinated cationic and amphoteric surfactants - 07169C/04
- *AMLA= 27.06.72 AS MOLD APP PHYS D14 (D16) *SU -407-457
Cylindrical electro-plasmolyser for grape pulp - 06782C/04
- *AMLA= 15.09.72 AS MOLD APP PHYSICS D14 (D16) *SU -449-523
Electro-plasmolyser for vegetable pulp - 06784C/04
- *ANAG/ 08.06.79 ANAGNOSTOPOULOS G D D16 *GB 2025-457
Spiral plating of inoculum on growth medium - 06035C/04
- *ANPR- 12.07.78 ANPROSOL INC D22 E34 (E33) *GB 2025-229
Chlorine based sterilising soln. contg. phosphate buffer - 05974C/04
- *ANTI/ 02.05.78 ANTILA M D13 *SF 7801-343
Butter which produces less cholesterol in blood plasma - C/04
- AQUA/ 27.06.78 AQUARIUS CH D13 = NL 7808-099
Individual packaging of confectionery esp. lollies - 78406A/44
- *ARON/ 03.04.78 ARONBRUNETIERE R R D21 *FR 2421-605
Non-foaming compsn. for cleaning the hair and scalp - 05890C/04
- ASAE 15.10.76 ASAHI DENKA KOGYO D13 = US 4183-971
Hard butter e.g. for chocolate mfr. - 30507A/17
- *ASAG 30.05.78 ASAHI GLASS KK D15 J01 (D22) *J5 4155-174
Deodorisation of exhaust gas or waste water - 06165C/04
- *ASAH 30.05.78 ASAHI CHEMICAL IND KK A97 B04 D16 *J5 4155-891
Selective adsorbent comprising fixed sheep erythrocyte membrane - 06270C/04
- ASAH- 09.11.72 ASAHI TSUSAN KK D13 = J4 9069-856
Somen prepn. from wheat flour - 06657C/04
- *ASAH- 09.11.72 ASAHI TSUSAN KK D13 *J7 9043-589
Somen prepn. from wheat flour - 06657C/04
- *ASGE= 22.06.76 AS USSR GEN GENETIC C03 D16 *SU -603-297
Tomato plant microbiological protection agent - 06800C/04
- ASPR 31.05.78 NICHOLAS PTY LTD A96 B04 D21 (A11) = SW 7904-723
Inhibition of dental caries with cationic polysaccharide - 71825B/40
- *ASRA= 21.05.75 AS USSR RARE ELEMEN D18 E32 *SU -662-500
Double sulphate of titanium and ammonium prodn. - 07073C/04
- *AUPH= 22.12.77 AS UKR PHYS-ORG CHE D13 E14 G06 (D23) *SU -662-545
2,5-Di: methoxy-benzaldehyde prodn. for photography, perfumery and food - 07109C/04
- BADI 05.04.74 BASF AG A60 D18 E21 F06 (F09) = IT 1035-186
Green-black trisazo dyes for leather, cellulosics, etc. - 70677W/43
- BADI 29.04.74 BASF WYANDOTTE CORP A25 D25 (A18) = IT 1035-485
Stable low-viscosity polymer dispersions contg. polyols - 62264W/38
- BADI 29.04.74 BASF WYANDOTTE CORP A18 D25 (A25) = IT 1035-486
Solid dispersed, finely divided polymers contg. hydroxyl gps - 62263W/38
- BADI 06.07.76 BASF AG A60 D25 E13 F06 #US 4183-851
Novel pyrazoline cpd. - 22679Y/13
- *BADI 22.06.78 BASF AG A97 D12 (A23) *EP ---6-528
Polyamide used in forming meat and sausage casings - 05731C/04
- *BADI 14.07.78 BASF AG D23 E15 *EP ---7-076
Di:hydro-bisabolene and di:hydro-bisabolol derivs. - 05772C/04
- BALC 03.04.78 BALCO FILTERTECHNIK GMBH D14 J01 = FR 2421-676
Conical centrifuge basket esp. for domestic juice centrifuges - 75486B/42
- *BARN- 30.05.78 BARNES & HUMBY LTD A97 D18 G02 *GB 2025-199
Artificial tobacco leaf with raised vein pattern - 05966C/04
- BATT 10.06.77 BATTELLE MEMOR INST C03 D13 = EP ---6-856
Carbohydrate based ruminant feedstuff - 89608A/49
- *BATT 07.07.78 BATTELLE MEMORIAL C03 D13 *EP ---7-136
Cattle feed produced from lignocellulosic materials - 05809C/04
- BAUM- 07.07.78 BAUMANN-BELTRON GMB D15 = DT 2829-835
Submersible mat for air injection into bubble bath - 82566B/46
- BEDD/ 21.04.78 BEDDING P M J D25 (D16) = SF 7801-296
Cleaning soln. for soft contact lenses - 79480B/44
- BEEC 31.03.78 BEECHAM INC B05 D21 E16 = US 4183-916
Oral hygiene compsn. for control of dental plaque and gingivitis - 75699B/42
- BEEC 20.05.78 BEECHAM GROUP LTD B03 D16 = J5 4154-771
Stable crystalline lithium pseudomonate - 86306B/48
- *BEEC 12.07.78 BEECHAM GROUP LTD D21 E34 *EP ---7-170
Inhibiting corrosion of aluminium tooth-paste tubes - 05825C/04
- BEHW 22.11.75 BEHRINGWERKE AG A96 B04 D16 (A14) = CA 1069-070
Vinylene-glycol copolymers as biological supports - 36264Y/21
- BENC 22.06.78 BENCKISER-KNAPSACK D13 E17 (D17) = DT 2827-477
Poly:alcohol esp. xylitol prepn. - 03828C/03
- BERG 26.05.78 BERGWERKSVERBAND GMBH C03 D21 E13 (D13 D23) = J5 4157-557
Indole prodn. from 1,2,3,4-tetra:hydro-quinoline - 87855B/49
- BERG- 22.03.78 FORSCH BERGHOF GMBH D15 K05 M25 = J5 4157-774
Selective removal of heavy metal ions from aq. soln. - 73718B/41
- BERT- 05.04.78 BERTIN & CIE D15 J01 K07 = FR 2421-661
Regenerating liq. filters by automatically initiated program - 82528B/45
- BETZ 14.04.75 BETZ LABS INC A91 D15 #IT 1035-297
Cationic polyquaternary polymeric flocculating agent - 70780W/43
- *BHAL= 29.11.76 BELO HALLURGY RES D16 E34 J01 (E16) *SU -662-149
Potassium flotation enrichment of sylvinit ore - 06954C/04
- BIER- 11.08.77 BIER-DRIVE AG D16 = EP ---6-887
Pressurised beer tank fitting - 16150B/09
- BIER- 11.08.77 BIER-DRIVE AG A92 D16 = EP ---6-888
Beer tank charging system - 16151B/09
- *BIOL= 28.02.73 BIOL IND RES TECHN B04 C03 D16 *SU -646-763
Labelling live microorganisms for measuring their concn. - 06808C/04
- BIOT 26.05.78 BIOTEST SERUM INST GMBH B04 D16 = DK 7902-157
Culture flask for collecting liq., esp. urine, for germ, count - 71802B/40
- BIOT 26.05.78 BIOTEST SERUM INST GMBH B04 D16 = NO 7901-457
Culture flask for collecting liq., esp. urine, for germ, count - 71802B/40
- BIOT 26.05.78 BIOTEST SERUM INST GMBH B04 D16 = SW 7904-553
Culture flask for collecting liq., esp. urine, for germ, count - 71802B/40
- BLUE- 25.08.77 BLUE WING CORP C03 D13 = EP ---6-895
Microencapsulation of lipids in protein to prepare foods - 01951B/02
- BOEF 07.12.73 BOEHRINGER MANNHEIM B04 D16 = SF 7902-601
Activating cholesterol oxidase with surfactants - 40938W/25
- BOEF 20.03.78 BOEHRINGER MANNHEIM GMBH A89 B04 D16 J04 = DS 2812-154
Analytical determn. of alpha amylase - 69916B/39
- BOEF 02.05.78 BOEHRINGER MANNHEIM GMBH A89 B04 D16 = SF 7901-355
Substrate for serum alpha-amylase determination - 82716B/46
- BOEF 12.06.78 BOEHRINGER MANNHEIM GMBH B04 D16 = EP ---6-998
Serum thyroxine binding index diagnostic determination - 91310B/51

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- *BOEF 18.07.78 BOEHRINGER MANNHEIM GMBH B04 D16 E17 *EP ---7-058
Glycerol determination using glycerol dehydrogenase - 05764C/04
BOEH 14.06.74 BOEHRINGER INGELHEIM D11 (D13) = CA 1068-976
Bread-coated emergency food snack - 00058X/01
BOEH 03.06.78 BOEHRINGER C H & SO B04 C03 D16 = SW 7904-840
Antiviral compsn. contg. eucaryotic transfer-RNA - 87609B/49
BOLI 03.05.78 BOLIDEN AB D15 E33 F09 J01 = SF 7901-409
Aluminium sulphate soln. contg. polynuclear complexes - 84603B/47
BOLI 08.05.78 BOLIDEN AB D15 E31 K07 M25 = SF 7901-454
Selective removal of uranium from substances - 84604B/47
*BONN/ 06.04.78 BONNET R D14 *FR 2421-568
Centrifugal dryer for washed vegetables before packaging - 05888C/04
BOSC 29.09.76 BOSCH R GMBH D13 = US 4183-968
Sweets cut from continuous extrusion then pressed - 25562A/14
BRIM 30.08.72 BRISTOL MYERS CO B02 C02 D13 = SF 7902-534
Ceph-3-em 4-carboxylic acid derivs - 20484V/11
BRIM 31.08.72 BRISTOL MYERS CO B02 C02 D13 = SF 7902-635
7-Substd 3-substd ceph-3-em 4-carboxylic acid - 20505V/11
BRIM 13.05.76 BRISTOL MYERS CO A96 B04 D21 (A14) = CA 1069-046
Therapeutic aq. tar gel compsn. for skin diseases - 79868A/44
*BROV 23.08.78 BBC BROWN BOVERI SA D15 *BE -878-346
Electro-flotation appts. to purify polluted effluent - 05502C/04
BRTA 12.05.78 BRIT AMER TOBACCO LTD D18 = DT 2918-920
Aroma-improving tobacco additive from Nicotinia plant gum - 84665B/47
BUCL 25.10.77 BUCKMAN LABS INC A97 D15 E11 M14 = J7 9044-694
Compsn. used to prevent corrosion and incrustation in aq. systems - 44129A/25
BUCL 25.08.67 BUCHERGUYER MASCH D13 = DS 1761-986
Fruit juice extraction press - 85966R/46

- CALG 15.06.78 CALGON CORP A97 D15 H05 J01 (A14) = EP ---7-259
Resolving oil-in-water emulsions - 56204B/30
CALI 19.06.78 CHEVRON RESEARCH CO C02 D13 E13 (D16) = GB 2025-458
Acceleration of cellulose fermentation - 00245C/01
*CANA 29.04.77 NAT RES COUNCIL CAN A88 D15 J01 *CA 1068-856
Casting tubular membranes - 05522C/04
CANT- 06.08.75 CANTON TEXTILE MILL D15 = CA 1069-226
Aerobic treatment of liquid wastes - 88614X/47
*CARB- 10.01.78 CARBOXYQUE FRANCAIS D15 *FR 2421-669
Injecting gas into liq. esp. oxygen into waste water - 05897C/04
CARP- 27.07.77 CARPIGIANI BRUTO MA D13 = US 4183-680
Scraper blade for ice cream mixer - 10452B/06
*CARP- 11.07.78 CARPIGIANI BRUTO D13 *EP ---7-144
Ice-cream machine flavour mixer - 05812C/04
*CETU- 12.06.78 CETUS CORP D16 E13 *EP ---7-176
Epoxide or glycol prodn. - 05828C/04
*CHAM/ 30.06.67 CHAMBOST A D12 *IT 1035-010
Vacuum packed sliced salami prepn. - C/04
CHAM/ 17.02.78 CHAMBE M C03 D13 (C04 D15) = J5 4157-771
Heat sterilising plant for organic waste using hot air - 65802B/36
*CHEM- 19.07.78 CHEMAP AG D16 *EP ---7-133
Fermenter for microorganism cultivation - 05806C/04
*CHSC- 30.06.78 CHEM ADVIES SCHREUD A97 D21 *EP ---7-120
hand-washing emulsion for industrial use - 05797C/04
CHUI 30.09.76 CHUGAI RO KOGYO KAISHA D15 L02 = J7 9044-269
Granulating ash from incineration of wastes, esp. sewage sludge - 39345A/22
*CHUR- 29.05.78 CHURI GOSHI KAISHA D23 (D13) *J5 4155-205
Stabilisation of fats and oils against oxidation - 06182C/04
CIBA 13.06.75 CIBA GEIGY AG A97 D05 F06 (A26 A87 E14 F09) = CA 1069-016
Wetting and antifoaming compsn. for treating aq. liquors - 96263X/52
CIBA 18.05.78 CIBA GEIGY AG A60 C03 D22 E36 = J5 4157-514
Hydrogen peroxide, hydroxylamine and hydrazine adducts - 86210B/48
CIBA 29.06.78 CIBA GEIGY AG A91 D15 (A11) = BE -877-338
Removing cationic substances from waste water - 03805C/03
*CIBA 06.07.78 CIBA GEIGY AG D22 E14 F06 *DT 2926-790
Proofing, wool, pelts and furs against insects - 05699C/04
CLOR- 16.05.74 CLOROX CO D13 #IT 1035-076
Preserving mushrooms by vacuum impregnation - 80945V/47
*COKE 11.07.78 COCA-COLA CO D13 E13 *EP ---7-095
Anthocyanin coloured food - 05783C/04
COLG 21.04.69 COLGATE PALMOLIVE CO B06 D21 E34 = IT 1035-023
Dentifrice composition - 78561R/42
COLG 28.07.69 COLGATE PALMOLIVE CO D21 E13 = IT 1035-028
Liquid shampoo for hair and suede - 08244S/04
COLG 13.07.70 COLGATE PALMOLIVE CO D21 = IT 1035-037
Iridescent dentifrice - 04717T/03
COLG 18.09.73 COLGATE PALMOLIVE CO D21 E33 = US 4183-911
Antiperspirant compsns contg microencapsulated surfactant - 54491W/33
COLG 18.04.75 COLGATE PALMOLIVE CO A97 D25 E19 = CA 1069-014
Detergent compsn. partic. for washing machines - 66840X/36
COLG 15.05.78 COLGATE PALMOLIVE CO D25 E33 (E16) = US 4183-815
Detergent compsn. for washing powders contg. specified clays - 69974B/39

- COLG 25.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25 E33) = DK 7901-785
Dentifrice paste compsn. contg. calcium carbonate - 71767B/40
COLG 25.05.78 COLGATE PALMOLIVE CO A84 D25 E16 F06 (A25 E13) = DK 7902-171
Polyurethane foam dispenser - 71792B/40
COLG 25.05.78 COLGATE PALMOLIVE CO D25 E19 F06 = DK 7902-172
Liq. bleach and fabric softening compsn. - 68037B/37
COLG 25.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25 E33) = NO 7901-702
Dentifrice paste compsn. contg. calcium carbonate - 71767B/40
COLG 30.05.78 COLGATE PALMOLIVE CO D21 E33 = SW 7904-250
Extrudable opaque dentifrice paste - 71814B/40
COLG 13.10.78 COLGATE PALMOLIVE CO B05 D21 = US 4183-915
Stable aq. compsn. for re-mineralising dental enamel - 80873B/45
*COLI/ 12.11.71 COLIZZA S D21 *IT 1035-042
Cosmetic for elimination of dandruff - C/04
*CONF= 18.12.73 CONFECTIONERY IND D13 *SU -561-314
Porous chocolate prodn. appts. - 06792C/04
*CONF= 18.12.73 CONFECTIONERY IND D13 *SU -561-315
Porous confectionery products e.g. chocolate prepn. - 06793C/04
CORP 20.05.71 CPC INTERNATIONAL INC D16 E16 = J4 7043-387
Glucose-isomerase prodn - 78797T/50
CORP 20.05.71 CPC INTERNATIONAL INC D16 E16 = J7 9043-595
Glucose-isomerase prodn - 78797T/50
CORP 21.08.74 CPC INTERNATIONAL INC D13 = J7 9044-728
Dry hydrosoluble foodstuff prodn - 03921X/03
*COSD 21.08.78 COSDEN TECHN INC A41 D15 E14 H05 *BE -878-335
Removal of poly:nitrophenol contaminants from water - 05499C/04
CRGI 04.01.74 CARGILL INC C03 D13 = CA 1068-972
Animal and poultry foodstuffs contg. chloride salts - 35952W/22
CSMT 16.04.75 CENTRO SPERI METAL SPA D15 E36 = IT 1035-331
Active carbon from semi-coke - 66845X/36
*CURT- 19.10.77 CURTIS H INDS INC A96 D21 (A14 A25) *US 4183-366
Henna hair treatment compsn. - 07168C/04
DAMO- 20.06.78 DAMON CORP B01 D16 J04 K08 = DT 2924-881
Determn. of biologically active species in protein-contg. sample - 77217B/43
*DAVI- 20.06.78 DAVIDSON M LTD D16 *DT 2826-907
Seed germination acceleration e.g. in malting - 05540C/04
DAVI/ 25.11.75 DAVIS R D D16 = CA 1069-045
Nutrient compsn. - 49648Y/28
*DAVI/ 03.04.78 DAVID P A D15 J04 *FR 2421-673
Contacting plate for packing heat and mass transfer columns - 05900C/04
*DESP 26.11.75 DESOTO INC D21 E16 (E17) *US 4183-959
Prilled urea bath bead compsn. - 07309C/04
DIDI 05.06.78 DIDIER-WERKE AG A88 D15 = SW 7904-849
Air inlet pipe for gas distribution in liq. - 73639B/41
DIVE 06.06.78 DIVERSEY CORP A88 D13 J01 (D15 D16) = SW 7904-895
Multielement pipe filter for milk, wine effluent etc. - 73649B/41
DNTO 19.03.76 DAINIPPON TORYO KK D15 M11 = J5 2113-560
Electrolytic treatment appts. - 06699C/04
*DNTO 19.03.76 DAINIPPON TORYO KK D15 M11 *J7 9044-270
Electrolytic treatment appts. - 06699C/04
*DORA/ 05.07.78 DORA A D21 *DT 2829-435
Breath and mouth deodorising compsn. - 05590C/04
DORO 24.05.78 DORR OLIVER INC D15 J04 = NO 7901-470
Flow distributor for fluid bed reactor - 86324B/48
*DOWC 12.07.66 DOW CHEMICAL CO D15 *IT 1035-003
Water and aq. solns. bromination process - C/04
DOWC 03.03.75 DOW CHEMICAL CO A97 D15 F09 J01 (A13) = CA 1069-245
Oxazoline/oxazine grafted cross-linked vinyl aromatic polymers - 22340X/12
DOWC 30.05.78 DOW CHEMICAL CO C03 D15 E14 J01 = J5 4156-347
Removing high boiling point organic contaminants from water - 89742B/50
*DOWC 25.09.78 DOW CHEMICAL CO C03 D22 E14 F09 *US 4183-957
Antimicrobial 1-phenoxy ethyl-3-phenyl amidine derivs. - 07307C/04
DSOM- 04.12.73 DSO MLETSCHNA D13 (D16) = IT 1035-092
Bulgarian yoghurt ferments prepn - 32466W/20
*DSOP 24.08.79 DSO PHARMACHIM A96 D22 F01 (A23) *BE -878-408
Polyamide thread for surgical body implant - 05519C/04
DUAR/ 08.11.77 DUARTE R G D11 #CA 1068-987
Manual or automatic drive dough press - 88059Y/49
DUCH/ 27.06.78 DUCHSTEIN S C03 D13 = NL 7904-889
Non-digestible expanded perlite granules as pig feed additive - 79135B/44
DYNM 29.04.78 DYNAMIT NOBEL AG D15 E33 F09 L02 = SF 7901-376
Directly usable alkaline aluminate prodn. in high yield - 66375B/37
EAST 07.11.75 EASTMAN KODAK CO A97 B04 D16 = CA 1069-073
Cholesterol oxidase prodn. in surfactant-contg. medium - 32799Y/19
EGOS/ 30.05.78 EGOSID D15 = NO 7901-777
Generating heat, cooling capacity and pure water - 89740B/50
EGYE- 29.05.78 EGYESULT MUSZAKI TO D15 #SW 7806-132
Purificn. of esp. oil polluted water - 72835A/41

- EKOP- 28.01.78 EKOPERT GMBH D16 H07 = DT 2857-431
Granulate for oil absorption and degradation - 63242B/35
- ELIL 14.04.67 ELI LILLY & CO B03 D13 E13 = IT 1035-008
5-3-hydroxyphenoxy-1h-tetrazole synthetic sweetening - 34330F/00
- ELLN/ 26.05.78 ELLNER S D15 (D22) #NO 7801-836
Ultraviolet liquid purification system - 79920A/44
- *ESAC- 04.04.78 ESAC AUTOMATION SA D16 *FR 2421-944
Treatment of champagne bottles i.e. inclination, vibration, rotation - 05927C/04
- ESSO 19.03.69 EXXON RES & ENG CO D21 E17 G02 = DS 2011-163
Preparation of alcohols ether or ether-- 69649R/38
- ESSO 08.04.72 EXXON RES & ENG CO D21 E17 (D22) = DS 2217-043
Bacteriostatically active 1,3-diols - 65714U/44
- ETHI 11.12.74 ETHICON INC A96 D22 = CA 1069-010
Surgical needle joint - 48356X/26
- ETHI 23.04.75 ETHICON INC A96 D22 = CA 1069-009
Surgeons fastener for wounds - 85309X/46
- EXPE= 07.06.78 EXPER VETERINARY IN B04 C03 D16 = GB 2025-222
Trichophytosis vaccine - 91409B/51
- FAME- 05.06.78 FAMECCANICA SPA A96 D22 = SW 7904-850
Baby's disposable napkin pants - 91366B/51
- FARB 23.03.73 BAYER AG B04 D16 #J7 9043-599
Saccharase inhibitors - 54021U/37
- FARB 15.02.74 BAYER AG A41 D15 E13 (A60) = IT 1035-100
Alpha, beta-olefinically unsatd. monomers - 57172W/35
- FARB 04.04.74 BAYER AG A82 D18 (A25) = IT 1035-147
Tanning process using hydrophilic oligo-urethanes - 05919X/04
- FARB 17.04.74 BAYER AG D18 E14 (E13) = IT 1035-311
Urea derivs with aliphatic perfluoro group - 72497W/44
- FARB 19.04.74 BAYER AG A88 D15 J01 (A26 D13) = IT 1035-351
Polybenz-1,3-oxazine-2,4-dione semi-permeable membranes - 74310W/45
- FARB 23.04.74 BAYER AG D15 E33 = IT 1035-389
Basic aluminium nitrate prepn from aluminium - 74099W/45
- FARB 26.04.78 BAYER AG B02 C02 D13 E13 (D22) = SF 7901-327
Imino-acetamido beta-lactam antibiotic derivs. - 79405B/44
- *FARB 13.07.78 BAYER AG C01 D22 E11 F09 *EP ---7-053
2-Cyclopropyl-pyrimidinyl phosphoric and phosphonic acid derivs. - 05760C/04
- *FARB 19.07.78 BAYER AG A41 C03 D21 E17 *EP ---7-100
Two-step formose soln. hydrogenation to polyhydric alcohol mixt. - 05786C/04
- *FARB 19.07.78 BAYER AG A41 C03 D21 E17 *EP ---7-101
Polyhydric alcohol prepn. by formose hydrogenation - 05787C/04
- *FARB 19.07.78 BAYER AG A41 C03 D21 E17 *EP ---7-102
Polyhydric alcohol prepn. by two/step formose hydrogenation - 05788C/04
- *FARE= 17.11.77 FAR EAST DALMORNIIP A88 D15 H03 J01 *SU -655-655
Removing petroleum products from effluent water - 06817C/04
- FARH 30.12.72 HOECHST AG B03 D13 E13 = DS 2264-235
6-Methyl-3,4-dihydro-1,2,3-oxathiazine-4-one-2,2 dioxide - 52188V/29
- FARH 02.11.73 HOECHST AG A88 D15 J01 (A23) = CA 1069-059
Dehydrating industrial sludges by filtration - 32681W/20
- FARH 07.04.78 HOECHST AG B04 D16 = FR 2421-942
Coagulating fermented biomass suspensions - 75297B/42
- FARH 11.05.78 HOECHST AG D25 = SF 7901-480
Washing and cleaning prod., esp. washing powder - 82551B/46
- FARH 26.05.78 HOECHST AG A97 D12 (A11 A21 A92) = J5 4156-786
Tubular packing film, esp. sausage skins - 87852B/49
- FARH 19.06.78 HOECHST AG C02 D22 E13 F09 = EP ---7-010
3-(1,2,4-Triazolyl)-cinnamic and crotonic acid derivs. - 01804C/02
- *FARH 24.06.78 HOECHST AG A97 D12 (A11) *EP ---6-551
Cellulose hydrate tubular sheath esp. for sausage packaging - 05732C/04
- FARH 03.07.78 HOECHST AG A11 D12 (A35 A97) = DT 2829-102
Continuous mfr. of fibre-reinforced, cellulose hydrate-based hose - 03834C/03
- FARM- 18.02.76 FAR-MAR-CO INC D15 = CA 1068-880
Gluten washing and dewatering - 75467X/40
- *FEED- 20.10.78 FEED PELLETING INC D14 *US 4183-675
Animal feed pelleting mill with steam jacket - 07202C/04
- FEMI- 17.05.74 FEMIA SOC FR EURO D14 = IT 1035-420
Root vegetable cleaning machine - 72494W/44
- *FEPU 26.07.77 FERR METAL EFFL PURIF D15 J01 *SU -655-654
Mechanism for flotation cleaning of fluid - 06816C/04
- *FIRM 06.07.78 FIRMENICH SA D13 E17 *DT 2927-090
Alpha, beta-unsatd. aldehyde food and drink aromatisers - 05712C/04
- FIRM 06.07.78 FIRMENICH SA D13 E17 = GB 2025-198
Alpha, beta-unsatd. aldehyde food and drink aromatisers - 05712C/04
- FLET- 30.06.78 FLETCHER W & R NZ L D12 = NL 7904-865
Method and apparatus for washing animal bungs - 02229C/02
- FMCC 28.03.75 FMC CORP A97 D13 (A11) = J7 9043-593
Spreadable heat resistant edible jelly - 28269X/15
- *FOOD= 20.12.76 FOOD IND CORR INST D11 *SU -661-251
Automatic controller of dough lump mass - 06867C/04
- *FOOD= 13.06.77 FOOD IND STARCH D17 *SU -662-153
Rotor of vane centrifugal screen - 06958C/04
- FORE- 15.10.75 FORENEDE BRYGGERIER D16 E13 = SU -662-017
Brewing beer of better storage stability - 12818Y/08
- FRAD/ 05.04.78 FRADIN M D13 = FR 2421-565
Uncooked food prod. contg. meat or fish and cereals - 73612B/41
- *FRES- 29.06.78 FRESINIUS E CHEM-PH B04 D16 *DT 2828-512
Reaction of body fluid constituents with enzymes - 05560C/04
- FRIT- 04.10.77 FRITZCHE DODGE & O D13 = US 4183-970
Prepn. of aroma material esp. cocoa substitute or extender - 30034B/16
- *FROM 06.04.78 FROMAGERIES BEL-LA VACHE D13 *FR 2421-561
Prepn. of alkali or alkaline earth metal caseinate(s) - 05886C/04
- *FUJI 24.05.78 FUJISAWA PHARM KK B03 C02 D16 *J5 4154-713
Glucosamine derivs. - 06091C/04
- *FUJI/ 31.05.78 FUJISAKI T D25 E34 F06 *J5 4155-986
Bleaching yellowed white woollen fibres or fabrics - 06305C/04
- GAFF/ 19.12.77 GAFFAR A A96 B05 D21 (A14 B04) = US 4183-914
Magnesium poly:carboxylate complex anti-tartar compns. - 79129B/44
- *GALL- 19.07.78 GALLAHER LTD C02 D16 E13 (D18) *EP ---7-244
Prod. of nicotine from Nicotiana tabacum or rustica - 05862C/04
- *GANS/ 13.04.77 GANSHIN S N D22 *SU -626-496
Steriliser for objects having different dielectric permittivity - 06803C/04
- *GCDE- 30.06.78 G-C DENTAL IND CORP A96 D21 *DT 2926-405
Dental silicone compns. curable at room temps. - 05690C/04
- *GEME- 04.07.78 ETAB GEN MEC OUEST D11 *GB 2025-306
Folding food-crepe along diagonal by dropping into shaped casing - 05989C/04
- *GENE= 04.04.78 GENETICS & IND MICR B05 D16 E16 *FR 2421-943
L-homoserine prepn. by fermentation - 05926C/04
- GENO 15.03.71 GENERAL FOODS CORP B05 D13 (D21) = IT 1035-047
Anti-caries mixtures - 65068T/41
- GENO 13.07.73 GENERAL FOODS CORP A97 D13 = SF 7902-773
Gelling of tinned protein products prevented - 03772W/03
- GENO 07.06.78 GENERAL FOODS CORP D13 = SW 7904-891
Fruit juice powder easily soluble in cold water - 91393B/51
- *GENO 28.06.78 GENERAL FOODS LTD D13 (D17) *DT 2925-988
Spray-dried agglomerated food e.g. coffee powder, prepn. - 05685C/04
- GENO 28.06.78 GENERAL FOODS CORP D13 (D17) = GB 2025-245
Spray-dried agglomerated food e.g. coffee powder, prepn. - 05685C/04
- *GFOO= 06.12.77 GEORG FOOD IND D13 *SU -662-057
Tea flush sorting appts. - 06909C/04
- GIAM/ 27.04.78 GIAMMARCO G D15 J01 = J5 4155-178
Steam desorption of gases from liq. - 81176B/45
- GILL 25.02.70 GILLETTE CO A14 D21 (A96) = IT 1035-032
Cosmetic preparations contg polymers withquat ammonium gps - 59324S/37
- GIVA 12.03.71 GIVAUDAN L & CIE SA D23 E15 = J7 9043-586
Dimethyl octahydro-2-naphthalenone - 63014T/40
- GIVA 23.06.71 GIVAUDAN L & CIE SA D23 E15 = J4 8013-560
Use of 10-methyl-delta-1,9-octalone-2- as perfume component - 01637U/02
- GIVA 23.06.71 GIVAUDAN L & CIE SA D23 E15 = J7 9043-587
Use of 10-methyl-delta-1,9-octalone-2- as perfume component - 01637U/02
- *GIVA 25.07.78 GIVAUDAN CORP D18 E15 *US 4183-363
2-Hydroxy methylene-cyclohexan-1-one(s) - 07166C/04
- GLAX 26.05.64 GLAXO LAB LTD B04 C03 D16 = IT 1035-001
Enzyme complex by fermentation of cytophaga ncib 9497 - 20616F/00
- GOLD 03.07.78 GOLDSCHMIDT TH AG B03 C02 D22 = DT 2829-137
1,3-Di-n-decyl-2-methyl-imidazolium chloride and bromide - 27893B/15
- *GRAC 07.11.72 GRACE W R CO C03 D13 *US 4183-953
Soln. preventing rot or mildew on seeds, silage and other feed - 07304C/04
- GRAC 24.05.78 GRACE W R CO D21 E36 = DK 7902-128
Dentifrice contg. hydrated silica gel polishing agent - 71785B/40
- *GRAH- 02.06.78 GRAHAM-SNIDER ENERG C04 D15 E17 H06 *EP ---7-168
Extracting methane gas by anaerobic digestion of e.g. livestock waste - 05824C/04
- *GRAH/ 20.03.78 GRAHAM K D12 *US 4183-118
Severing oil bag from poultry carcass - 07138C/04
- GUAL/ 27.06.78 GUALANDI P D22 = NL 7904-572
Deodorising compsn. for ash trays - 71759B/40
- GUAN 18.07.67 GUANO WERKE AG C03 D13 = DS 1692-434
Animal feed mineral supplements contg phosphates of - 04786H/00
- *GUMU/ 07.12.76 GUMUSHAN O H D18 *US 4183-364
Refining tobacco giving prod. free of tars resin and nicotine - 07167C/04
- *GUNS- 31.01.78 GUNSONS SORTEX LTD D13 *US 4183-967
Splitting pistachio nut shells - 07315C/04
- HAAR 19.04.74 HAARMANN & REIMER GMBH B05 D23 E14 (D13) = IT 1035-353
2-Alkoxy-4-(1-propenyl)-phenols prepn - 65705W/40
- HAAR 19.04.74 HAARMANN & REIMER GMBH D23 E14 G06 (D13) = IT 1035-354
Anethole prodn from anisole and propionaldehyde - 64049W/39

HAGU/

- *HAGU/ 06.04.78. HAGUENAUER G D21 *FR 2421-609
Skin cream contg. lanolin and Lanovasoline (RTM) - 05891C/04
- HAUN 05.04.78 HAUNI-WERKE KORBER KG D18 F06 = FR 2421-977
Plasticising cigarette filter tow - 75823B/42
- HAYB 08.07.68 HAYASHIBARA CO D13 = IT 1035-013
Pure maltose for foods - 16189R/10
- HAYB 12.07.68 HAYASHIBARA CO D16 = IT 1035-016
Pure maltose - 16191R/10
- HAYB 05.08.68 HAYASHIBARA CO D13 = IT 1035-018
Low molecular low viscosity starch conversion syrup - 14067R/09
- HEIN/ 17.03.78 HEINDL A D16 = DS 2811-782
Accelerated hop cone drying - 70216B/39
- *HEMB/ 05.04.78 HEMBERGER P D16 *DT 2814-663
Rapid fermentation reactor - 05538C/04
- HENK 19.06.78 HENKEL KG AUF AKTIEN D21 E19 = BE -877-049
Deodorant compsns. - 00157C/01
- HENK 26.06.78 HENKEL KG AUF AKTIEN D23 E13 = DT 2827-979
13,15-Di:oxa-bi:cyclo-(10,50)-heptadecane cpds. - 02158C/02
- *HENK 03.07.78 HENKEL KG AUF AKTIEN D15 E33 (A25) *DT 2829-143
Water softening aluminosilicate granulate cation exchanger prepn. - 05581C/04
- HENK 03.07.78 HENKEL KG AUF AKTIEN D15 E33 = DT 2829-165
Aluminosilicate granulate water softener prepn. - 03845C/03
- *HENK 03.07.78 HENKEL KG AUF AKTIEN D15 (D25) *DT 2829-230
Aluminosilicate granulate cation exchanger prepn. - 05584C/04
- *HENK 06.07.78 HENKEL KG AUF AKTIEN A97 D25 E19 (A25) *DT 2829-697
Nonionic surfactant detergent compsn. - 05614C/04
- HENK 06.07.78 HENKEL KG AUF AKTIEN A97 D25 E19 (A25) = EP ---7-049
Nonionic surfactant detergent compsn. - 05614C/04
- *HERM/ 29.05.78 HERMANN W D15 J01 *J5 4155-981
Filter for softening of liquid or complete desalination - C/04
- HOFF 18.04.74 HOFFMANN-LA ROCHE LTD B03 D21 E13 = CA 1069-054
Light-protective and sun-tanning cosmetic compsns. - 74371W/45
- HOKU- 12.09.77 HOKUREN FED AGRICULT D15 = US 4183-807
Reducing COD of effluent water - 25184B/13
- HOOK 05.03.68 HOOKER CHEM & PLAST D15 E36 F09 = DS 1900-998
Continuous production of chlorine dioxide - 63712Z/00
- *HYDR- 12.05.77 HYDROMER SOC C03 D13 *FR 2421-569
Mfr. of pet food partic. of meat based raw material - 05889C/04
- *HYDR= 16.12.77 HYDROLYSIS IND RES D16 *SU -662-556
Aminated lignin microbiological sorbent prepn. - 07120C/04
- HYNN- 30.05.78 HYNNAT OY D15 J01 = NO 7901-756
Continuous filter press for drying sludges - C/04
- *HYNN- 30.05.78 HYNNAT OY D15 J01 *SW 7904-704
Continuous filter press for drying sludges - C/04
- ICIC- 06.04.78 ICIC SPA D23 = FR 2421-727
Rotary cage continuous press to extract oil from seeds, etc. - 58060B/32
- ICIL 04.12.74 IMPERIAL CHEM INDS LTD D16 J01 = US 4183-787
Aerobic fermentator for liquid/gas separation - 46447X/25
- INFL 06.02.67 INT FLAVORS & FRAGR INC D13 = IT 1035-005
Artificial meaty flavourings obtd by - 47605R/27
- INFL 26.04.68 INT FLAVORS & FRAGR INC D13 E17 = IT 1035-015
Disulphides alkyl 1 alkenyl as onion flavoured agents - 17161R/11
- INFL 21.08.70 INT FLAVORS & FRAGR INC D13 E13 (D23) = IT 1035-039
Odoriferous pyrimidine derivs - 14519T/09
- INFL 28.07.71 INT FLAVORS & FRAGR INC C03 D12 E13 (D23) = IT 1035-049
Dithiazines and trithianes - 08693U/07
- INFL 03.03.77 INT FLAVORS FRAGRANCES D23 E15 (D13) = DS 2808-710
Methyl-thio-butyl-tri:methyl-cyclohexene and cyclo hexadiene - 67315A/38
- *INFL 27.04.77 INT FLAVORS & FRAGR INC A97 C03 D22 (A23) *US 4184-099
Compsn. for slow release of volatile cpds. at high temps. - 07353C/04
- *INFL 26.12.78 INT FLAVORS & FRAGR INC B05 D13 E15 *US 4183-965
Depressing bitter taste of coffee, hops and artificial sweeteners - 07313C/04
- INTE- 07.07.78 INTR INTERCOOPERAT C03 D12 #DT 2830-043
Continuous process and installation mfg. fodder from waste meat etc. - 82195A/46
- INTT 04.09.75 INT TELEPH & TELEG CORP D11 = SU -662-052
High complete protein wheat bread compsn. - 94193X/50
- *IVAN/ 11.04.75 IVANOVA N F A97 D15 F06 *SU -662-504
Removal of lubricant from polyamide fibre prodn. aq. effluent - 07077C/04
- *JAOR 02.06.78 JAPAN ORGANO KK D15 *J5 4157-770
Continuous neutralisation of regenerated waste soln. - 06615C/04
- JAPE 03.04.78 JAPAN EXLAN KK A88 D15 J01 (A14) = FR 2421-656
Mfg. acrylonitrile membrane e.g. for water desalting - 85048B/47
- JETC- 01.08.77 JET-CERAMIC DENTAL D21 = EP ---6-881
Dental prosthesis working model prodn. - 15961B/08
- JOHJ 03.04.78 JOHNSON & JOHNSON D22 = FR 2421-571
Diaper with contoured absorbent batt - 00389C/01
- *KANE 30.05.78 KANEBO KK A35 D15 (A14) *J5 4156-344
Treatment of polyvinyl alcohol-contg. waste liquor - 06387C/04
- KAOS 16.04.74 KAO SOAP KK A25 D24 E17 = J7 9043-522
Non-hygroscopic transparent soap prepn. - 02660A/02
- KAOS 07.11.75 KAO SOAP KK D21 E37 = J7 9044-727
Toothpaste compsn. for chemical removal of plaque - 36653Y/21
- *KAOS 13.07.78 KAO SOAP KK A96 D21 E19 *GB 2025-451
Soap contg. tri:chloro-hydroxy-di:phenyl ether antibacterial - 06033C/04
- KATA- 05.04.78 KATAYAMA CHEM WORKS A97 C03 D22 F09 (A25 D15) = FR 2421-620
Microbicide for industrial cooling water and paper pulp - 77643B/43
- *KAYA 01.06.78 KAYAKU ANTIBIOTIC RES C02 D16 *J5 4157-598
Plant growth regulating A-19-C substance - 06585C/04
- *KEMP/ 23.08.78 KEMPER K D11 *BE -878-375
Two-speed mixing or kneading machine partic. for bakery - 05515C/04
- KEND 27.12.76 KENDALL CO D22 = CA 1068-851
Multilayered cup-shaped breast pad for nursing mothers - 19360A/10
- KEND 03.07.78 KENDALL CO A96 D22 F04 (A11 A23) = DT 2923-847
Light, absorbent, disposable surgical dressing - 80855B/45
- *KENN/ 31.05.78 KEN N A97 D15 E17 (A14) *J5 4156-096
Synthesis of absorptive resins esp. for removing carbonyl cpds. - 06371C/04
- *KERJ 01.07.78 KERNFORSCHUNGS JULICH D16 *DT 2828-982
Aerobic and/or anaerobic tests on microorganisms - 05572C/04
- *KHLO/ 17.06.76 KHLOPOV LV D13 *SU -662-058
marshmallow sweets forming appts. - 06910C/04
- *KICO= 04.04.77 KIEV CONFECT FACTOR D13 *SU -661-335
Extent of confectionery glazing determination - 06890C/04
- *KIFO= 15.12.77 KIEV FOOD IND TECHN D12 *SU -662-054
Knife for meat mincer - 06906C/04
- KIRB- 24.09.69 KIRBY H & T & CO D22 E17 #J7 9044-722
Adipic acid or salts - 74169T/47
- KLEI/ 07.07.78 KLEIN M A97 D15 F09 J01 (A13 A17 A25 A88) = DT 2927-407
Absorption and filtration mat for waste liquids - 04079C/03
- KNAP 27.06.67 KNAPSACK AG D21 E34 = IT 1035-009
Maddrell salt preparation - 60322Z/00
- KOPP 23.04.73 KOPPERS CO INC D15 J01 = IT 1035-073
Fixed bed water purification filter - 81197V/47
- KORN- 23.04.76 FA KORNE A97 D15 M14 = GB 1559-725
Preventing oxidative corrosion in water pipes - 59540Y/34
- *KURE 24.05.78 KUREHA CHEM IND KK C03 D22 E14 *J5 4154-719
Preventing para-di:chlorobenzene agglomeration - 06092C/04
- *KURE 27.05.78 KUREHA CHEM IND KK C03 D22 E14 *J5 4154-720
Mfg. fine para-di:chlorobenzene particles - 06093C/04
- *KYOG 26.05.78 KYOWA LEATHER CLOTH A82 D22 E19 F09 (F06) *J5 4156-809
Lining material for interior walls - 06422C/04
- KYOW 30.11.76 KYOWA HAKKO KOGYO B05 D16 E16 = US 4183-786
(L)-Serine microbiological prodn. from glycine - 40795A/23
- KYOW 30.06.78 KYOWA HAKKO KOGYO K D12 = NL 7905-086
Pickled meat prod. prodn. - 01977C/02
- LABA 17.04.78 LABATT J LTD D11 = SF 7901-234
Film-forming lipoprotein complex for baking - 79337B/44
- LABA 17.04.78 LABATT J LTD D17 = SF 7901-235
Dry, odourless, tasteless vital gluten prepn. - 79336B/44
- *LEBE/ 17.11.77 LEBEDEV D P D16 J04 *SU -661-294
Dissolved gases determ. appts. - 06873C/04
- *LECH= 20.04.77 LENGDCHEM-PHARM D16 *SU -662-141
Microbial cells disintegration unit - 06951C/04
- *LEMI 08.08.77 LENINGRAD PLEKHANOV MINE D15 E19 J04 *SU -661-308
Quantitative determ. of oxyethylated surfactants - 06874C/04
- LESI 31.05.78 LESIEUR COTELLE SA D13 (D23) = SW 7904-650
Treating fats, esp. palm oil - 71796B/40
- *LIEB/ 08.07.78 LIEBERT E D21 E17 *DT 2830-093
8-14C n-alkane mixts. - 05651C/04
- LIFE- 04.06.75 LIFE SAVERS INC A97 D13 = CA 1068-973
Chewing gum base prodn - 14679X/08
- *LIFF/ 25.05.78 LIFF LJ A96 D21 *US 4183-898
Liquid make/up compsn. esp. simulating blood - 07281C/04
- *LIGG 29.08.74 LIGGETT GRP INC D18 E12 (E31 E33) *US 4183-362
Decreasing burn rate of tobaccos - 07165C/04
- *LINO- 05.04.78 LINOTEK OY D23 F09 *FR 2421-985
Washing crude tall oil soap from paper pulp mfr. - 05934C/04
- LIOC 25.12.76 LION DENTIFRICE KK A96 D21 = US 4183-917
Hair-conditioning compsn. - 12937B/07
- *LIOC 30.05.78 LION DENTIFRICE KK A96 D21 (A14) *J5 4155-691
Packing material for preventing dental caries - 06260C/04
- LIOY 19.09.72 LION FAT & OIL KK D12 E17 = J4 9048-868
Improving stickiness of marine prod. paste foodstuffs - 06659C/04
- *LIOY 19.09.72 LION FAT & OIL KK D12 E17 *J7 9043-592
Improving stickiness of marine prod. paste foodstuffs - 06659C/04
- *LIOY 01.06.78 LION FAT & OIL KK D25 E19 *J5 4157-109
Detergent compsn. giving good softness to cloth - 06458C/04

- *LIOY 01.06.78 LION FAT & OIL KK A97 D25 (A25) *J5 4157-110
Heavy duty liquid detergent compsn. - 06459C/04
- LKBP 31.05.78 LKB PRODUKTER AB B02 D16 J04 = SW 7806-296
Adenine triphosphate determ. by bio-luminescence - 71832B/40
- LOGA- 27.06.78 LOGAN SRL A96 D21 E17 (A26) = NL 7905-006
Non-foaming emollient for shaving - 60235B/33
- *MALF/ 20.01.78 MALFIONE J L D12 *FR 2421-559
Power driven hand tool to remove scales from fish - 05884C/04
- *MAMY/ 06.12.77 MAMYKIN V K A97 D12 *SU -662-055
Sausage drying appts. - 06907C/04
- *MART/ 08.04.78 MARTINEZ R D11 *FR 2422-151
Weighting-out machine for dough - 05945C/04
- *MASW 15.07.78 MASCH BUCKAU R WOLF D17 *GB 2025-260
Ring for sugar cane mill roll - 05980C/04
- MATU 22.12.76 MATSUSHITA ELEC IND KK D13 = US 4183-293
Fruit juice extractor - 48151A/27
- MAZN 25.03.71 MARUZEN OIL KK B02 C02 D16 = J7 9044-758
Oxychlororaphin prodn - 82597T/52
- *MEAT= 27.03.65 MEAT IND RES INST D13 *SU -179-180
Hard wood smoke condensate treatment - 06776C/04
- MEAT= 17.04.74 MEAT IND RES INST D12 = DS 2516-995
Carcase skinning conveyors in meat prodn. line - 74440W/45
- *MEAT= 09.12.77 MEAT IND RES INST D12 *SU -662-099
Animal brain sub:commissure-organ removal - 06917C/04
- *MEAT= 21.06.78 MEAT IND RES INST D12 *DT 2925-095
Flow line for sausage mfr. - 05678C/04
- MEIJ 01.03.76 MEIJI SEIKA KAISHA D11 = J5 2105-241
Instant bread mix - 06731C/04
- *MEIJ 01.03.76 MEIJI SEIKA KAISHA D11 *J7 9044-733
Instant bread mix - 06731C/04
- *MEIJ 25.05.78 MEIJI SEIKA KAISHA C03 D16 *J5 4154-701
Antibiotic SF-2049 - 06087C/04
- *MEIJ 30.05.78 MEIJI SEIKA KAISHA B04 D16 *J5 4157-501
Antibiotic BN 229-A - 06538C/04
- MERI 03.08.70 MERCK & CO INC B05 C02 D22 E16 = DS 2136-067
Fluorinated alanines - 11126T/07
- MERI 13.04.78 MERCK & CO INC A11 D16 H01 (D13 D21) = J5 4154-800
Low calcium xanthan gums - 79440B/44
- MERI 21.04.78 MERCK & CO INC D16 = SF 7901-292
Testing for microorganisms on surfaces - 79580B/44
- MEYN/ 28.11.76 MEYN P D12 = US 4183-117
Machine for cleaning fowl stomachs when giblets are removed - 19713A/11
- *MICH/ 18.12.75 MICHAELS E B D21 E16 *US 4183-952
Antimicrobial compsns. for inhibition of body odour - 07303C/04
- MILE 28.10.77 MILES LABORATORIES INC D13 = DS 2842-070
Juicy self-basting sausage-like food prods. - 07733B/04
- MILK= 01.06.78 MILK IND RES INST D14 J02 = SW 7904-794
Centrifugal liquid homogeniser - 91385B/51
- MINN 02.06.78 MINNESOTA MINING CO A96 D21 E11 (A14 A26) = SW 7904-701
Oligomeric methacrylated siloxane prepolymer used in dental filler - 91399B/51
- MIRK- 05.05.78 MIRKOZ DIESEL ES HU D15 J01 = SF 7901-445
Flotation separator partic. to skim surface oil from sewage - 68156B/38
- *MITB 31.05.78 MITSUI SHIPBUILDING ENGG D15 J01 *J5 4155-982
Reverse osmosis device for desalination of sea water - 06301C/04
- MITK 20.12.77 MITSUI TOATSU CHEM B02 C02 D23 E13 #US 4157-333
Piperonal prepn. - 11545A/06
- MITN 15.12.75 MITSUBISHI GAS CHEM IND A97 D16 E17 = J7 9044-757
L-dextro-rotatory-tartaric acid and salt prepn. - 81621X/44
- *MITR 29.05.78 MITSUBISHI RAYON KK A88 D15 *J5 4156-268
Treatment of emulsified oil-contg. waste waters - 06383C/04
- *MITR 29.05.78 MITSUBISHI RAYON KK A14 D22 F06 *J5 4156-900
acrylic fibres having disinfectant properties - 06450C/04
- MITU 14.11.72 MITSUBISHI CHEM IND KK A97 D15 = J7 9043-477
Polymer coagulant for purifcn of waste water - 23022W/14
- MOEH/ 11.07.78 MOEHRLE D B A96 D22 #GB 2025-231
Reusable menstrual tampon - 21564B/11
- *MOEP= 07.12.77 MOSC EPIDENIOLOGY B04 D16 *SU -662-104
Soluble antigen for differential whooping cough diagnosis - 06922C/04
- *MOFO= 18.12.73 MOSC FOOD IND TECHN INST D13 *SU -561-314
Porous chocolate prodn. appts. - 06792C/04
- *MOFO= 18.12.73 MOSC FOOD IND TECHN INST D13 *SU -561-315
Porous confectionery products e.g. chocolate prepn. - 06793C/04
- *MOKR= 18.12.73 MOSC KRASNYI OKTYABR D13 *SU -561-314
Porous chocolate prodn. appts. - 06792C/04
- *MOKR= 18.12.73 MOSC KRASNYI OKTYABR D13 *SU -561-315
Porous confectionery products e.g. chocolate prepn. - 06793C/04
- MOLI- 27.06.78 MOLINIER SA D22 F04 = DT 2925-165
Knitting elastic dressing bands with chain warps - 00460C/01
- MOLI- 27.06.78 MOLINIER SA D22 F04 = NL 7903-793
Knitting elastic dressing bands with chain warps - 00460C/01
- *MOMD 12.10.72 MOSCOW MEAT DAIRY INST D12 *SU -511-740
Meat loaf prodn. from comminuted meat, lard, spices and water - 06786C/04
- *MOMD 21.12.77 MOSCOW MEAT DAIRY INST D12 *SU -662-056
Children's meat products steriliser - 06908C/04
- *MONO= 22.08.75 MONOMER RES INST D15 *SU -662-505
Industrial waste water purifcn. - 07078C/04
- MONS 11.04.74 MONSANTO LTD A88 D18 = IT 1035-240
Polypropylene foam cigarette filters - 02254X/02
- MONS 24.05.78 MONSANTO CO B04 D16 = DK 7902-120
Urokinase prodn. in increased yields - 86321B/48
- *MOSK/ 04.08.75 MOSKETI K V B05 D21 *SU -662-097
Deep acute caries dental treatment - 06915C/04
- *MOSU 30.09.76 MOSCOW LOMONOSOV UNIV A97 B04 D16 (A14) *SU -662-557
Stabilised complexes of oxido-reductase enzymes prepd. - 07121C/04
- MULL/ 04.07.78 MULLER A D16 = DT 2829-308
Extracting hops with carbon dioxide under specified conditions - 77230B/43
- MUNK/ 22.03.77 MUNK W G D13 = GB 1559-764
Freeze-dried fruit slices - 70970A/40
- NALC 20.12.76 NALCO CHEMICAL CO D15 F09 (D16) = CA 1069-015
Preventing slime deposition in industrial water systems - 79163Y/44
- NATR 27.08.71 NATIONAL RES DEV CORP D16 J04 = J7 9043-597
Biochemical reaction with magnetisable active component carrier - 46856U/33
- NATR 06.09.77 NATIONAL RES DEV CORP C03 D13 = EP ---6-905
Treating fish to produce auto-immune response - 22497B/12
- NATR 28.09.77 NATIONAL RES DEV CORP B04 C03 D16 = EP ---6-916
Increasing the immunogenicity of an antigen - 29725B/15
- NATT 20.03.78 NAT STARCH & CHEM CORP A11 D17 (A97 D13) = US 4183-969
Cold water swelling starch prodn. - 74669B/41
- NATT 05.05.78 NAT STARCH & CHEM CORP A96 D21 (A13 A14) = J5 4155-185
Aerosol hair spray compsns. - 82835B/46
- NATT 15.05.78 NAT STARCH & CHEM CORP A11 D13 F09 (A97) = J5 4155-290
Reagent soln. for efficient, pollution-free starch phosphorylation - 67935B/37
- NEST 06.10.70 MAGGI AG D13 = DS 2149-682
Food additive - 26029T/17
- NEST 16.04.73 SOC PROD NESTLE SA D13 = DS 2462-710
Semicontinuous prodn. of cheese from milk - 76878V/44
- NEST 24.11.75 SOC PRODS NESTLE D13 = CA 1068-975
Aromatising coffee with noncondensable volatile coffee aroma gas - 38492Y/22
- NEST 02.02.76 SOC ASS PROD NESTLE D13 = US 4183-963
Continuously impregnating food material with brine or sugar syrup - 46965Y/27
- NEST 09.08.76 MAGGI AG D14 J04 = DS 2732-130
Free-running material fluidity measurement - 14353A/08
- NEST 11.05.78 SOC PROD NESTLE SA D13 = SF 7901-461
Protein esp. for children's diets and cheese mfr. - 84384B/47
- *NICH- 31.05.78 NICHIDEN KAGAKU KK A96 D22 *J5 4157-788
Liq.-absorbent bodies e.g. nappies, sanitary towels or tampons - 06627C/04
- NIHA- 09.09.77 NIPPON HAIGO SHIRYO D13 = J7 9044-739
Strengthening agent for coating egg-shells - 36017B/19
- NIIG 13.08.75 NIIGATA ENG KK D15 = DS 2636-535
Aerobic compost fermentation from organic sludge - 14994Y/09
- *NIRA 30.05.78 UNITIKA KK D15 E36 M11 *J5 4155-945
Recovering selenium component in electrolytic colouring of aluminium - 06289C/04
- NISA- 00.00.75 NIPPON SANGYO KIK D21 = J5 1102-003
Prodn. of coloured, patterned bar of soap - 06689C/04
- *NISA- 00.00.75 NIPPON SANGYO KIKAI D21 *J7 9044-007
Prodn. of coloured, patterned bar of soap - 06689C/04
- NISB 22.06.76 JAPAN TOBACCO & SALT PUB D16 = J7 9044-755
Medium for tissue culture - 11591A/06
- NISH/ 00.00.78 NISHINO T D15 J03 = J7 9044-676
Device for electrolysed water prodn. - 03099B/02
- NISW 31.03.77 NISSHIN OIL MILLS KK D13 = J7 9044-729
Frozen fried tenpura prodn. - 86807A/48
- NISW 15.07.77 NISSHIN OIL MILLS KK D13 (D12) = J7 9044-736
Frozen minced fish meat prepn. - 23046B/12
- NISW 24.08.77 NISSHIN OIL MILLS KK D13 = J7 9044-738
Pasty food mfr. using soybean protein - 32362B/17
- NITA- 12.09.77 JAPAN TAX ADMIN D15 = US 4183-807
Reducing COD of effluent water - 25184B/13
- *NITN 05.07.78 NIHON TOKUSHU NOYAKU SEI C01 D22 *EP ---7-020
O-Poly:haloalkyl-O,S-di:alkyl phosphono:thiolate derivs. - 05746C/04
- *NIVL 31.05.78 JAPAN VILENE CO A96 D22 *J5 4157-788
Liq.-absorbent bodies e.g. nappies, sanitary towels or tampons - 06627C/04
- NORD- 21.06.78 NORDFLEISCH AG D12 = BE -877-142
Mechanical application of classification stamp to slaughtered carcass - 04556C/03
- NOVO 04.07.78 NOVO INDUSTRIA/S D16 (D25) = DT 2926-808
Protease concentrate for use in washing compsns. - 03854C/03

OAGI-

- *OAGI-09.11.72 OAGISHOGIKK D13 *J7 9043-589
Somen prepn. from wheat flour - 06657C/04
- OETK-14.07.78 OETKER TIEFKUHLKOST GMPH D13 = GB 2025-197
Prepn. of frozen vegetable mixts. for mixing with water - 49054B/27
- *OKLA-14.04.78 OKLAHOMA STATE UNIV D13 *US 4183-966
High protein snack food mfr. - 07314C/04
- OLIN 02.05.74 OLIN CORP A60 C02 D22 E13 = IT 1035-419
Antimicrobial bis-(2-pyridyl-1-oxide)-disulphide - 47579W/28
- OLIN 29.06.78 OLIN CORP A26 D25 E11 (A25 A60 A97) = BE -877-374
Alkoxy-bis(trialkoxysiloxy)-silane surfactant - 56220B/30
- OLIN 29.06.78 OLIN CORP A26 D25 E11 (A25 A60 A97) = NL 7904-586
Alkoxy-bis(trialkoxysiloxy)-silane surfactant - 56220B/30
- OREA 05.04.78 L'OREAL SA D21 E14 = FR 2421-878
Substd. benzylidene camphor cpds. for cosmetic compns. - 67033A/38
- OREA 06.04.78 L'OREAL SA A96 D21 E24 = FR 2421-606
Two/part hair colouring using oxidn. dyes - 73617B/41
- OREA 06.04.78 L'OREAL SA D21 E24 = FR 2421-607
Two/part hair colouration using oxidn. and direct dyes - 73618B/41
- OREA 06.04.78 L'OREAL SA D21 E24 = FR 2421-608
Oxidation dye compns. for hair dyeing - 73619B/41
- *OREA 06.04.78 L'OREAL SA D21 E24 *FR 2421-869
Substd. para-phenylene:di:amine cpds. for hair dyeing compns. - 05915C/04
- *OREA 06.04.78 L'OREAL SA A97 D21 E24 F06 (D18) *FR 2421-870
Meta-phenylene di:amine derivs. - 05916C/04
- OREA 06.04.78 L'OREAL SA D21 E24 = FR 2421-872
Substd. alkoxyalkyl-para-phenylene:di:amine cpds. - 73615B/41
- OREA 06.04.78 L'OREAL SA D21 E34 = FR 2421-880
(N)-Hydroxyalkyl-(N)-mesyl:aminoalkyl-para phenylene:di:amine cpds. - 73616B/41
- OREA 23.06.78 L'OREAL SA A96 D21 = BE -877-151
Cosmetic compsn. contg. tetra:polymer - 01949C/02
- *OREA 12.07.78 L'OREAL SA A96 D21 E19 *GB 2025-415
Compsn. for treating greasy skin and hair - 06019C/04
- *OREA 12.07.78 L'OREAL SA D21 *GB 2025-613
Assessing surface oxidn. of keratin fibres - 06066C/04
- *OSTE-29.06.78 OSTEO AG A96 D21 (A14) *EP ---7-287
Fibre-reinforced bone cement based on plastics, esp. PMMA - 05878C/04
- PALL 15.05.78 PALL CORP A23 D15 J01 (A88) = SF 7901-532
Skinless hydrophilic alcohol insoluble polyamide membrane - 86275B/48
- PARC-22.06.78 PARCOR B05 C03 D21 = BE -877-080
Mucolytic S-benzyl-L-cysteine derivs. - 00431C/01
- PAUL/12.04.76 PAULUCCI JF D11 = DS 2716-163
Continuous electric baking oven - 76232Y/43
- PENN 05.04.78 PENNWALT CORP D11 E34 (D17) = US 4183-972
Potassium bromate powder additive to flour and starch - 75603B/42
- PERD-23.01.74 PERDENT GMBH A96 D21 = CA 1069-239
Strong high gloss dental material - 55845W/34
- PERS 03.04.75 PERSONAL PRODUCTS CO A96 D22 #IT 1035-171
Biodegradable impermeable sheet for hygienic use - 72458W/44
- PERS 28.04.78 PERSONAL PRODUCTS CO D22 = SF 7901-375
Catamenial tampon with increased absorptive capacity - 79123B/44
- PFIZ 28.03.67 PFIZER CORP D13 = IT 1035-007
Meat flavoured rice or noodles - 62046R/35
- PFIZ 26.01.71 PFIZER INC B02 D16 = DS 2157-693
Cephalosporin c extraction - 62990T/40
- PFIZ 05.04.74 PFIZER INC A11 D13 (A97 D17) = IT 1035-163
Polycondensn. of saccharides to sugar, flour and starch substits. - 69274W/42
- PFIZ 16.04.76 PFIZER INC B02 C02 D22 #DS 2636-966
(6)-Acylamino-(3)-tetrazolyl-penamams useful as antibacterials - 14581Y/09
- *PFRJ 07.07.78 PFRIMMER J CO A96 D22 (A17) *DT 2829-871
Sterilisable medical equipment pack - 05630C/04
- PHIP 30.09.75 PHILLIPS PETROLEUM CO C03 D16 H04 (D13) = CA 1069-072
Single-cell protein prod. from thermophilic bacillus strains - 75487X/40
- *PIAZ/23.04.75 PIAZZA P D15 *IT 1035-444
Potable water purifier of portable type - C/04
- POLH 03.04.78 POLYCHROME CORP A96 D21 E19 G02 (A11 A82) = FR 2421-604
Non-carcinogenic nail varnish compsn. - 75586B/42
- PRIN/25.07.75 PRINCE JE D15 = CA 1069-227
Sludge digester with recirculation of sludge - 97879X/52
- PROC 21.12.70 PROCTER & GAMBLE CO D13 = IT 1035-044
Synthetic meat - 43245T/27
- PROC 16.04.74 PROCTER & GAMBLE CO D25 E17 F06 = IT 1035-289
Textile softening compsn. for automatic driers - 72499W/44
- PROC 06.06.75 PROCTER & GAMBLE CO A94 D22 F04 (A23 A96) = CA 1068-889
Continuous mfr. of composite non woven matting - 94323X/51
- PROC 30.10.75 PROCTER & GAMBLE CO D22 F07 = GB 1559-710
Laminated disposable diaper - 33107Y/19
- PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 = DT 2857-153
Detergent compsn. water-releasably loaded on a substrate - 02340B/02
- *PYAR= 22.12.77 PYARNU SUPPLY MACH D13 *SU -662-154
Determination of fat content in milk - 06959C/04
- QPPP 19.01.72 Q.P. CORP D13 = J4 8077-059
Paste like foodstuff - 06658C/04
- *QPPP 19.01.72 Q.P. CORP D13 *J7 9043-591
Paste like foodstuff - 06658C/04
- *QUAK 19.06.71 QUAKER OATS CO D13 *IT 1035-035
High protein content foodstuff prepn. - C/04
- QUAK 02.06.78 QUAKER OATS CO C03 D13 #SW 7806-488
Base compsns. for pet foods - 42159A/24
- *QUAL/06.11.78 QUALINO U D11 *IT 1033-022
Twisted pastry prodn. appts. - C/04
- RALS 05.04.78 RALSTON PURINA CO C03 D13 = FR 2421-562
Animal feed-block contg. magnesium oxide and ferrous sulphate - 79029B/43
- RALS 05.04.78 RALSTON PURINA CO C03 D13 = FR 2421-563
Prepn. of molasses based animal feedstuff blocks - 75604B/42
- RALS 05.04.78 RALSTON PURINA CO B05 C03 D13 = FR 2421-564
Reducing iron deficiency in suckling piglets - 75608B/42
- RAYT 24.05.74 RAYTHEON CO D15 J04 = IT 1035-364
Organic carbon analyzer system - 51840X/27
- *REFR= 31.10.75 REFRIG IND RES INST D12 *SU -587-775
Animal source food prods. quality control - 06795C/04
- RETO 28.04.71 REYNOLDS LEASING D18 = SU -661-994
Tobacco treatment process - 48509T/30
- REXO 31.05.78 REXOLIN CHEM AB C03 D15 E19 F09 = NO 7901-794
N-Aminomethyl-1,3-propane di:amine penta:acetic acid - 91333B/51
- REXO 31.05.78 REXOLIN CHEM AB C03 D15 E19 F09 = SW 7904-273
N-Aminomethyl-1,3-propane di:amine penta:acetic acid - 91333B/51
- *RHKA 18.07.78 RHEINISCHE KALKSTEIGMBH C04 D15 *EP ---7-011
Sewage sludge mixer and granulator - 05742C/04
- RHON 19.04.74 RHONE-POULENC INDUSTRIES B04 D16 E11 J04 = IT 1035-382
Silane-grafted inorganic carriers - 72834W/44
- RHON 22.04.74 RHONE-POULENC INDUSTRIES D16 E14 = IT 1035-406
Dextro-amino acid oxidase separation and purification - 72841W/44
- RHON 09.12.75 RHONE-POULENC INDUSTRIES A25 D25 (A97) = DS 2655-551
Polyurethane with hydrophobic and hydrophilic gps. - 41678Y/24
- RIES/01.06.78 RIESS G A96 D21 = SW 7811-746
Dental surgical implant for securing crowns, bridges etc. - 24021B/13
- RIKA 08.10.75 RIKAGAKU KENKYUSHO B04 D16 = J7 9044-756
Substrate-specific endonucleases - 27592Y/16
- RIKA 08.03.76 INST PHYS CHEM RES A97 C03 D16 (A23 D13) = J7 9044-754
Cultivation of an arthrobacter bacteria - 75196Y/42
- *ROME= 09.12.77 ROST MEDICAL INST, D12 *SU -662-099
Animal brain sub:commissure-organ removal - 06917C/04
- *ROSS/05.04.78 ROSSIGNOL JF D13 *FR 2421-566
Vacuum immersion of mushrooms etc. prior to canning for freezing - 05887C/04
- ROST-05.07.78 VU ROSTLINNE VYROBY C03 D16 = DT 2927-224
Protecting sugar beet against damping off - 80863B/45
- ROUS 07.04.78 ROUSSEL UCLAF B02 D22 = FR 2421-907
Amino:thiazolyl-acetamido cephalosporin derivs. - 73624B/41
- RUTI-16.04.75 RUTIR SRL C04 D16 = IT 1035-347
Stable odour-free organic fertilizer - 66822X/36
- SAKA/13.08.75 SAKAIT D16 = J7 9044-752
Yeast microbial cell components extrn. - 22805Y/13
- SAKA/13.08.75 SAKAIT D16 = J7 9044-753
Cytolysis of living yeast cells e.g. of genera Saccharomyces - 22806Y/13
- *SAMI-06.04.78 SAMIFI BABCOCK SPA D13 *FR 2421-560
Controlling atmos. of cold store for fruit and vegetables - 05885C/04
- *SANE 03.08.68 SAN EI CHEM IND KK A97 D13 *J7 9044-740
Gelled food prodn. from carrageenan - 06732C/04
- SANO 08.06.78 SANDOZ AG B04 C03 D16 = SW 7904-754
Antibiotics S 54832 from Micromonospora globosa NRRL 11299 - 91518B/51
- SAOB 08.09.75 SANKYO SEIKI MFG KK D15 J03 = J7 9043-994
Electrolytic waste water treating device - 28318Y/16
- *SASN 31.05.78 SANSHIN SEISAKUSHO D15 J03 M11 *J5 4155-979
Metal treatment aq. waste purificn. - 06299C/04
- SATO-18.12.70 SATO SHOKUHI KOGYO B05 D16 (D13) = IT 1035-043
Alcohol contg solids - 44556T/28
- SCHA/03.04.78 SCHATTLNER RI D22 E19 = FR 2421-619
Ambient sterilising compsn. contg. glutaraldehyde and phenol - 72737A/41
- *SCHE 07.11.77 SCHERING CORP B03 D21 *US 4183-923
3-Alkane-sulphonyloxy-azetidine derivs. - 07294C/04
- *SCHR/05.07.78 SCHREIBER H D15 J03 *DT 2829-530
Electrodialytic element - 05599C/04
- *SCHW-12.07.78 SCHWARZKOPF H GMBH D21 E24 *DS 2830-497
Hair-dyeing compsn. for yellow and brown shades - 05529C/04

- SEIB 13.08.75 SEIBU CHEMICAL IND D15 = DS 2636-535
Aerobic compost fermentation from organic sludge - 14994Y/09
- *SHIK- 02.06.78 SHIKOKU KAKOKI KK A92 D14 (A32) *J5 4157-161
Bottling device for milk or bean curd raw material - 06490C/04
- *SHIK- 02.06.78 SHIKOKU KAKOKI KK A92 D14 (A32) *J5 4157-171
Mfg. bottles for bottling milk or bean curd raw material - 06497C/04
- *SHIM/ 01.06.78 SHIMOKAWA M D15 *J5 4157-772
Fresh water prodn. and concn. by refrigeration - 06616C/04
- SHIO 05.06.72 SHIONOGI KK B04 D16 = J7 9043-600
Antibiotic A-300 prepd. from *Streptomyces hygroscopicus* - 44311V/24
- SILV- 03.04.74 SILVERSON MACH LTD D15 J02 = IT 1035-157
Mixer for liquids contg. solids, esp. fibres - 71109W/43
- *SITE= 27.12.76 SIBE TECHN INST D16 *SU -662-043
Breaking down cellular film of chlorella - 06902C/04
- SKFK 19.04.78 SVENSKA FLAKTFABRIK D22 = SF 7901-260
Disinfection of hospital equipment with hot damp air - 64720B/36
- SMHL 25.05.78 SIMON HARTLEY LTD D15 = NO 7900-075
Thickening activated sludge - 40664B/22
- SMIK 22.12.75 SMITH KLINE FR CAN B04 D16 = CA 1069-030
Oxidase reagent solns. for detecting *Neisseria* colonies - 28939Y/16
- SMIN 01.11.74 SMITH & NEPHEW RES A94 D22 F04 = CA 1068-860
Nonwoven fabric prodn. - 56938X/30
- SMIN 26.04.78 SMITH & NEPHEW LTD A96 D22 = SF 7901-365
Water soluble terpolymers contg. piperidinium methyl units - 66366B/37
- SNAM 24.05.78 SNAMPROGETTI SPA D14 J01 (D23) = NO 7901-663
Continuous solid-liq. extn., esp. of vegetable material - 85965B/48
- SODR- 30.05.78 SODRA SKOGSAGARNA A D22 F09 = SW 7806-233
Feed arrangement of continuous sheets of pulp to dry-laying machine - 44035B/24
- *SOLD/ 01.12.77 SOLDATIG B02 D21 *US 4184-039
Chloro-substd. benzothiadiazine 1,1-dioxide(s) - 07352C/04
- *SOUS- 04.04.78 SOUSSANA SA A97 D12 F09 *FR 2421-726
Bonded fibrous sheet with gas permeability similar to gut - 05907C/04
- SPOR= 19.04.78 SPORT CAMPING ARTIC A97 D18 (A11) #SF 7801-207
Waterproofing agent for leather - 00669C/01
- SQUI 22.06.70 SQUIBB E R & SONS INC B05 D15 E14 (B03 E13) = J5 4157-550
Tetrahydronaphthoxypropanolamines - 01836T/02
- STAH/ 23.01.75 STAHMANN M A C03 D13 (D16) = CA 1068-974
Coagulation of plant protein - 46105X/25
- STAM 26.04.74 STAMICARBON BV D15 = IT 1035-463
Aeration of effluent in biological treatment plants - 75720W/46
- STAM 02.03.77 STAMICARBON BV D15 (D16) = US 4183-809
Effluent water treatment to remove nitrogenous and organic materials - 63415A/36
- STAM 17.05.77 STAMICARBON BV D15 = US 4183-810
Biological treatment of nitrogenous industrial wastes - 88094A/49
- *STAU 31.05.78 STAUFFER CHEMICAL CO D25 *J5 4157-111
Alkaline detergent composition - C/04
- *STAU 10.07.78 STAUFFER CHEMICAL CO D13 *EP ---7-054
Whippable compsn. which can replace egg albumen in baking - 05761C/04
- STEN/ 26.06.78 STENGELIN V D15 = DT 2827-996
Purificn. of waste water with intermittently immersed bacteria beds - 79133B/44
- STER 05.06.78 STERLING DRUG INC B05 C01 D22 = SW 7904-687
Alkyl and aryloxy-alkyl di-alkyl phosphonate(s) - 87592B/49
- STER= 08.06.76 STERLITAMAK ISOPREN A60 D13 E14 F06 #J7 9043-486
2,6-Di-tert-butyl 4-methyl phenol prepn. by hydrogenolysis - 96224X/52
- STRA- 16.10.70 STRAKOSCH ZUCKERFAB D17 = DS 2115-126
Purifying sugar solns - 27825T/18
- SULA- 20.08.79 SUOMEN LAAKETEHDAS B06 D13 = SF 7902-577
Compsns. contg. desired sodium potassium magnesium calcium ratios - 49035B/27
- SULA- 20.08.79 SUOMEN LAAKETEHDAS B06 D13 = SF 7902-578
Compsns. contg. desired sodium potassium magnesium calcium ratios - 49035B/27
- SULA- 20.08.79 SUOMEN LAAKETEHDAS B06 D13 = SF 7902-579
Compsns. contg. desired sodium potassium magnesium calcium ratios - 49035B/27
- SULA- 20.08.79 SUOMEN LAAKETEHDAS B06 D13 = SF 7902-580
Compsns. contg. desired sodium potassium magnesium calcium ratios - 49035B/27
- SULA- 20.08.79 SUOMEN LAAKETEHDAS B06 D13 = SF 7902-581
Compsns. contg. desired sodium potassium magnesium calcium ratios - 49035B/27
- SULA- 20.08.79 SUOMEN LAAKETEHDAS B06 D13 = SF 7902-582
Compsns. contg. desired sodium potassium magnesium calcium ratios - 49035B/27
- SULA- 20.08.79 SUOMEN LAAKETEHDAS B06 D13 = SF 7902-583
Compsns. contg. desired sodium potassium magnesium calcium ratios - 49035B/27
- SULZ 03.04.78 SULZER FRERES SA D16 = FR 2421-848
Activated sludge preservation - 73792B/41
- SUMO 15.10.75 SUMITOMO CHEMICAL KK C02 D22 E13 = SU -661-992
(N)-Dihalophenyl-cyclopropane-dicarboximides - 27167Y/16
- *SUMO 29.05.78 SUMITOMO CHEMICAL KK D25 E13 *J5 4157-578
Conversion of alpha to beta-type bis:triazinyl:amino:stilbene derivs. - 06575C/04
- *SUMO 01.06.78 SUMITOMO CHEMICAL KK D22 E14 *J5 4157-560
1-Tri:aryl:methyl:imidazole prepn. - 06566C/04
- SUMO 01.06.78 SUMITOMO CHEMICAL KK C02 D22 = J5 4157-561
Prepn. of antimicrobial N-trityl-imidazole cpds. - 92203B/51
- SUMO 01.06.78 SUMITOMO CHEMICAL KK C02 D22 = SW 7904 739
Prepn. of antimicrobial N-trityl-imidazole cpds. - 92203B/51
- SUPE- 07.06.78 SUPER IRIDE SPA D22 J04 = SW 7904-795
Hygienic clothing, e.g. sanitary towel, absorbent wad or undergarment - 71761B/40
- SUSO 25.04.73 SUOMEN SOKERIOY A91 D17 E13 = SF 7902-520
Ion exchange recovery of xylose or xylitol from pentose mixts. - 80301V/46
- SVSO 03.04.78 SVENSKA SOCKERFAB AB B04 D16 = FR 2421-909
Modification of enzyme characteristics - 82524B/45
- SWIF 28.03.77 SWIFT & CO D12 = CA 1068-855
Poultry tendon extraction system - 73066A/41
- SYNT 30.05.78 SYNTEX (USA) INC B03 C02 D22 (D13) = J5 4157-562
2-Phenoxy and 2-phenylthio-4-phenyl-N-butyl imidazole(s) - 89810B/50
- *SYNT= 30.12.77 SYNTH NATUR PERFUME D23 E17 *SU -662-542
Citral intermediate prepn. for vitamin and scent mfr. - 07106C/04
- TAKS 10.06.77 TAKASAGO PERFUMERY KK D23 E13 = US 4183-831
Perfumes with natural aroma - 01335B/01
- *TAKS 25.05.78 TAKASAGO PERFUMERY KK D23 E15 *J5 4154-733
Cyclohexenyl-aldehyde derivs. - 06100C/04
- TATL 26.10.73 TATE & LYLE LTD D17 E13 = DS 2449-870
6,6'-Dichloro-6,6'-dideoxy-sucrose prodn. - 30990W/19
- TEEP 18.04.78 TEEPAK INC A32 D12 (A11 A97) = SF 7804-007
Forming fibrous tube for sausages - 64645B/35
- TEEP 21.04.78 TEEPAK INC A97 D12 (A11) = SF 7804-008
Tough, artificial casings of fibrous structure - 64701B/36
- *TEIN- 07.04.75 CIA TEC IND PETROLI D16 *IT 1035-207
High pressure aerobic fermentation - C/04
- TEIS/ 24.12.70 TEISSEDRE C D16 = IT 1035-046
Red wine-making process - 76165T/48
- TETR 05.04.78 TETRA PAK INT AB D22 = FR 2421-803
Packaging strip sterilising device - 75582B/42
- THIO 03.05.74 THIOKOL CHEMICAL CORP A91 D15 E19 = IT 1035-174
Quat. ammonium poly-electrolytes with formal, acetal or ketal gp - 76103W/46
- TILL/ 30.05.78 TILLIE E D15 H03 = NO 7901-760
Pollution control using binders - 03913C/03
- TIPE- 04.04.78 TIPE REVENT AB D11 = FR 2421-558
Grill oven with access in one vertical side - 58051B/32
- TOSU- 04.05.76 TOYO SUISAN KK D13 = J5 2134-035
Mfr. of packed sekihan - 06730C/04
- *TOSU- 04.05.76 TOYO SUISAN KK D13 *J7 9044-730
Mfr. of packed sekihan - 06730C/04
- TOXN 25.05.78 TOYO JOZO KK B02 C02 D16 = DK 7901-770
Neplanocin purine nucleoside antibiotics from *Ampullariella* spp. - 87915B/49
- TOXN 25.05.78 TOYO JOZO KK B02 C02 D16 = J5 4154-792
Neplanocin purine nucleoside antibiotics from *Ampullariella* spp. - 87915B/49
- *TOXN 30.05.78 TOYO JOZO KK B04 D16 *J5 4157-502
Antibiotic A-10947 used as growth accelerator for animals - 06539C/04
- TOXN 17.06.78 TOYO JOZO KK B04 D16 E17 = GB 2025-426
Lactate oxidase enzyme specific to L-lactic acid - 01925C/02
- TOYJ 03.02.76 TOYO SODA MFG KK D22 E33 = J7 9044-280
Bleaching powder with high concn. of available chloride - 66027Y/37
- TOYM 30.07.76 TOYOBOK KK A11 D15 F01 (A25 A32) = J7 9044-771
Hollow fibre membrane material prodn. - 26285A/14
- *TOYW 29.05.78 TOYOTA CENT RES & DEV D16 E19 J04 *J5 4155-890
Enzymatic fractional determ. of water-soluble aldehyde(s) - 06269C/04
- TOZI- 12.09.77 TOHO ZINC KK D15 = US 4183-807
Reducing COD of effluent water - 25184B/13
- *TREE- 12.10.77 TREE TOP INC D13 *US 4183-292
Apparatus for producing dried fruit products - 07156C/04
- TRIO- 30.05.78 TRIO ENGINEERING LT D12 = SW 7904-675
Gutting and cleaning tool for fish - 91364B/51
- *UCEL= 03.05.77 UKR CELL-PAPER IND A97 D15 F09 *SU -662-506
Paper mill aq. effluent clarification - 07079C/04
- *UCOM= 21.09.76 UKR COMMUNAL BUILD D15 J01 *SU -662-117
Sedimentation of suspended particles in effluents - 06928C/04
- UHDE 16.11.74 UHDE F GMBH D16 = SU -662-018
Protein prodn. by fermentative process - 40329X/22
- UMAS/ 29.05.78 UMASE N A91 D15 E34 (A14 E33) = J5 4155-186
Compsn. for flocculating hydrophilic colloidal particles - 88090B/49

- UNIC 26.04.74 UNION CARBIDE CORP D15 = IT 1035-472
Removing hydrogen sulphide from waste fluid - 27291W/16
- * UNIC 23.11.77 UNION CARBIDE CORP D15 *US 4183-808
Activated sludge waste water treatment - 07242C/04
- UNIC 24.02.78 UNION CARBIDE CORP A96 D22 (A23) = J5 4155-687
Orthopaedic cast or splint, or bandage for applying cast - 64989B/36
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = SF 7901-462
Conc. aq. smoke flavour compsn. for coating tubular food wrapping - 82544B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = SF 7901-463
Wrapping for food products esp. sausages - 82545B/46
- * UNIC- 06.07.78 UNI-CHEMIE AG D21 E17 *DT 2926-267
Cosmetic compsn. increasing skin moisture retention capacity - 05688C/04
- UNIL 17.06.69 UNILEVER NV D13 E17 = DS 2029-506
Thia alkane thiols as meat aroma food addit- - 92172R/49
- UNIL 06.09.74 UNILEVER LTD D25 E33 (E34) = CA 1069-013
Detergent compsns. esp. for clothes - 20734X/12
- UNIL 04.03.75 UNILEVER LTD D13 (D23) = CA 1068-977
Plastic fat prod for margarine derived from palm oil - 70472X/38
- UNIL 07.11.75 UNILEVER LTD D13 = CA 1068-978
Low fat, margarine type emulsion compsn. - 32796Y/19
- UNIL 02.03.78 UNILEVER NV D25 E33 = J5 4155-200
Sodium aluminosilicate aq. suspension for detergent mfr. - 63167B/35
- * UNIL 18.05.78 UNILEVER NV A96 D21 *GB 2025-228
Hair setting compsn. contg. anionic and cationic resins - 05973C/04
- UNIL 31.05.78 UNILEVER NV D12 = SW 7904-741
Preparing coherent flesh product from pieces of flesh - 87597B/49
- UNIL 31.05.78 UNILEVER NV A97 C03 D13 = SW 7904-742
Stable liquid animal feed, e.g. milk substitute for calves - 87598B/49
- UNIL 31.05.78 UNILEVER NV D13 = SW 7904-743
Fat mixt. for low temp.-spreadable margarines, etc. - 87596B/49
- * UNIL 23.06.78 UNILEVER LTD D21 E12 *EP ---7-191
Particulate basic aluminium chloride poly:hydroxy cpd. complexes - 05835C/04
- * UNIL 29.06.78 UNILEVER NV C03 D13 *NL 7807-000
Detoxifying rapeseed protein concentrate - 06736C/04
- * UNIL 30.06.78 UNILEVER NV D13 E12 *NL 7807-127
Increasing the sweetness of di:saccharide(s) - 06740C/04
- * UNIL 30.06.78 UNILEVER NV D13 E12 *NL 7807-128
Increasing sweetness of poly:hydric alcohol(s) - 06741C/04
- * UPJO 17.07.78 UPJOHN CO B02 C02 D22 *US 4183-860
Antimicrobial and antitumour 7S-O-alkyl-nogaro(s) - 07262C/04
- * UPRO= 29.06.73 UKR PROVISION EQUIP D11 *SU -662-051
Dough dividing machine for bread-baking - 06904C/04
- * URAL= 28.01.77 URAL THERMOTECH RES D15 J04 *SU -661-221
Mixing and preheating unit - 06857C/04
- UYFL- 05.04.78 UNIV OF FLORIDA D21 L02 = FR 2421-595
Inorganic dental or surgical implant - 77620B/43
- * UYGO= 06.12.77 GORKI UNIV CHEM RES D16 *SU -662-071
Estimating distance between adjacent shotgun pellet entry points - 06911C/04
- * VBEN/ 03.07.78 VON BENNIGSEN-MACKI D17 *DT 2829-149
Powder sugar mfr. - 05582C/04
- VBEN/ 03.07.78 VON BENNIGSEN MACK D17 = EP ---7-037
Powder sugar mfr. - 05582C/04
- * VDKE- 19.06.79 CONSTRUCT VANDEKERC D14 (D23) *BE -877-078
Agitating boiler esp. for defibering palm fruit kernels - 05459C/04
- VECO- 27.06.78 VER COOP COBERCO M D13 = BE -877-255
Fresh cheese of high protein content prodn. - 03802C/03
- VECO- 27.06.78 VER COOP MELKINDUST D13 = NL 7806-917
Fresh cheese of high protein content prodn. - 03802C/03
- * VINO/ 29.07.77 VINOKURI D12 *US 4183-964
Mfg. sausages in skins - 07312C/04
- * VLME= 04.04.77 VOLG MEAT DAIRY IND D14 *SU -662-046
Cheese-washing installation used in dairy industry - 06903C/04
- VOLP/ 22.06.78 VAN OLPHEN G C D16 #DT 2827-481
Wine making process using screening centrifuge - 69901B/38
- VORH- 27.06.77 VORHAUER LABS INC A96 B07 D22 E14 = EP ---6-861
Contraceptive biologically compatible tampon sponge - 01868B/01
- * VOTE= 11.05.75 VORON TECHN INST D11 *SU -662-053
High viscosity dough from low-grade flour prepn. - 06905C/04
- WACK 29.04.74 WACKER CHEMIE GMBH B03 C02 D13 E13 = IT 1035-449
Purification of 2-aminothiazole - 76006W/46
- WAJC/ 05.04.78 WAJCS J D15 E33 M11 = FR 2421-849
Antipollution treatment of conc. waste waters from anodisation plant - 75757B/42
- WATS- 22.02.78 WATSON J DEV LTD D15 = J5 4155-177
Self powered desalination appts. - 65013B/36
- WEBE- 05.06.78 WEBER FAB ELEKTR AG A96 D21 = SW 7904-841
Tooth-cleaning dental floss - 91397B/51
- WEBE/ 09.12.74 WEBER W D15 = DS 2458-157
Storm sewage tank - 46328X/25
- WELL 29.03.72 WELLCOME FOUNDATION LTD B04 D16 = IT 1035-061
Pasteurella antigens and vaccines - 62768U/42
- WELL 26.05.78 WELLCOME FOUNDATION LTD B05 C03 D13 = SW 7904-570
Compsns. contg. eicosa:penta:enoic acid - 85978B/48
- WELS/ 26.09.74 WELSFORD P A D13 = IT 1035-301
Flavour and taste improvement of semi-luxury foodstuffs - 52474X/28
- * WIEN- 02.06.78 WIENER BRUCKENBAU E D16 *SW 7904-854
Composting process - C/04
- WILL- 02.02.78 WILLIAMS J A & A M D14 #US 4183-294
Stone fruit cutter - 47135B/25
- * WILZ/ 24.08.78 WILZ-PAULS R M D16 *BE -878-391
Beer clarifier comprising gelatin or fish glue - 05516C/04
- WISC 11.02.76 WISCONSIN ALU RES FOUND D15 J04 = CA 1068-930
Analysing ions by their effect on fluorescence - 12508Y/07
- * WMAC- 17.08.78 WESTERN STATES MACH D17 J01 *BE -878-300
Centrifuge with closable outlet in basket bottom - 05487C/04
- WOLF- 28.06.78 WOLFF A CHEM-PHARM A96 B05 D21 = DT 2828-352
Compsns. for seborrhoea treatment - 79155B/44
- WOLF- 28.06.78 WOLFF A A96 B05 D21 = NL 7904-776
Compsns. for seborrhoea treatment - 79155B/44
- YAWH 24.02.75 NIPPON STEEL CHEM KK A97 D15 H09 J01 = J7 9043-998
Sepn of aq emulsion contg heavy oil from coal tar - 76630X/41
- YOSH 05.04.78 YOSHITOMI PHARM IND A97 C03 D22 F09 (A25 D15) = FR 2421-620
Microbicide for industrial cooling water and paper pulp - 77643B/43
- ZAID 15.10.75 ZH BISEIBUTSU KAGAKU KEN B02 D16 = J7 9044-759
Neothramycins A and B and methylneothramycins - 12856Y/08
- ZAID 22.07.77 ZH BISEIBUTSU KAGAKU KEN B04 D16 = DS 2813-507
Amastatine A1, A2, A3, B1, B2 aminopeptidase A inhibitors - 55160A/31
- * ZENY 31.05.78 ZENYAKU KOGYO KK B05 D21 (D25) *J5 4156-018
Aminoacid soap contg. extract of alkanet root and gamma oryzanol - 06322C/04
- ZUGM- 15.10.68 METALLWARENFAB ZUG D11 = DS 1944-863
Domestic oven protects controls from fume attack and - 30858R/18

20616-F BCD BE -664-444 Q00 NL -145-901 W26 US 3330-738 Q01 SU -201-249 Q01 NL 6506-419 Q01 GB 1048-887 Q01 ZA 6502-555 Q01 CA -769-703 Q01 AU 6558-981 Q01 FR 1568-722 Q01 DT 1271-660 Q01 IT 1035-001 C04	69649-R DEG BE -747-459 R38+ NL 7003-702 R39 DT 2011-163 R40 FR 2039-652 S13 CA -872-836 S24 US 3670-032 T26 GB 1283-517 T30 CA -905-477 T31 J7 3043-327 U52 DS 2011-163 C04+	CA -956-646 V45 IL -37-429 W25+ DK 7405-707 W27+ CH -563-961 W34+ DS 2136-067 C04+	65068-T BD DT 2212-148 T41+ NL 7203-450 T41 J4 7029-560 T52 FR 2130-275 U06 GB 1372-932 V45+ GB 1373-200 V45 CA -960-146 W03 US 3932-603 X04 CA -996-032 X38 IT 1035-047 C04+	DT 2315-563 U43 FR 2182-909 V06+ J4 9006-118 V12+ ZA 7302-147 W02 IL -41-902 X18+ GB 1441-098 X27+ HU T013-608 Y32+ IT 1035-061 C04+	CH -605-499 A41 CH -605-498 A41 CH -605-500 A41 CH -606-441 A48 CS 7402-911 B28 CS 7703-303 B28 SF 7902-520 C04	J5 0078-962 A33 J7 8025-386 A33 IT 1025-422 A42 CA 1069-059 C04	35952-W CD BE -824-089 W22+ NL 7500-064 W30+ DT 2500-107 W30+ FR 2271-772 X11+ CA 1068-972 C04+	62264-W AD BE -828-525 W38 DT 2519-099 W45 NL 7504-873 W46 SW 7504-926 W51 FR 2268-839 X07 J5 1017-924 X13 US 4014-846 Y14 GB 1497-692 A02 ZA 7502-716 X24 US 4093-573 A31 J7 9015-289 B27 CA 1068-439 C02 IT 1035-485 C04											
34330-F BDE NL 6805-345 Q00 J7 0011-495 R18 US 3515-727 R24 FR 1588-806 R30 CA -859-171 S03 GB 1221-115 S05 US 3597-234 S43 CH -517-755 T13 DT 1770-214 U45 NL -144-607 W08 EI 6800-436 Q01 BE -715-043 Q01 AU 6836-454 Q01 IT 1035-008 C04	78561-R BDE BE -749-259 R42 DT 2011-003 R43 NL 7005-787 R43 FR 2039-314 S12 ZA 7001-392 S44 GB 1270-752 T15 CA -911-889 T43 CH -543-884 V03 J7 5005-266 W13 IT 1035-023 C04	US 3764-601 U42 CH -545-071 V07+ GB 1354-733 V22+ US 3843-804 V44 US 3857-972 W02 J5 0131-973 W50+ CA -978-952 W51 US 3942-537 X12 CH -572-518 X15+ US 3960-860 X24 DS 2141-916 X51+ J7 7021-072 Y26+ NL -153-936 Y31+ J7 9003-878 B12+ IT 1035-039 C04+	74169-T DE CH -527-124 T47 J7 9044-722 C04+	65714-U DE DT 2217-043 U44 US 3846-326 V46+ GB 1378-437 V52 CA -983-857 X10 DS 2217-043 C04	80945-V D BE -814-539 V47 NL 7405-971 V47 DT 2421-592 V48 FR 2227-833 W08 GB 1457-783 X50 CA 1018-819 Y43 CH -596-773 A15 IT 1035-076 C04+	40938-W BD BE -822-843 W25+ NL 7415-037 W26+ SW 7415-324 W31+ DK 7406-370 W35+ SF 7403-513 W36+ J5 0089-588 W37+ FR 2254-026 W39+ AR -201-067 W40+ DL -115-759 X01+ DT 2439-348 X11+ ZA 7407-732 X13 GB 1435-400 X20+ DT 2361-169 W26 HU T012-561 X50+ OE 7409-740 Y01+ DK 7604-668 Y05+ CS 7408-375 Y10 IL -46-073 Y26+ DS 2439-348 Y38 DS 2361-169 A04 CS 7602-701 A43 IT 1026-827 B01+ CA 1044-582 B02+ SU -613-731 B19 US 4164-448 B35+ CH -613-046 B38+ SF 7902-601 C04+	64049-W DEG DS 2418-974 W39 BE -828-033 W45 NL 7504-530 W45 J5 0142-524 X02 FR 2268-001 X06 DL -117-210 X14 GB 1454-730 X45 US 4026-951 Y23 SU -560-527 A20 CA 1045-166 B03 CH -612-410 B35 IT 1035-354 C04												
04786-H CD BE -718-124 Q00 CH -507-664 Q01 FR 1576-683 Q01 NL 6810-309 Q01 J7 3012-786 Q01 GB 1242-092 Q01 ZA 6804-662 Q01 DS 1692-434 C04+	85966-R D US 3541-951 R46 SU -355-783 U38 DS 1761-986 C04	26029-T D DT 2149-682 T17 US 3716-380 U09 GB 1318-460 U22 DS 2149-682 C04	76165-T D FR 2119-225 T48 IT 1035-046 C04	78797-T DE DT 2223-864 T50 BE -783-688 T50 NL 7206-884 T50 FR 2138-797 U12 US 3770-589 U46 GB 1395-053 W21 CH -576-523 X29+ CA -997-694 X42 DS 2223-864 A02 IT 1025-009 A42 J4 7043-387 C04 J7 9043-595 C04	20505-V BCD NL 7312-062 V11+ BE -804-350 V11+ DT 2344-095 V17+ US 3823-141 V29 US 3813-376 V23 US 3813-390 V23 ZA 7305-908 V40 GB 1412-721 W45+ FR 2279-408 X20+ CA 1014-951 Y33 CA 1014-950 Y33 IL -43-410 A06+ SF 7902-635 C04+	44311-V BD J4 9014-691 V24 J7 9043-600 C04	23022-W AD J4 9079-979 W14 J7 9043-477 C04	27291-W D US 3876-535 W16 DT 2518-570 W45 BE -828-426 W46 J5 0149-142 X03 ZA 7502-694 X21 DS 2518-570 X48 GB 1490-897 Y44 CA 1040-758 A44 J7 9019-114 B32 IT 1035-472 C04	52188-V BDE DT 2264-235 V29 NL 7317-601 V29 BE -809-349 V31 FR 2212-337 V43 J4 9094-690 V46 US 3917-589 W47 GB 1452-099 X41 CA 1006-517 Y12 OE 7310-858 Y27 NL -153-870 Y31 CH -593-958 A02 ZA 7309-560 W02 DS 2264-235 C04	08693-U CDE NL 7209-080 U07 DT 2220-743 U08 BE -786-929 U09 FR 2147-325 U20 GB 1364-747 V35 CH -562-572 W30 J7 5033-149 W47 US 8560-717 X08 CA -994-244 X33 US 3982-034 X40 DS 2220-743 Y26 IT 1035-049 C04	46856-U DJ J4 8033-088 U33 GB 1403-359 W34 US 4152-210 B20 J7 9043-597 C04	54021-U BD BE -795-996 U37 NL 7302-652 U38 DT 2209-834 U38 FR 2174-239 U51 ZA 7301-395 U52 J4 8098-089 V08 DL -104-553 V24 GB 1376-575 V49 J4 9118-885 W03 IL -41-613 W45 US 3937-817 X08 CH -576-522 X29 CA -992-017 X29 CS 7301-419 X43 US 4019-960 Y18 DS 2209-834 Y35 HU T013-781 Y37 SU -505-377 A13 J7 9043-599 C04+	62990-T BD DT 2157-693 T40 J4 7016-692 T42 GB 1311-268 U13 J7 9017-832 B30 DS 2157-693 C04	63014-T DE DT 2206-131 T40 BE -780-508 T40 NL 7200-514 T40 J4 7029-541 T52 FR 2128-825 U05 GB 1329-807 U37	62768-U BD NL 7304-320 U42+ BE -797-468 U42	80301-V ADE NL 7405-506 V46 DT 2418-800 V47 NO 7401-486 V50 DK 7402-245 V52 SF 7401-282 W06 SF 7401-281 W06 NO 7500-007 W10 FR 2238-695 W19 ZA 7402-438 W27 FR 2247-539 W29 GB 1454-698 X45 GB 1454-697 X45 CA 1020-955 Y48+ OE 7403-391 A06 SW 7405-435 V51	32466-W D BE -822-911 W20 NL 7415-721 W25 DT 2457-303 W25 SW 7415-052 W30 NO 7404-358 W31 SF 7403-490 W36 FR 2252-810 W38 PT -63-227 X19 J5 1121-590 X49+ DS 2457-303 Y16 GB 1474-586 Y21 OE 7409-665 Y39 CH -606-419 A48 CA 1048-429 B09 US 4156-019 B23 IT 1035-092 C04	62263-W AD BE -828-524 W38 DT 2519-139 W45 NL 7504-874 W46 SW 7504-925 W51 J5 0149-778 X03 US 3931-092 X03	72458-W AD BE -827-809 W44 NL 7504-183 X44+ FR 2308-656 Y08+

72458-W

US 4070-450 A00+
 CH -602-110 A33
 OE 7502-956 B01
 CA 1069-054 C04

72494 W D

BE -827-957 W44
 NL 7505-496 W49
 DT 2521-166 W49
 FR 2070-805 Y10
 GB 1502-449 A09
 IT 1035-420 C04

72497 W DE

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 GB 1497-618 A02
 IT 1035-311 C04

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 SW 7504-334 W49+
 DK 7501-636 X06+
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 US 4022-938 Y20+
 CH 594-778 A09+
 GB 1504-925 A12+
 US 4103-047 A44
 IT 1035-289 C04+

72834 W BDEJ

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 US 4034-139 Y28
 CH -601-139 A28
 IT 1035-382 C04

72841 W DE

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 NL 7504-634 W45
 SW 7504-604 W50
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 J5 0145-580 X02
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 DK 7501-669 X07
 US 3941-657 X11
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 CH -610-333 B20
 IT 1035-406 C04

74099 W DE

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 FR 2268-751 X07
 US 3983-221 X41
 CH 1498-752 A03
 IT 1035-389 C04

74310 W ADJ

DT 2418-996 W45
 BE -828-035 W45
 NL 7504-661 W45
 SW 7504-451 W50
 J5 0141-587 X02
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 SF 7501-157 X07
 US 4036-748 Y30
 OE 7502-947 Y39
 GB 1496-816 A01
 SW 7800-588 A36
 CH -610-915 B23
 T 1035-351 C04

74371 W BDE

DT 2514-814 W45
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 NL 7504-573 W45
 J5 0140-462 X02
 FR 2267-758 X06
 DK 7501-661 X06
 BR 7502-358 X10
 ZA 7502-062 X17
 SW 7504-393 W50
 J5 1457-495 X49

US 4070-450 A00+
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 OE 7502-956 B01
 CA 1069-054 C04

74394 W ADF

DT 2515-970 W45
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 NL 7504-645 W45
 DK 7501-681 X05
 FR 2267-794 X06
 US 3937-223 X08
 BR 7502-011 X13
 SW 7504-548 X15
 ZA 7501-805 X17
 DL -118-527 X22
 GB 1453-265 X43
 OE 7502-940 Y44
 HU T014-039 Y45
 IL -46-934 A14
 US 4128-612 A50+
 CA 1062-573 B40
 CH -614-118 B50
 IT 1035-318 C04

74440 W D

DT 2516-995 W45+
 DS 2516-995 C04+

75720 W D

BE -828-392 W46
 NL 7405-628 W46
 DT 2517-865 W47
 SW 7504-793 W51
 FR 2268-755 X07
 DL -117-434 X14
 ZA 7502-547 X21
 OE 7503-082 X36
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 CA 1034-268 A29
 IT 1035-463 C04

76006 W BCDE

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 FR 2268-805 X07
 US 3997-550 X52
 GB 1461-377 Y02
 J7 7006-991 Y12
 OE 7503-257 Y22
 CA 1041-105 A45
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 CH -610-316 B20
 IT 1035-449 C04

76103 W ADE

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 J5 0149-800 X03
 FR 2269-549 X08
 IT 1035-174 C04

00058 X D

BE -830-230 X01+
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 NO 7502-100 X07+
 SW 7506-825 X08+
 SF 7501-618 X10+
 DK 7502-684 X12+
 FR 2274-221 X14+
 DS 2428-699 X15
 J5 1038-447 X20+
 DT 2514-163 X41
 DT 2428-699 X02
 PT -63-900 Y10+
 ZA 7503-793 Y13
 DT 2559-819 Y50
 DS 2514-163 A12
 GB 1510-996 A20+
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Section D:

FOOD
DETERGENTS

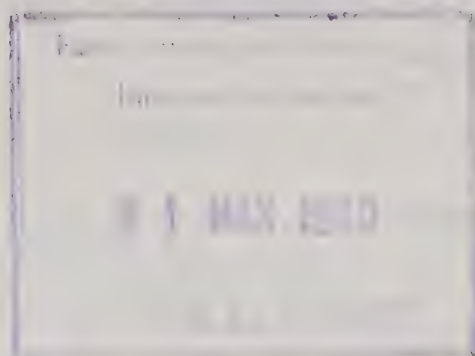
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ABSTRACTS

INDEXES

II - PATENTEE

V - BASIC NUMBER

VII - PATENT NUMBER

COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Non Delayed	17 DEC 79	878,411 - 878,560
	31 DEC 79	878,564 - 878,809
BRAZIL	15 JAN 80	7,802,386 - 7,903,932
CANADA	8 JAN 80	1,069,251 - 1,069,650
DENMARK	31 DEC 79	7,802,362 - 7,902,299
E. GERMANY	3 + 10 + 17 + 24 + 31 OCT 79	30,723 - 133,301 137,873 - 138,457
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-DAS	24 JAN 80	1,495,925 - 2,921,437
-OLS	24 JAN 80	2,757,302 - 2,929,025
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UNITED KINGDOM	30 JAN 80	1,559,791 - 1,560,260 2,025,741 - 2,026,290
ITALY	20 OCT 79	1,035,501 - 1,036,000
JAPAN		
-Unexamined	—	47,030,154 - 54,125,882
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-Examined	5 JAN - 9 JAN 80	80,000,001 - 80,000,760
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AUSTRIA	15 JAN 80	7,011,756 - 7,906,147
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UNITED STATES		
-Reissues	22 JAN 80	Re30,196 - Re30,197
-Patents	22 JAN 80	4,184,212 - 4,185,326
PCT	24 JAN 80	8,000,053 - 8,000,117

*Printed patents actually published early - mid January, 1980

Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Main CPI Class for Section	Patent No
	Other Classes	Latest Priority	Earliest Priority
	Publication Date	Earliest Disclosure Basic Patent	IPC
		Accession No	
MEDA-		A89	69369W/42 =US 3964-992
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)			
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)			
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26			

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

MAUE- ★ D11 07681C/05 ★DT 2829-910
Air circulation baking oven - controlled by flap valve for separate heating gas ducts to separate decks

MAUERMANN J BACKOFFE 07.07.78-DT-829910
(24.01.80) A21b-01/28

An air circulation baking oven with two decks or more has separate heating gas inflow ducts for each deck but a common duct for the return of the flue gases and a common blower. A flap valve separates the inflow ducts and can be used in a central position where both are open, or in one of the side positions where one duct is shut off.

This creates a simple design which enables the user to control the two gps. of oven decks independent of each other. Automatic controls set a two-stage burner to suit the conditions and actuate the flap valve. 7.7.78 as 829910. (21pp39)

DEBA- ★ D11 07727C/05 ★DT 2830-866
Dough mouldings sprinkling plant - with suction cup head for transferring from sponge plate and dipping in sprinkling material

DEBAG DEUT BACKOFEN 13.07.78-DT-830866
(24.01.80) A21c-09/04

Dough mouldings are sprinkled with poppy seeds, salt, sesame or caraway seed by lifting the inverted mouldings up from a sponge substrate by a head with suction cups. The head with them is dipped into the sprinkling material and then released on to an intermediate tin. The latter is inverted to deposit the mouldings on a baking tin.

This replaces these labour-intensive operations by simple appts., requiring little manual manipulation. 13.7.78 as 830866. (19pp39)

HAAG- ★ D11 07786C/05 ★DT 2926-158
Dough shapes mfr. - between feed roll and moulding roll with roughened surface by sand-blasting prevents sticking (NL 15.1.80)

HAAGSE BAKKERIJMACH 13.07.78-NL-007547
(24.01.80) A21c-11/04

Shapes of dough or marzipan are produced by guiding the paste in a layer over a feed roll which is faced by a moulding roll. The desired shapes are engraved in negative form on the periphery of the latter. A cutter blade skims off the shapes from the periphery of the feed roll. Both the shell and the countersunk shapes are given a rough surface by sandblasting.

The roughened surfaces result in point contact and prevent any sticking of the dough to the moulding roll. Manual powdering of the rolls is not necessary any more and imperfect shapes have been eliminated. 28.6.79 as 26158. (6pp39)

ASH- ★ D11 07845C/05 ★FR 2422-335
Machine for surface slitting bread dough pieces before baking - has main mounted blades which return via continuously moistened cleaning heads

GASHOR-OOMS SA 19.12.78-ES-240261 (10.04.78-ES-468688)
(14.12.79) A21c-11/12

The slits are cut by blades fixed to motor-driven, endless chains. The chains and common drive are mounted on a frame which can be raised or lowered above the loaf conveyor. On the return run of each chain, each blade is drawn through a cleaning head which wipes off particles of dough. Each cleaning head is supplied with a drip supply of water from a common reservoir via pipe-encased capillary mesh.

The mesh is pref. encased in flexible pipes of which the delivery ends can be turned upwards through 90° to curtail water flow to the cleaning heads. The cleaning head pref. comprises a pair of side cheeks spaced with sufficient clearance for a blade to be drawn through the gap. The angle of blade chain path to longitudinal axis of conveyed loaf is pref. adjustable.

The machine is simple and inexpensive. It can be quickly installed by floor-mounting astride an over feed conveyor.

por. 6.4.79 as 008869. (12pp448)

PARS/ ★ D11 C/05 ★IT 1035-868

Ravioli prodn. appts.

PARSIG 28.05.75-IT-049824
(20.10.79) A21c

PARS/ ★ D11 C/05 ★IT 1035-910

Ravioli prodn. appts. control system

PARSIG 30.05.75-IT-049852
(20.10.79) A21c

ASAH ★ D11 08548C/05 ★J5 4160-781
Fillings for bread, biscuits or cakes - which on heating retain their original shape

ASAHI CHEMICAL IND KK 09.06.78-JA-068869
A97 (19.12.79) A23I-01/06

Filling compns. comprise the water-dispersible complex (II) described below, gelling agent (III), sweetner (IV), edible acid (V) and water. (II) is prepd. by grinding a dispersing agent (VI) and a degrading agent (VII) with fine-crystalline cellulose (VIII) in the presence of water and then drying the mixt.

The ratio of (VI):(VII) is 1/9 - 9/1. The content of (VI) and (VII) in the mixture is 5-50 wt. % and the content of (VIII) in the mixture is 50-95 wt. %. (IV) is e.g. sucrose or invert sugar. (V) is e.g. citric acid, fumaric acid or adipic acid. (VI) is e.g. tragacanth gum, carrageenan gum or xanthan gum (VII) is e.g. a monosaccharide, oligosaccharide or modified starch. 9.6.78 as 068869 (5pp42)

SCHI/ ★ D11 C/05 ★OE 7807-820

Proofing cupboard for bakery prods.

SCHIMKE F 02.11.78-OE-007820
(15.01.80) A21c-13/02

BREA= ★ D11 08851C/05 ★SU -663-359

Bread prodn. from surfactant-contg. fermenting dough - includes specified mechanical vibrations applied in two stages before baking to accelerate biochemical processes etc.

BREAD BAKING IND 30.01.78-SU-574876
(28.05.79) A21d-08/02

Prodn. of bread including introducing a surfactant into the dough and subjecting the latter to mechanical vibrations, exerting dispersing effect, is improved by applying the vibrations in two stages with a 5-10 min. interval; the first vibration stage lasts 3-5 min. the second stage 2-3 min. The amplitude of the vibrations is 1.8-2.0 mm; the frequency is 45-60 Hz.

By this method, the biochemical and microbiological processes in the bread are intensified, and its storage stability is enhanced.

Shcherbatenko, V.V., Nemtsova, Z.S., Andruabiva, V. A. et al. Bul. 19/25.5.79. 30.1.78. as 574876 (2pp70)

ELEC- ★ D11 08961C/05 ★US 4184-418

Cooking taco shells on V/shaped former - carried by conveyor and engaging conveyor belt folded round former

ELECTRA FOOD MACH I 07.07.78-US-922652
P28 (22.01.80) A47j-37/12

A conveyor belt carries tacos through a hot oil bath having shaped side-walls which fold it into a V-shape. A set of V-shaped formers is carried by an overhead conveyor in synchronism with the belt. Tacos are sandwiched between each former and the belt and are carried thus through the oil bath.

The side walls of the bath are planar at the inlet and outlet ends of the bath and gradually become more inclined towards the centre where they assume the V profile so as to fold the taco progressively.

The appts. prepares taco shells from uncooked tortillas. The oil bath holds only a small quantity of oil. 7.7.78 as 922652 (7pp295)

PAUL/ D11 86865Y/49 =US 4184-421
Pizza frying pan - with perforated aluminium foil disc supported on flange of bottomless pan to form crinkled edge

PAULUCCI J F 19.05.76-US-687926 (07.02.77-US-766311)

P28 Q34 (22.01.80) *DT2720-238 A47j-37/*

Food can be cooked in an infra-red oven in a disposable cooking sheet and pan liner which is supported in a re-usable rigid annular pan. The pan has a peripheral flange for positioning the sheet on the annular support surface.

The cooking sheet and pan liner is a one-piece soft Al foil of about 0.001 inch thickness and has a webs extending from a complete outer ring into a centre portion. The spaces between the webs allow more than half of the food on the sheet to be browned from underneath.

The webs have circular holes to increase the amt. of space for browning. 10.7.78 as 922901 Div ex 4065583 (+7.2.77-US-766311) (7pp1376)

HURK/ D11 31576B/17 =US 4184-614
Volumetric depositor for paste esp. edible paste - discharges excess material at constant pressure before delivering measured deposit

HURKMANS A 21.10.77-NL-011612

Q32 + R13 (22.01.80) *BE-871-403 A21c-05/02

Dough distributing machine includes a head with a pressure chamber reciprocating sealingly along the end face of a hopper outlet, a dough ejector movable in the head to receive dough by withdrawal in one head posn. and eject it in a second head posn.

A storage cavity with a piston under pressure is filled by the ejector in the second head posn. to accurately meter the amt. of dough, which is expelled from the cavity when the head posn. again changes, pref. when the head returns to its initial fill posn., the dough being then expelled from the cavity into contact with ambient air. 16.10.78 as 951867 (7pp1358)

HOUS- ★ D11 09142C/05 ★US 4185-125
Frying noodles in hot oil - after sepg. and loading into perforated containers with perforated covers

HOUSE FOOD IND KK 27.07.76-JA-088659

(22.01.80) A231-01/16

Raw noddles are fried by forcing the noodles apart, cutting the mass of individual noodles, charging to a perforated container more than 3 cm high and with a frustoconical, pyramidal, cylindrical or prismatic shape, and closing with a cover having perforations forming 5-30% of its area

The covered container is then immersed in oil at 130-160°C until the noddles are homogeneously fried and dehydrated. Oil temp. is pref. $\geq 145^{\circ}\text{C}$. The noddles produced can be stored for extended periods, are not damaged in transportation and become soft and edible when immersed in boiling water for 3 min. 27.7.77 as 819284 (5pp1358)

RADL/ ★ D11 09144C/05 ★US 4185-127
Dry dietary cake mix - contg. fructose as sweetener and glucono delta lactone in baking powder

RADLOVE S B 25.07.77-US-818531

(22.01.80) A21d-13/08

Dietary dry cake mix, comprises (a) non-shortening portion contg. flour, a sweetener, skim milk solids, dried egg whites, (b) shortening portion contg. shortening and emulsifiers, and (c) a baking powder consisting of an alkaline bicarbonate and an acid component.

Improvement is that the sweetener is fructose and the acidic component includes glucono delta lactone. The wt. ratio of the acidic component to the bicarbonate is greater than about 1.5-1.0, and the wt. ratio of fructose to acid component is between 10 and 30, so that when the mixture is combined with water, the batter formed has a pH of 3.5-5.5.

The compsn. contains no sucrose, artificial sweeteners and very little cholesterol. It has acceptable moisture, good volume and texture, and although the sweetener is fructose, it retains an acceptable sweetness during cooking. 25.7.77 as 818531 (7pp955)

D12: MEAT; FISH PROCESSING

NORM- D12 83534W/51 =DS 2523-752
Cutter for removal of tough surface layers - partic. skin from fish fillets, with profiled blade

NORMATIC APS 31.05.74-DK-002966

(24.01.80) *DT2523-752 A22c-25/17

A device for the removal of tough surface layers from food, e.g. for the skinning of fish fillets, consists of a ribbed roll to which the fish is fed. A knife blade has a cutting edge close to and parallel to the roll perimeter. The cutting edge is continued towards the roll by a radiused guide surface so that the skin is carried away through the gap between it and the roll. At the opposite continuation of the cutting edge, another (straight) guide surface for the skinned fillet describes an angle 15° less than normal to the roll surface.

This removes the skin automatically independent of the varying thickness of the fish fillets, without changing the setting of the skinning blade. 28.5.75 as 523752 (5pp39)

VOGT- ★ D12 07678C/05 ★DT 2829-883
Overhead abattoir transport line - with raisable track section for carcass skinning station

VOGT-WERKE KG 07.07.78-DT-829883

(24.01.80) A22b-07

In a processing flow line in an abattoir, the carcasses are conveyed from station-to-station suspended from an overhead track. At a station where the carcasses have to be skinned, a section of the track is offset so that the chain conveyor does not act on it, and this section can be lifted up with the carcass to create enough space at the floor for the skinning roll.

This saves having to excavate a pit for this station which is often impossible. 7.7.78 as 829883. (9pp39)

LUCA/ ★ D12 07846C/05 ★FR 2422-337
Manual tongs for extermination of game birds and poultry - by driving jaw mounted spike into birds head

LUCAS L F 14.04.78-FR-011105

(14.12.79) A22b-03/08

The head of the bird is inserted into the space between jaws. One jaw has an internal spike which is driven into the birds head by sudden closure of the jaws. This closure is effected by the action of a leaf spring inserted into channels of each hand lever.

The tongs can be conveniently carried by hanging from a belt. 14.4.78 as 011105 (6pp448)

PUJO/ ★ D12 07847C/05 ★FR 2422-339
Friction machine for plucking poultry without tearing skin - has hard surfaced rollers to nip out short feathers

PUJOL M 10.04.78-FR-010711 (09.09.76-FR-027638)

(14.12.79) A22c-21/02

A machine for plucking poultry holds a bird against rotating brushes and rollers which pull out the feathers. The bird is first pressed down on to a pair of parallel rotating brushes which pull out the larger feathers. Fixed on an extension of the brush shaft system is a pair of parallel, spring-loaded contact, rotating rollers covered in a flexible, e.g. elastomeric, material. The bird is transferred from the brush section to be pressed against the rollers which detach the remaining, smaller feathers.

In this addn., the rotating rollers are now made with a hard surface, in partic. metal and pref. stainless steel. Each roller is pref. contacted by a scraper blade to prevent feathers winding around the roller. A positive drive is pref. provided between the two rollers by shaft extensions fitted with meshing, spur gears.

Hard-surfaced rollers have a much longer life than the

previous, pliable-surfaced rollers. The rollers can no longer be made ineffective by being forced apart by material winding around a roller. 10.4.78 as 010711 Add to 9.76-027638 (12pp448)

MEAD- ★ D12 07902C/05 ★GB 1559-900
Hide chain stripper safety enclosure - with spring biased upwardly inclined top door sections for passage of chains and hide
MEADE - LONSDALE GR 12.04.77-GB-014999
(30.01.80) A22b-05/16

A safety enclosure for use in stripping hides from carcasses by pulling upwardly with chains while the carcass is anchored to the ground includes a frame enclosing the stripping station and having a top transverse trapdoor with two hinged sections spring-biased into abutment.

Each section is inclined upwardly from its hinged edge so that chains and hides can readily pass up through the door. The sections are pref. at 30° to the horizontal when the door is closed, and the sections are tapered towards one side to leave a gap between them for free passage of the chains. The arrangement prevents the hide flying in any direction as it is released from the carcass.

12.4.77 as 014999. (3pp1358)

PROT- D12 04719A/03 =GB 1559-931
Press for meat paste prodn. using meat and bone mixt. - includes slide valve with self-cleaning perforated plate to remove bone splinters (BE 29.12.77)

PROTECON BV 30.06.76-NL-007187
(30.01.80) *DT2729-344 A22c-17

A press for sepg. meat and bones includes a piston arranged in a cylinder with fine openings at one end of the cylinder through which the meat is forced and a slide valve which is opened after the meat has been discharged to allow removal of the bones by further movement of the piston. When the slide valve is moved a scraper cleans the fine openings.

Pref. the fine openings are in a front surface of the slide valve which closes the cylinder during pressing. Fine openings may also be located in the front face of the piston. 12.6.77 as 023706. (8pp1376)

ERB/ ★ D12 07912C/05 ★GB 2025-754
and operated shrimp peeling device - with pivoted arm carrying spring loaded bifurcated opening blades (DK 28.8.78)
JERBELLE H 24.01.77-DK-000291 (24.07.78-GB-030893)
(30.01.80) A22c-29

The device includes a base having a support at one end for the shrimp. An arm is pivoted to the base at the opposite end to the support and may be moved past the support towards the base.

Mounted on the arm are two opening elements and a slide which can move the opening elements along the arm and over the support. A guide on the base co-operates with the slide to maintain the arm in the correct orientation for inserting the opening elements under the shell of the shrimp and to restrain pivoting movement of the arm until the slide has moved far enough along the arm for full insertion of the elements under the shell. The opening elements can then move laterally apart as well as towards the base with the arm to spread open the shrimp shell. 14.7.78 as 030893. (7pp295)

LET- ★ D12 07943C/05 ★GB 2025-883
Removing gambrel from carcass - by pushing carcass sideways while gambrel is anchored
FLETCHER W & R LTD 20.07.78-NZ-187913
Q35 (30.01.80) B65g-47/36

A carcass is carried by a hooked gambrel attached to an overhead conveyor by a rotary linkage. The gambrel is removed by first aligning the carcass so that the gambrel looks 'project transversely the conveyor motion. The carcass is then pushed transversely off the hooks while the gambrel engages an abutment which restrains its transverse movement.

Carcass alignment is effected by a cam-operated pusher which provides a 90° rotation to selected carcasses. Final alignment is achieved by a shaped camming surface. The pusher removes gambrels from frozen carcasses. 17.7.79 as 024827. (8pp295)

KURE ★ D12 C/05 ★IT 1035-515
Ham and salami prodn. - with better adhesion between meat and casing
KUREHA KAGAKU KOGYO 20.07.70-IT-052273
(20.10.79) A22c

NISY ★ D12 08038C/05 ★J5 4157-821
Sorbic acid based food preservative compsn. - with hardened oil and specified particle size range so that flavour and consistency are not harmed

NIPPON SYNTH CHEM IND 02.06.78-JA-066865
E17 (13.12.79) A01n-09/24

Sorbic acid powder of ave. particle size 20-250 µm is coated with 0.5-1.2 pts. wt. hardened oil (per pt. wt. sorbic acid.) The preservatives are used for fish or meat processed foods such as fish paste, frankfurters or viennas.

Since the present formulation contains a smaller amount of hardened oil than prior art formulations it does not affect the flavour or gel strength of the foods adversely. Previously sorbic acid of < 10 µm has been coated with hardened oil, and this requires a larger amount of the oil.

The oil can be of either vegetable or animal origin, and pref. has a m.pt. > 40°C. Part of the oil can be replaced by monoglyceride, acetomonoglyceride, sorbitan monofatty acid ester, etc. The ave. particle size of the sorbic acid is pref. 50-200 µ. The formulation can be prepd. by melting the hardened oil, dispersing the sorbic acid powder in it, and spraying the dispersion at low temp. The temp. at the time of dispersing is < 90°C, pref. 80-85°C to prevent solubilisation of the sorbic acid powder in the melted oil. 2.6.78 as 066865 (3pp108)

TAIF ★ D12 08055C/05 ★J5 4157-845
Prod. of film for wrapping meat - by sepg. collagen fibre from animal tissue, dissolving fibre in aq. organic acid soln., extruding in coagulating bath and cutting

TAIYO FISHERY KK 31.05.78-JA-064382
A97 (13.12.79) A23j-03 A23l-01 C08h-01 C08j-05/18

The film can be prepd. by (a) sepg. collagen fibre from animal tissue, (b) dissolving it in aq. organic acid soln., (c) extruding it in the form of film through nozzle in the coagulating bath consisting of hydrochloric acid and aq. alkali soln., (d) cutting it without tanning and (e) if necessary, washing and drying. The bonding method is effected by (f) arranging closely on both sides of the film obtained and (g) pressing it under the pressure of 1-2 kg/cm².

Meat-bonding film can be prepared from collagen fibre without tanning and the film can be used conveniently for bonding meat, fish meat, etc. 31.5.78 as 064382 (4pp5)

TOXW ★ D12 08057C/05 ★J5 4157-866
Oxygen-free storage of fish roe - to prevent discolouration and putrefaction

TOYO INK MFG KK 31.05.78-JA-064313
A92 (13.12.79) A23b-04 A23l-01/32

Fish roe is packaged after treating with colourant and/or redox catalyst or bleach, using an O₂ barrier packaging material and an O₂ absorber. Fish roe is discoloured or putrefied in the presence of O₂. The method allows roe to be kept for a long time while maintaining good colour and freshness.

Pref. the redox catalyst is nicotinamide and ascorbic acid or ascorbate, esp. nicotinamide, ascorbic acid (salt), organic acid, phosphate, amino acid, sugar, alcohol and NaCl. The oxygen absorber is pref. Fe powder, hydrosulphite, hydroquinone, tannic acid, glucose oxidase or salcomine. The roe can be packaged in bottles, cans, boxes etc., but pref. in bags of transparent plastic film, esp. a laminate. The inner side of the laminate is of polyethylene film and the outer side is an O₂ barrier resin film such as vinylidene chloride resin or acrylonitrile resin. Pref. the laminate also contains a UV-ray absorber such as titanium oxide or ferric oxide powder. 31.5.78 as 064313 (4pp5)

ASAH ★ D12 08511C/05 ★J5 4160-684
Storing living shellfish in sea water - using added sodium dihydrogen phosphate to improve survival rate

ASAHI CHEMICAL IND KK 02.06.78-JA-065689
C03 P14 (19.12.79) A01k-61

In storage of living shellfish in marine water, sodium di-

hydrogen phosphate is incorporated into the marine water. Life of living shellfish can be increased upon storage and/or transportation in marine water. Amt. of sodium dihydrogen phosphate to be added is 0.05 to 0.5 g/litre, pref. 0.1-0.2 g/litre. The shellfish may be any, e.g. ark-shell ear-shell, oyster, clam, scallop, cockle, etc. For instance, 20 ark-shells are placed in marine water containing sodium dihydrogen phosphate, the water being kept at 13 to 14°C, pH 8.20, COD of 8 ppm or less, and ammonia content of ≤ 1 ppm. Presence of 0.1 g/l. of NaH_2PO_4 gave 100% survival after 3 days, 90% after 7 days and 80% after 14 days (of 30% survival for control). 2.6.78 as 065689 (4pp22)

TOPP ★ D12 08546C/05 ★ J5 4160-774
Preserving redness of stretch film packaged meat - in an atmosphere of oxygen and carbon dioxide at low temp.
TOPPAN PRINTING KK 06.06.78-JA-068071
E36 (19.12.79) A23b-04

The brown colour which normally appears after a few days on sale is due to reduction of myoglobin and haemoglobin by CO or NO. By packaging in an atmosphere of 10-40 vol. % CO_2 and 90-60 vol. % O_2 contg. $< 50 \text{ mg/m}^3$ reducing gases the redness is retained for a longer period of time. 6.6.78 as 068071 (3pp42)

NIPK ★ D12 08547C/05 ★ J5 4160-775
Processed meat contg. colourant and enzymatically digested peptide - which preserve the red colour of fresh meat for a long time

NIPPON KAYAKU KK 07.06.78-JA-067820
(19.12.79) A23I-01/31

Processed meats (I) contain a colouring agent (II) and an enzymatically digested peptide (III) of mol. wt. 400-6000. Pref. (I) is produced by addn. of (II) and (III) to raw meat and heat processing it.

Addition of (III) to (I) preserves the fresh red appearance of (I) for long time. (II), is e.g. KNO_3 or NaNO_2 , Na ascorbate is pref. also added. (III) is prepd. by hydrolysing proteins from animals, chickens, fish, skins, feathers albumin, gluten or soy beans. The quantities of (III) and (II) are 0.01-1 wt. %, pref. 0.02-0.5 wt. % and 0.01-1 wt. % pref. 0.1-0.3 wt. % (w.r.t. raw meat), resp. 7.6.78 as 067820 (3pp42)

MOMD ★ D12 08852C/05 ★ SU -663-360
Animal carcass processing cutter - has two plates on both sides of knife held by vibration generator for low friction used in meat prodn.

MOSCOW MEAT DAIRY INST 02.12.77-SU-549379
(28.05.79) A22b-05/20

The friction of the knife against meat and is reduced and the reliability of the carcass cutter is improved by cantilever plates attached to the housing of the vibrations generator. The plates are set symmetrically with respect to the knife which is operated by the vibration generator.

The knife is lowered along the bracket of the carriage, and the direction of the cut is set by the rod guide carrying the generator housing. Cutting takes place during the forward stroke, while the return stroke of the knife causes the plates to penetrate meat in the cutting area.

Ivashov, V.I., Yurkov, S.G., Kulishev, B.V. et al. Bul 19/25.5.79. 2.12.77. as 549379 (2pp89)

KISA = ★ D12 08853C/05 ★ SU -663-361
Meat tenderiser - comprising vertical drum with bottom guide for lifting and turning and bearings

KIEV SALE ECONOM IN 08.12.77-SU-549096
(25.05.79) A22c-09

Enhanced tenderisation of meat is ensured by the vertical drum having a guide attached to the outside of the bottom. One of the bearings is connected to the drive through the driven pulley while the other bearing has its lower end attached to the frame. The upper end of the bearing is in the guide to impart reciprocation to the drum.

The lumps of meat are loaded into the drum which is reciprocated and turned at the same time. Each vertical displacement of the drum results in the impact of meat against the ribs of the shell followed by circular motion so that various sides of the meat are treated.

Tsyganenko, V.A., Mitsyn, V.E., Zdobnov, A.I. Bul. 19/25.5.79. 8.12.77. as 549096 (2pp89)

MOMD ★ D12 08854C/05 ★ SU -663-362
Semi-dry party smoked sausage meat - contg. addn. of iodine contg. cpd. to eliminate pathogenic microflora and to accelerate drying

MOSCOW MEAT DAIRY INST 12.01.78-SU-569358
(28.05.79) A22c-11

Semi-dry sausage meat prods. are prepd. by smoking or jerking raw meat, introducing it into an envelope and drying.

This method is improved by preliminarily introducing into the meat 3-30 mg. % (calculated as iodine) of Iodinol lugol or (RTM) other iodinated cpd.

The pathogenic activity of the microflora contained in these products is suppressed and the drying is accelerated. ing 3.5% NaCl; and introducing 0.5% of Iodinol (aq. soln contg. 0.1% of crystalline iodine, 0.3% of KI and 0.9% of polyvinyl alcohol). The stuffing is introduced into a sheath and kept at 0-2°C for 7 days; then smoked for 2 days at 18-22°C; and dried for 18 days at 12°C and a relative humidity of 75%. Lugol (aq. soln. contg. 1% of crystalline iodine and 2% of KI) or iodonate (aq. soln. contg. 3% of iodine and a surfactant) can also be used.

Zharinov, A.I., Silaev, M.P., Slepikh, G.M. et al. Bul 19/25.5.79. 12.1.78. as 569358 (2pp70)

POLA = ★ D12 08855C/05 ★ SU -663-363
Oriented fish conveying track - includes section having different adhesion forces to belly and back to prevent fish turning

POLAR FISHING IND 21.07.76-SU-390433
(25.05.79) A22c-25/12

The reliability of fish orientation, and wider range of fish size handled by the unit are increased by transverse shift of the fish along a track section. The latter exhibits an increased resistance to fish turning due to different values of belly and back adhesion.

The fish is placed across the moving conveyor one section of which offers a rise in resistance by surface roughness, slot or other means. The different consistencies in the belly and the back of the fish ensure its orientation because the back is less plastic than the belly. Blagoveshchenskii, Yu.A., Fedoseenko, L.A., Stoletov, V.L. Bul. 19/25.5.79. 21.7.76. as 390433 (2pp89)

BEAF ★ D12 08947C/05 ★ US 4184-229
Appts. for removing kidneys, tail and fat from poultry backs - comprising rotary knives, vacuum head and overhead conveyor
BEATRICE FOODS CO 06.03.78-US-883832
(22.01.80) A22c-21

A poultry back is advanced along a horizontal slide by a cleated overhead conveyor. At a first processing station a pair of rotary knives sever fat flaps from the back and at a second station vacuum heads within the slide are activated to extract the kidneys. Pref. a final station severs the tail while the back is transported on a transverse conveyor belt.

The horizontal slide has an upstream section which aligns the back with the slide. The slide itself has a cross-section as an inverted V with a longitudinal groove along its apex to receive the ridge which extends along the inside of the carcass back.

Appts. is dependable, economical and durable. 6.3.78 as 883832 (16pp295)

USII D12 53115A/29 = US 4184-230
Appts. for cutting and breaking poultry necks - has locating turret and cutter driven from conveyor sprocket shaft at conveyor loop
US INDUSTRIES INC (BARK-) 14.12.76-US-750571 (07.11.77-US-848790)
(22.01.80) *US4091-503 A22c-21

Poultry carcass is processed by suspending neck down, holding and locating the neck while moving the carcass along a set path, cutting partially through the neck and breaking the neck bone while supporting and not cutting through the opposite neck side.

The neck is stretched by deflecting part of the carcass on engagement with a rigid transverse member across the travel path and holding parts of the carcass above and below the member. Carcass movement is continued to open

the incision and separate the broken bone so that the carcass is ready for withdrawal of windpipe, oesophagus and crop through the incision. The parent patent claims the appts. 7.11.77 as 848790 Div ex 4091503 (12pp1358)

See Also

D16 DL 137941
D13 US 4185123

D13 GB 1560177

D13 GB 1560178

D13: OTHER FOODSTUFFS

UNDE/ ★ D13 07407C/05 ★ BE -878-568
Foods, edible products and fodders with low biogenic amine content - by adding microorganisms or enzymes to cause transamination or de-amination of histidine and prevent conversion to histamine

UNDERBERG E 04.09.78-CH-009295

C03 (D16) (31.12.79) A23k A23l A23p

Prepn. of foods, edible prods. and fodders having a low biogenic amine content is effected by adding a microorganism or enzyme causing trans-amination or deamination of histidine. Pref. microorganisms are bacteria chosen from micrococcus, pseudomonas and lactobacilli or fungi or yeasts pref. Saccharomycetes on the enzymes produced by these microorganisms are used. Preferred microorganisms or enzymes decompose the histidine to give glutamic acid or ketoglutaric acid or their salts.

Process causes convert histidine present in foodstuffs to inoffensive prods., avoiding its conversion to toxic histamine. The process is esp. useful in alcoholic fermentations to produce wine and beer; in prodn. of dairy prods. such as cheese yoghurt etc.; in prodn. of sauerkraut and in silage production. 3.9.79 as 878568 (24pp395)

KRUM/ ★ D13 07516C/05 ★ DL -138-032
Feedstuff prodn. from slaughterhouse waste - by comminuting stomachs and intestines of slaughtered animals

KRUMMSDORFF 18.07.78-DL-206813

C03 (10.10.79) A23k-01/10

In the prodn. of feedstuffs with a high content of vegetable and animal protein in the natural, sterilised, ensilaged or dried state, the gastro-intestinal tract (including the stomach and intestine components) are removed from animals after slaughter and, after removal of the spleen and pancreas. If hygienically innocuous, the comminuted material is passed on to the consumer. Otherwise, the product is first subjected to further processing.

The process can be carried out with equipment available in the slaughterhouse. 18.7.78 as 206813 (4pp280)

UNIL D13 70324T/44 = DS 2216-390
Cheese products - with aroma of ripe cheese by adding a mixture of amino acids chosen from glutamic acid, glycine, lysine and methionine

UNILEVER NV 08.04.71-LU-062953

E16 (24.01.80) *NL7204-793 A23l-01/22

Prepn. of foods with a full, rounded, cheese aroma from foods already contg. volatile cheese aroma components comprises adding (a) a mixt. of 26-52 pts. wt. L-glutamic acid, 8-52 pts. wt. L-lysine and 5-30 pts. wt. L- or DL-methionine; or (b) a mixt. of 34-44 pts. wt. L-glutamic acid, 10-50 pts. wt. glycine (opt. wholly or partly replaced by L-alanine and/or L-proline) and 8-16 pts. wt. L-lysine.

The aminoacids can also be used in the form of the corresp. salts. Pref. the free aminoacids are added to the food in a total amt. of 250-60000 mg/kg. Method imparts a mature cheese aroma and flavour to young cheese, processed cheese, etc. 5.4.72 as 216390 (4pp927)

SCH- D13 38667A/22 = DS 2652-626
Fresh acid milk prods. and whipped cream prodn. - with addn. of multivalent sugar-alcohol(s) to boiler milk

ZSCHEYGE CHEM & MOL 19.11.76-DT-652626

(24.01.80) *DT2652-626 A23c-09/12 A23c-13/12

Method for improving the taste and storage life of yogurt, kunket, cultured milk, buttermilk, sour cream, kefir and whipped cream comprises adding sugar alcohols of formula $C_4H_{12}O_5$ or $C_6H_{14}O_6$ to the boiler milk in amts. of 0.2-0.3%.

The additives suppress syneresis, stabilise the casein structure, eliminate boiled milk taste, reduce bitterness and prevent oxidative deterioration of flavour. Only small amts. of additives are required, and addn. of rennet and pectin is not necessary. 19.11.76 as 652626 (4pp927)

DECO-

D13

63481A/36 = DS 2720-203

Decaffeinating green coffee by solvent extraction - using solvent contg. organic ester and a ketone and avoiding after-taste

DECOFA KAFFEE-BEARB 05.05.77-DT-720203

(24.01.80) *BE-866-564 A23f-01/10

Raw coffee beans contg. 15-55 wt.% water are decaffeinated by treatment with a 1-3C alkanol ester of formic or acetic acid together with 3-6C ketone, in a wt. ratio of 50-99.95 pts. ester to 50-0.05 pts. ketone.

Typical mixts. (ratios by wt.) are e.g. methyl acetate: acetone (85:15-97:3); methyl acetate:butanone-2 (75:25-90:10); ethyl acetate:acetone (65:35-93:7); and ethyl acetate: butanone-2 (50:50-80:20).

Roast coffee prepd. from the treated beans has no unpleasant aftertaste and does not differ in flavour from an untreated coffee. 5.5.77 as 720203 (5pp927)

DECO-

D13

61930A/35 = DS 2720-204

Treatment of coffee grains with ester and ketone - to remove digestive irritants without affecting caffeine strength or taste

DECOFA KAFFEE-BEARB 05.05.77-DT-720204

E17 (24.01.80) *BE-866-197 A23f-01/04

Removal from raw coffee beans of components which contribute to the presence of gastro-intestinal irritants in roast coffee, without altering the original caffeine content, comprises treating the opt. dried beans at elevated temp. with a 1-3C alkanol ester of formic or acetic acid together with a 3-5C ketone, in a wt. ratio of 50-99.95 pts. ester to 50-0.05 pts. ketone.

Typical mixts. are e.g. methyl acetate-acetone, contg. 3-15 wt.% ketone; methyl acetate-butanone-2, contg. 10-25 wt.% ketone; ethyl acetate-acetone contg. 7-35 wt.% ketone; and ethyl acetate-butanone-2, contg. 20-50 wt.% ketone.

Roast coffee prepd. from the treated beans has no unpleasant aftertaste. The roasted beans are free from light-coloured flecks. 5.5.77 as 720204 (4pp927)

MITU ★

D13

07821C/05 ★ DT 2928-002

Isobutyric acid prepn. by continuous catalytic isobutyraldehyde oxidn. - in liq. phase, with control of oxygen to isobutyraldehyde mol. ratio

MITSUBISHI CHEM IND KK 21.07.78-JA-089126 (14.07.78-JA-085834)

E17 (24.01.80) C07c-51/26 C07c-53/22

In isobutyric acid prepn. by the continuous alkali metal cpd. - catalysed liq. phase oxidn. of isobutyraldehyde with O_2 or an O_2 -contg. gas, the O_2 /isobutyraldehyde mol. ratio in charge is kept at ≥ 0.5 .

Isobutyric acid is used as a foodstuff auxiliary or as starting material in methacrylic acid and Me methacrylate prepn. Isobutyric acid can be prepd. with high conversions, yields and reaction velocity. By-prod. quantity is minimised. 11.7.79 as 928002 (+14.7.78(2); 21.7.78-JA-085835/6; 089125) (25pp200)

ROQF ★

D13

07831C/05 ★ DT 2928-200

High fat-contg. premix prepn. - by emulsifying fat raw material with alkali solubilised potato protein and atomising (BE 14.1.80)

ROQUETTE FRERES SA 12.07.78-FR-020896

C03 (24.01.80) A23c-11 A23d-03 A23d-05

Fat premixes contg. $>50\%$ fat are prepd. by (i) emulsifying the fat raw material with a potato protein, (I), which was preliminarily solubilised by an alkali treatment, and (ii) atomising the emulsion obtd. in the presence of a spray-carrier. The alkali treatment-solubilised (I) is claimed.

The prods. can be used in the prepn. of milk substitutes for calves, after mixing with further constituents. High fat-contg. stable emulsions can be prepd. 12.7.79 as 928200. (16pp200)

HERV/ ★ D13 07844C/05 ★FR 2422-324
Cheese making mould assembly - with cavity block fixed to drainage shutter so that curds cannot leak at interface

HERVE Y 11.04.78-FR-011282

P13 (14.12.79) A01j-25/13

The mould cavity block has previously been placed removably on top of drainage shutter which itself sits inside a tray. Even when care has been taken to achieve a close fit between block base surface and shutter, loss of prod. frequently results from leakage of curds at this interface.

The base shutter is now firmly secured to the mould block to overcome this leakage problem. Fixing may be by welding, bonding with adhesive, moulding the two items as a single piece, stapling, riveting, clamping etc. 11.4.78 as 011282 (4pp448)

SALI- ★ D13 07848C/05 ★FR 2422-342
Salting food products esp. cheese, for reduced saltiness - using alkali or alkaline earth metal chloride(s) other than sodium

CIE SALINS MIDI EST 13.04.78-FR-010860

(14.12.79) A23c-19 A23l-01

The process comprises exerting an osmotic pressure on the aq. phase of the products by incorporating or spreading on the surface alkali metal chlorides other than NaCl and/or alkaline earth metal chlorides. The process is applied to the syneresis of the clot in cheese mfr.

The chlorides are pref. used with at least one of NaCl, α - or β -lactose and powdered lactoserum which may opt. be deproteinated, lactose free or de-acidified. The pref. alkaline earth metal chloride is CaCl_2 .

The process reduces the salty taste without affecting the texture or appearance. 13.4.78 as 010860 (5pp597)

PUJO/ ★ D13 07877C/05 ★FR 2422-713
tumbling action laceration to extract oil from olives - with increased capacity by discharging stones and skin directly from laceration zone

PUJOL JF 17.01.78-FR-001162 (27.01.77-FR-002223)

(14.12.79) A23n-01 C11b-01/04

The fruit is lacerated in the first section of a horizontal, rotary drum by tumbling action together with free rolling masses, i.e. ball mill style. In a second section of the drum, the lacerated prod. is strained to separate juice from skin, stones etc.

In this addn., the diametral dividing wall between the two drum sections is now formed as a perforated screen so that skin and stones are retained and only juice allowed to pass into the second section. The retained solids are lifted into an axial screw conveyor which carries them through the second section of the drum.

The first section of the drum is partitioned into sub-sections, each with its own size of free rolling masses. The second section has its own charge of free rolling masses to complete laceration of any fine particles still in the juice.

The output capacity of the lacerating drum is increased. 17.1.78 as 001162 Add to 27.1.77-002223 (10pp448)

BRPE ★ D13 07879C/05 ★FR 2422-731
Phospho amino lipid used as anticorrosion agent - for silage contg. an acid preservative

BP SOC FR PETROLES 10.04.78-FR-010555

C03 E11 M14 P12 (C01) (14.12.79) A01f-25/16 A23k-03/03 C23f-11

Anti-corrosion agents contains a phospho amino lipid (I) or an amino deriv. thereof. Used for prevention of corrosion in equipment used to store animal feeds, particularly silage, in the presence of acid preservatives. (I) is known to be non-toxic to animals.

Generally 10-3000 ppm of (I) is used, based on the weight of acid preservative, typically formic acid. Pref. (I) are lecithin, oleyl sarcosinic acid, or an oleyl sarcosinate. 10.4.78 as 010555 (6pp520)

NENG- D13 16724Y/10 =GB 1559-792
Quantitative analysis of dispersions - having several phases dispersed in a common medium by multistage light absorption

NORTHERN ENG IND (GRUB-) 04.08.75-GB-032510

J04 R16 + R14 (30.01.80) *DT2634-814 G01n-21/31

The quantitative analysis of the dispersion medium and components forming the disperse phase of an emulsion

and/or suspension, comprises passing a beam of i. r. radiation through a sample of dispersion medium and a second beam through a reference sample, and selecting narrow absorption wavelengths for the dispersion medium and each component in turn to effect an energy balance between the beams.

This is followed by replacing the dispersion medium sample with one of the emulsion and/or suspension; and repeating the measurement process to determine the absorbance due to the medium and each component.

Simple appts. is used. The process can be used for the analysis of water, fat, protein and lactose in milk. 21.7.76. (- pp976)

BOEF D13 47728A/27 =GB 1559-920

Freeze drying granules of foods, drinks and pharmaceuticals - by spray contacting prod. in soln. with easily vaporised liq. refrigerant

BOEHRINGER MANNHEIM GMBH 30.12.76-DT-659546

J07 Q75 + Q76 (30.01.80) *BE-862-370 F25c-01

A device for the continuous prodn. of frozen granulates comprises a cooling column into which liq. coolant and prod. soln. are fed at the top and from which frozen prod. is removed at the bottom. Evapd. cooling agent is also removed from the column. The obtd. prod. can be fed, via a belt conveyor, to a freeze drying plant. Pref. the coolant is N_2 . The size and solids content of the granules is varied by the concn. viscosity and spray pressure of the prod. soln. as well as the nozzle dia.

The process is used for e.g. fish, meat, vegetables, fruit juice, coffee, tea, soup, pharmaceuticals, etc. A rapid change from one prod. to the other is obtd. cheaply. 28.12.77 as 053984. (5pp906)

BARN- D13 29152Y/17 =GB 1559-989

Sorbitol and xylitol compsn. for sweetening edible prods. - esp. sweets and chewing gum, not causing tooth decay

BARNANGEN AB 11.12.75-SW-014030

B05 E17 (30.01.80) *BE-849-279 A23l-01/23

Edible prod. contains as principal sweetener sorbitol and $\leq 25 (\geq 1)$ wt. % xylitol based on total wt. of sorbitol and xylitol. The ratio of xylitol to sorbitol is pref. 1:30-1:6 by wt. The prod. is in the form of a stimulant which is a chewing gum or a sweet.

The xylitol prevents significant decompn. of the sorbitol when contacted with saliva. Thus the substantially cheaper sorbitol may replace a larger fraction of xylitol without resulting in significant change in plaque pH as compared to the use of xylitol alone. 9.12.76 as 051511. (8pp)

APAW- D13 29203Y/17 =GB 1559-990

Machine for making soft ice cream - with compressed air supply to freezing drum via cream reservoir

APAW SA 22.12.75-IT-012943

+ Q75 (30.01.80) *BE-849-703 A23g-09/20 + B01f-07/04

An ice cream making machine has a mixing barrel, a compressed gas source, and a liq. mix supply tank. A first duct connects the gas source to the tank at a position above the liq. level, a second duct the barrel to the tank at a position above the liq. level, and a third duct the barrel to a tank at a position below the liq. level.

The second and third ducts are connected to two branches of a 'T'-junction, the third junction leading to the barrel.

The gas source is pref. compressed air, and all the joints are quick coupling. Freezing pref. occurs in the barrel. When a pressure drop occurs mix does not flow back into the pressure circuit. 22.12.76 as 053620. (5pp)

PROC D13 45476Y/26 =GB 1560-000

Supplementing foods having insufficient threonine - and sulphur-contg. amino acids by adding threonine and acylated methionine

PROCTER & GAMBLE CO 10.12.75-US-639494

E16 (30.01.80) *DT2653-987 + A23j-01 A23k-01/16

Compsn. for fortifying foodstuffs deficient in S-contg. amino acids and threonine comprises a threonine (I) and an N-acyl L-methionine (II).

Pref. (I) is L-threonine or a DL-threonine mixt. and (II) is N-acetyl-L-methionine. The ratio of (I) to (II) is pref. 10:1-1:10.

Proteins fortified with the above compsn. are fully equivalent to meat and cheese proteins derived from animal source. Typically a fortified peanut butter compsn. is

prepd. by adding 1.5 pts. wt. L-threonine and 0.5 pts. wt. N-acetyl L-methionine to a commercial peanut butter. 9.12.76 as 051466. (6pp393)

GENO D13 32122A/18 =GB 1560-177
Simulated bacon prodn. with fat and lean phases - contg. heat coagulable protein, fats and gelatin etc.

GENERAL FOODS CORP 30.12.76-US-755537
(D12) (30.01.80) *BE-862-342 A23j-03 A23l-01/34

A bacon analogue is prepd. comprising ≥ 2 regions contg. ≥ 1 lean phase and ≥ 1 fat phase. The lean and fat phases texturally resemble the lean and fat regions of cooked natural bacon when cooked.

The lean region comprises a loose oil-in-water dispersion of heat coagulable protein and a fat blend comprising palm oil and partially hydrogenated soy bean oil. The lean phase has a density > 1.08 g. per cc. The fat region comprises a dispersed fat encapsulated within a continuous matrix comprising gelatin and a heat coagulable egg albumin, blood albumin or their mixts.

The prepn. yields a more meaty lean phase and a better overall prod., esp. due to the specific oil blend employed in the lean phase. 15.12.77 as 052260. (6pp931)

GENO D13 32149A/18 =GB 1560-178
Simulated fat product used in meat substitutes - in which fat globules are dispersed in heat coagulated matrix

GENERAL FOODS CORP 30.12.76-US-755538
(D12) (30.01.80) *BE-862-464 A23j-03 A23l-01/34

A simulated adipose tissue is prepd. contg. a first phase comprising fat sepd. into globules of dia. 10-120 μ dispersed in a second phase matrix which envelops the fat.

The second phase mixt. is a coagulated mixt. comprising a heat coagulable component and a water-soluble, film-forming component. The matrix holds the fat globules within it, which will smoothly melt upon eating because of the film-forming component. Pref. the adipose tissue prepd. comprises 40-50wt.% of fat w.r.t. the total system and 50-60wt.% of water w.r.t. the second phase.

The tissue prepd. has good nutrition, realistic visual and textural characteristics, natural fat-like melting properties during both cooking and eating. The tissue provides a natural, smooth, fat-like meltdown and mouthfeel upon eating, and is esp. capable of frying. 15.12.77 as 052261. (13pp931)

KNOT/★ D13 07911C/05 ★GB 2025-751
High protein foodstuffs prepn. - by fermentation of dairy prods. contg. added protein materials

KNOTT J M 17.07.79-GB-024920 (18.07.78-GB-030260)
(30.01.80) A23c-09/13

Foodstuffs are prepd. by fermenting a dairy prod. (I) with a lactic acid producing microorganism so that the protein of (I) is at least partially hydrolysed. In addn., a proteinaceous material (II) (with greater protein: lactose (if any) ratio than milk) is also added to the fermentation so that the additional protein in (II) is also at least partially hydrolysed.

Simple, convenient method gives inexpensive foodstuffs which possess an enhanced content of at least partially hydrolysed protein, and increased levels of all human essential amino acids. The foodstuff is partic. suitable for administration to patients with gastric ulcers or tumours, etc. 17.7.79 as 024920. (4pp478)

SPEC=★ D13 07998C/05 ★GB 2026-027
Bacterially produced animal feedstuff - obtd. by fermenting nutrient medium using bacterial leaven of e.g. Lactobacterium thermophilic bacteria and mesophilic bacteria

SPEC DES-CONS BUR 13.07.78-SU-661948
C03 (30.01.80) C12p-39

An animal feedstuff comprises a prod. having a pH of 4-5, a dry solids content of 20.9-37% and a crude protein content of 5.8-8.8%, and is obtd. by fermentation of a nutrient medium contg. sources of carbohydrates, proteins, mineral salts and manure as poultry droppings using a thermophilic bacteria of the genus Lactobacterium or Streptobacterium and mesophilic bacteria of Streptococcus, Azotobacterium, Shermanni, Bacterium acidi propionicum, E.Coli or Pseudomonas produced by a long-term symbiosis and adaptation of the bacteria to a nutrient medium

contg. sources of C, N, mineral salts and biologically active cpds.

The feedstuff is a brown pulpy mass with a slight acidic smell, it contains no pathogenic bacteria and has good nutrient value. 13.7.79 as 024506. (5pp957)

DAIL ★ D13 08056C/05 ★J5 4157-858
Suppression of germination on storage of potatoes - with lysine or glutamic acid or their salts or sodium benzoate

DAICEL KK (HOKU-) 29.05.78-JA-064123
E16 (E12) (13.12.79) A01n-21/02 A23b-07

Potatoes are stored at 2-5°C in the presence of a germination-suppressing agent (I). (I) is sodium benzoate, L-lysine hydrochloride, L-lysine-L-glutamate, L-glutamic acid, sodium L-glutamate, L-methionine or DL-methionine.

(I) are permitted food additives. They are of low toxicity and can easily be washed off with water. They are applied (i) as a fine powder or (ii) by spraying an aq.emulsion or alcoholic soln. and then drying. Process is suitable for small scale use and does not cause pollution problems. 29.5.78 as 064123 (3pp5)

SANE ★ D13 08058C/05 ★J5 4157-880
Cold water soluble cocoa prepn. - using an ester of a polyhydric alcohol and an unsatd. fatty acid

SAN EI CHEM IND KK 02.06.78-JA-067004
(13.12.79) A23g-01

Water-soluble cocoa is prepd. by (a) adding > 0.001 pts. wt. ester (I) and > 100 pts. wt. cocoa powder, (b) heating the mixt. to above the m.pt. of the cocoa butter in the cocoa powder and above the m.pt. of (I) and (c) drying the homogeneous mixt. obtd. The prod. can easily be dissolved even in water at 0°C.

Esters (I) are obtd. from polyhydric alcohols e.g. glycerin, sorbitan, propylene glycol and unsatd. fatty acids e.g. oleic, linolic or linoleic acid. They are pref. used together with an ester of a polyhydric alcohol and a satd. fatty acid to give a higher rate of solution and to prevent the floating of the high m.pt. component when the prod. is dissolved in water. The mixt. is opt. cooled before drying. 2.6.78 as 067004 (3pp5)

IDEK ★ D13 08059C/05 ★J5 4157-882
Semi-solid emulsified foodstuff prepn. - using a yeast extraction residue formed by crushing washing and extracting protein from yeast cells

IDEMITSU KOSAN KK 02.06.78-JA-065700
(13.12.79) A23l-01/24

Semi-solid emulsified foods are prepd. by (i) forming a yeast extraction residue by (a) physically crushing yeast cells, (b) washing with a mixed solvent of oxalic and/or citric acids and methanol and/or ethanol and (c) extracting protein by treating with alkali or protease, (ii) mixing with edible oil, vinegar and egg yolk and (iii) homogenising the mixt.

The yeast extraction residue can be deodorised, defatted and made free of bitter taste. Semi-solid emulsified foods with good flavour and preservability can be prepd. It can also be used in mayonnaise, dressing, etc. and, for example, in prepg. mayonnaise about 75% of the egg yolk can be replaced by it.

The residue is pref. washed with water prior to the treatment with alkali or protease to remove remaining acid and pigment and attain a high extraction yield. The amount of the mixed solvent is > 2 times the wt. of the crushed cells and > 3 times their water content. The alkali treatment is at $< 80^\circ\text{C}$, at pH 10.5-13.5, and uses NaOH, KOH and/or ammonia. 2.6.78 as 065700 (4pp5)

KYOK-★ D13 08121C/05 ★J5 4158-382
Sepp. rancidity-preventing agent from rice bran oil - by extracting distn. residue of dark oil from alkali oil bottoms or its monohydric lower alcohol ester and/or other fractions

KYOKUTO SHIBOSAN K 05.06.78-JA-066818
(14.12.79) A23l-03/34 C09k-15/34

Process comprises (i) extracting (a) distn. residue of dark oil obtd. from alkali oil bottoms or its monohydric lower alcohol ester; (b) high b.pt. fraction ($> 200^\circ\text{C}$) of rice bran oil or dark oil or its monohydric lower alcohol ester; (c) alkali oil bottoms; (d) raw wax of rice bran and

/or (e) gum with alkali soln. of monohydric lower alcohol or organic solvent consisting mainly of monohydric lower alcohol (e.g. NaOH-methanol soln.); (ii) making the extract liq. slightly acidic; and (iii) treating the sepd. viscous substance with methanol, keeping the methanol at room temp. or lower temp. to remove solid or viscous substance and thus sepg. methanol-soluble substance.

Prod. effectively prevents hydrolytic, ketonic and oxid-active rancidity of margarine, etc. at relatively high temp 5.6.78 as 066818 (5pp50)

TOSH ★ D13 08510C/05 ★ J5 4160-662
Mfg. stable solid table salt prepn. for livestock - by heating mixt. of table salt, cetyl alcohol and stearyl alcohol, cooling and pressing
TOSHIBA PHARM KK 08.06.78-JA-068322
C03 (19.12.79) A23k-01/16

Table salt is mixed while heating with 0.2 to 1% each of cetyl alcohol and stearyl alcohol, the mixture cooled to solidify it and then pressed. The prepn. dissolves in the saliva of livestock but is not broken down by rain water, etc.

In an example, 0.015% manganese sulphate, 0.03% of ferrous sulphate, 0.15% cobalt sulphate, 0.06% copper sulphate, 0.015% zinc carbonate, 0.2% cetyl alcohol and 0.2% stearyl alcohol are mixed with table salt at 60 to 70° C, and the mixt. cooled and pressed under 1.4 ton/cm² to give a solid prepn. of 10 x 4 x 4 cm. 8.6.78 as 068322 (3pp22)

ASAH ★ D13 08512C/05 ★ J5 4160-686
Feedstuff compsn. for fish - contains 1,4-naphthoquinone subst. at 2- and 3 positions to reduce adverse effects of agrochemicals
ASAHI CHEMICAL IND KK 05.06.78-JA-066656
C03 (19.12.79) A23k-01/18

Feedstuff compsn. contg. 1,4-naphthoquinone having substituents at the 2 and 3 positions. By the compsn., inhibits death of fish which is caused by side effects of agricultural chemicals (e.g. thiol carbonic acid ester). The 1,4-naphthoquinone cpd. is e.g. 2-methyl-3-phytyl-1,4-naphthoquinone, 2-methyl-1,4-naphthoquinone oxide, etc. and it is used as several ppm to several ten thousand ppm, pref. several ten ppm to several thousand ppm. 5.6.78 as 066656 (3pp22)

NNSH ★ D13 08544C/05 ★ J5 4160-757
Foods or drinks contg. succinylated gluten - prepd. by succinylation of gluten and mixing with the food or drink
NIPPON SHINYAKU KK 16.12.76-JA-151758
(19.12.79) A21d-02/36 A23l-01 A23l-02

The degree of succinylation of the gluten is > 5, pref. > 50% and the gluten is succinylated using anhydrous succinic acid. It is water-soluble, unlike wheat flour gluten, but has the same rheological properties, making it useful as a foaming agent or foam stabiliser, or in the prodn. of doughs or gels.

Prods. are e.g. sausages, mayonnaise, dressings, soups, sponge cakes or marshmallows. 16.12.76 as 151758 (4pp42)

FREN ★ D13 08545C/05 ★ J5 4160-763
Calcium stearyl lactate addition to rice - to preserve taste and texture even after cooling
FREUND INDUSTRY LTD 09.06.78-JA-068866
(19.12.79) A23l-01/10

Calcium stearyl lactate (I) is a known preservative for bread. It can also prevent conversion of α -starch to β -starch in boiled rice thus preserving the taste. As (I) is insoluble, it is ground to a fine powder and suspended in the boiling water. It is used at 0.05 - 2.0, pref. 0.1 - 1.0 wt. % (w.r.t. rice). 9.6.78 as 068866 (3pp42)

ENZA- ★ D13 08549C/05 ★ J5 4160-787
Drink prodn. by bacterial fermentation - of a medium of yeast vegetable juice and corn starch which has been digested by amylase
ENZAMIN KENKYU-SHO 05.06.78-JA-067472
(D16) (19.12.79) A23l-01/30 A23l-02/38 A61k-35/66

A drink (I) is prepd. by (a) incubating a bacteria (II) for > 2 months in a culture medium (III), (b) ageing at controlled temp. and pH for > 6 months for biochemical prodn. of lipoproteins, lipopolysaccharides and lipids and (c)

filtering.

(II) is e.g. *Aspergillus*, *Bacillus natto* or a lactic acid bacterium. (III) is prepd. by mixing (i) yellow corn starch fully digested by amylase, (ii) bread yeast and (iii) vegetable juice, sterilising the mixt. and cooling. (I) contains glucose oxidase, peroxidase, pectinase, pectin, esterase, invertase, cellulase and transaldonase. 5.6.78 as 067472 (3pp42)

UENO D13 68929Y/39 = J8 0000-020
Food additive powder contg. sugar or sugar alcohol and surfactant - opt. with oil or fat, easier to use than liq. surfactant preps.
UENO PHARMACEUTICAL KK 01.06.76-JA-062930
(05.01.80) *BE-855-213 A23b-04/06 A23l-01/32

A food additive compsn. consists of a hydrophilic powdery colloidal solid of particle size < 20 mesh (0.833 mm) and comprises 60-99% of a sugar, 30-0.5% of a food quality surfactant and 30-0% of an edible oil or fat. Process comprises adding the surfactant and an oil or fat to a molten mass or aq. soln. of a sugar alcohol or sugar and mixing and opt. adding a sugar or sugar alcohol as seeding crystals. The soln. or dispersion is solidified to form a colloidal solid, stabilised by crystallisation and opt. dried. The solid is then ground to the above dimensions.

The powder compsn. is easy to manipulate. Also the powder form extends the range of applicability of the surfactants. 1.6.76 as 062930 A23b-4/06, A23l-1/325
(5.1.80) UENO PHARMACEUTICAL KK (8pp)(J53009350)

QPPP D13 83085X/45 = J8 0000-022
Dry powdered egg albumen prodn. - by removing sugar, alkali treatment, drying, storing hot then neutralisation, having good whisking props
Q.P. CORP (QPCO-) 30.07.75-JA-092078
(05.01.80) *BE-843-067 + A23b-05/02

A dry powder of egg albumen (I) is pref. by (i) treating sugar-free (I) with alkali so that the prod. obtd. on subsequent drying can be reconstituted to pH > 10 (ii) drying, (iii) drying, (iii) storing for normally > 10 days in a warm room (esp. at 55-70° for > 20 days), (iv) incorporating a powdered organic acid (II) so that when reconstituted the prod. is approx. neutral. Alkalis are esp. NaOH or Na₂CO₃ and (II) citric, tartaric, succinic or hydroxy succinic acids.

Powder has good whisking props, without addn. of whisking agents. 30.7.75 as 092078 A23b-5/02 (5.1.80)
QP CORP (4pp)(J52018861)

QPPP D13 16950A/09 = J8 0000-023
Dried egg white prepn. - by treating raw egg white with glucose-splitting Gram-negative bacteria and *Pseudomonas* microorganism and then drying

Q.P. CORP 07.07.76-JA-080572
(D16) (05.01.80) *J53006-459 A23b-05/02
Method comprises (1) treatment of raw egg-white (II) with glucose-splitting gram negative bacteria (III), which produces gas, and *Pseudomonas* microorganism (IV) which produces lipase, and (2) drying the (II)-solution.

Pref. the pH of (II) is maintained at 6-8, e.g. (7-7.5), by addition of edible organic acid such as citric acid and acetic acid for increase of activity of (III) and (IV). Examples of (III) are *Klebsiella pneumoniae* ATCC 10031 and *Citrobacter freundii* ATCC 8090, which decompose glucose to lactic acid, ethanol and carbon dioxide. Examples of (IV) are *Pseudomonas aeruginosa* ATCC 27601, *Ps. maltophilia* ATCC 13637 and *Ps. fluorescens* IFO 3081. The amts. of (III) and (IV) are 10⁵-10⁸/ml, e.g. (10⁶-10⁷). Both treatments with (III) and (IV) are carried out at 25-35° C for 2-4 days (III) and (IV) are sterilised by drying at above 60° C.

The dried egg-white has high foaming ability after mixing with water and has no lipase-activity, which generates bad odour by decomposition of fat in the dried egg-white. 7.7.76 as 080572 A23b-5/02 (5.1.80)
QP CORP (3pp)(J53006459)

QPPP ★ D13 08574C/05 ★ J8 0000-024
Frozen boiled egg prodn. - by removing shell, dipping in aq. dextrin alcohol soln. and freezing
Q.P. CORP 22.09.75-JA-114582
(05.01.80) A23b-05/04

The method comprises removing the shell from the boiled egg, dipping the egg in $\geq 20\%$ aq. soln. of dextrin (alcohol), and freezing the egg.

The method prevents foaming of the egg when thawed. The dipping time is 1-2 days for hen eggs and 12-20 hrs. for quail eggs. 22.9.75 as 114582 A23b-5/04 (5.1.80)
QP CORP (4pp83)(J52041267)

CHUO- D13 27947Y/16 = J8 0000-028
Silkworm feed to accelerate growth and control disease - comprises a mixt. of a diamino methylveratryl pyridine and a dimethoxy pyrimidinyl sulphanilamide

CHUO SANKEN KK (CHUO) 28.08.75-JA-104215

C02 P14 (05.01.80) *J52030-675 A23k-01/18 A61k-31/50

Feed for silkworm contains 2, 4-diamino-5(6-methylveratryl)pyridine (I) and N'(2, 6-dimethoxy-4-pyrimidinyl) sulphanilamide (II) The growth of silkworm is accelerated, and the yield of cocoon is heightened, and the softening disease of silkworm is controlled.

When only (II) is used, the effects of this invention are not obtd. 28.8.75 as 104215 A23k-1/18, A61k-31/505 (5.1.80) CHUO SANKEN KK (AJIN KATA HOFF) (4pp)(J52030675)

SODA- D13 24841W/15 = J8 0000-031
Milk-like flavouring material prodn - by heating alkyl-hydroxy acids under pressure

SODA SANGYO CO LTD 19.12.72-JA-126746

E17 (05.01.80) *J49085-276 +A231-01/22

A substance with milk-like odour is produced by heating 9-12C alkyl-hydroxy acid under high pressure. In an example, 100 g hydroxydecanoic acid was heated at 200-50° at 200 mmHg for 4-5 hr, cooled and distd. at 4 mm Hg to obtain the described substance. 19.12.72 as 126746 A231-1/226 (5.1.80) SODA SANGYO CO LTD (2pp) (J49085276)

IWAT- D13 72938X/39 = J8 0000-033
Bitterness free vinegared eggs - obtd by dissolving shells in acid, e.g. malic acid, and mixing resulting mixt after removal of egg membrane

IWATA KAGAKU KOGYO 04.02.75-JA-014008

(05.01.80) *J51091-362 A231-01/32

Raw birds eggs are treated with a soln. (ca. 20% concn). of monobasic or polybasic acids such as citric acid, maleic acid, succinic acid, tartaric acid, etc. or acidic salt of the polybasic acid or a mixed soln. of the acids or salts at normal temp. for 3-4 days to dissolve egg shells, and then mixed after removal of the membrane. On addn. of acetic acid no bitterness is caused.

4.2.75 as 014008 A231-1/32 (5.1.80) IWATA KAGAKU KOGYO (2pp)(J51091362)

KISH/ ★ D13 08575C/05 ★ J8 0000-034
Mfr. of seasoned boiled egg - treated with alkali then acid, heating, dipping in seasoning soln. and boiling

KISHIDA N 08.05.75-JA-054261

(05.01.80) A231-01/32

Method comprises (a) treating egg with alkaline soln. and then acid soln. to remove cuticle from eggshell and to enlarge pores of eggshell, (b) heating the egg of 80°C in vacuum until the white incompletely coagulates, (c) dipping the egg in seasoning soln, and (d) boiling the egg. 8.5.75 as 054261 A231-1/32 (5.1.80)

KISHIDA. N, NAITO M (2pp83)(J51130558)

DYNN D13 55556S/34 = J8 0000-370
Stable acetoglycerides for use as food coat -

DYNAMIT NOBEL AG 28.03.70-DT-015085

B07 E17 (D21) (08.01.80) *BE-762-688 C07c-69/30 +C07c-67/08

Acetoglycerides are prepd. by acetylation above 60°C of partial glycerides of fatty acids having 16 and/or 18 C atoms, using acetic anhydride. The glyceridies have an iodine number ≤ 5 and contg. > 70 wt.% monoglycerides are acetylated until they have an hydroxyl number of 30

maximum. Excess acetic anhydride and acetic acid are removed under vacuum above 170°C by introduction of a stream of inert gas or steam. 29.3.71 as 018664 (clg.28.3.70-DT-015085) C07c-69/80, 67/08 (8.1.80)
DYNAMIT NOBEL AG (3pp)(J46004018)

MILK= ★ D13 08645C/05 ★ SU-581-701
Lactic flora bacteria starter concentrate prodn. - includes use of fat-free milk and specified drying process, used in milk prod. mfr.

MILK IND RES INST 04.01.76-SU-309978

(D16) (30.09.79) A23c-07/12 C12k-03

Bacterial lactic flora concentrate for use as starter in milk prods. mfr. from soured milk, is prepd. in industrial conditions without the help of laboratory equipment according to claim in Parent Patent 232905. The prod. activity is increased and the mfr. process is accelerated by addn. of sterile fat-free milk contg. 15-25% solids and mixing the biomass with protective medium (1:4 ratio) followed by saturation of mixt. with air and freezing the resulting foam-type suspension.

The freezing process is conducted at (-50)-(-60)°C and the suspension is then freeze-dried, starting with temp. of (-40)-(-42)°C and ending with 45-50°C. The duration of the drying process is 6-10 hrs.

Laguda, I. V., Bannikova, L. A., Prusakova, N. V. Bul. 35/25.9.79. 4.1.76. as 309978 Add to 232905 (3pp938)

REFR= ★ D13 08646C/05 ★ SU-587-774
Storage period determ. of animal origin prod. - involves thin film chromatography and densitometry followed by peak area measurement

REFRIG IND RES INST 31.10.75-SU-187752

J04 R16 (06.07.79) G01n-31/08

Improved accuracy in determining the storage period of lipid extracts or of other products of animal origin is achieved by thin film chromatography with the chromatogram exposed using a colouring reagent. Densitometric analysis and determ. of the ratio of areas below the peak of trace due to free aliphatic acid to that below the peak of cholesterol (taken as a standard) determine the storage period.

The ground muscle tissue is loaded into the vessel containing methyl alcohol, and chloroform is added during stirring followed by addition of distilled water. The mixture is filtered out with paper and transferred to an extn. flask before the analysis.

Yakubov, G. Z., Kargaltsev, N. I., Guslyannikov, V. V. et al. Bul. 24/30.6.79. 31.10.75. as 187752 (3pp89).

STAR= ★ D13 08648C/05 ★ SU-612-603
Animal feed concentrate prodn. - includes heating, potato juice sepn., concn. by evapn. and freezing and spray-drying

STARCH PROD RES INS 11.10.76-SU-414969

C03 (15.09.79) A23j-01/16

Feed concentrate is produced from the juice of potato cells by coagulating the proteins, filtering them off, and drying the filtrate. This method is improved in that, before the drying, the filtrate is concentrated by freezing to obtain a mixt. of the concentrate and ice crystals; subsequently, the solid phase is sepd. from this mixt. By this method, the quality of the final product is improved, and the loss of solid substances is reduced.

Juice is sepd. from comminuted potatoes by centrifuging and heated to a temp. $\geq 80^\circ\text{C}$ to coagulate the proteins, which are sepd. by filtration. The filtrate is frozen. The ice crystals are sepd. The concentrate is evaporated to a solids content $\geq 50\%$, the product is then subjected to spray-drying, the freezing can alternatively be carried out in two stages. The cost of this process is halved compared with the conventional drying by evaporation (without freezing).

Gulyuk, N. G., Oblezova, T. P., Romanenko, V. N. Bul. 34/15.9.79. 11.10.76. as 414969 (2pp70)

ODFO= ★ D13 08658C/05 ★ SU-640-467
Heat treatment unit for vegetable prods. - uses preliminary oil saturation at controlled temperature and infrared frying

ODESS FOOD SUPPLY 16.03.76-SU-334439

P28 (05.07.79) A231-01/* A47j-37/04

Improved vegetable preserve and lower losses of oil during their heat treatment are achieved by the prelimin-

ary saturation with oil at 70-90°C. Frying then takes place in a fluidised bed using infrared radiation. The frying chamber features an oil bath with an infrared radiator, two additional chambers and a source of hot air ensuring the drying.

The treated prod. absorbs oil during its displacement and the surplus oil is drained through the perforations in the blades. The hot air fluidises the charge, and the infrared radiation ensures frying. The lower losses of oil are due to its reduced amount in the unit and the higher rate of repeat flow.

Ferapontov, A.S. Bul. 25/5.7.79. 16.3.76. as 334439 (3pp89)

TEXT= ★ D13 08788C/05 ★SU-662-641
Prod'n. line for cotton filters for milk - has profiled cutting mechanisms placed across conveyor for material displacement and waste removal

TEXTILE IND DES 20.08.76-SU-400346
F07 J01 (18.05.79) D06c-27

The prod'n. line can be used for cotton filters employed for milk filtering. The line contains an arrangement for material roll unrolling, compensator, bearing plate with clamps for the material, profiled cutting mechanisms, an arrangement for filter stack formation, storing device and a conveyor for material displacement and waste removal. In order to increase the filter cutting quality, the profiled cutting mechanisms are placed across the conveyor for material displacement and waste removal.

The filter stack formation arrangement is placed under the profiled cutting mechanisms and consists of a pulsating conveyor with turning platforms, sloping chute and sprung push rods for platform rotation. The conveyor belt for material displacement and waste removal consists of parallel branches. The conveyor working branches are situated between the bearing plate and material clamps. The profiled cutting mechanisms have knives fitted on a cutting head piece. The head piece can rotate and reciprocate in a vertical plane.

Telegin, M.P., Kislyakova, O.E. Bul. 18/15.5.79. 20.8.76. as 400346 (5pp110)

TEXT= ★ D13 08789C/05 ★SU-662-642
Milk filter prod'n. unit - has various arrangements for prod'n. of glued paper strips with filtering cotton wool between them

TEXTILE IND DES 31.01.77-SU-447867
F07 J01 (18.05.79) D06c-27

The unit can be used for milk filter prod'n. It comprises a filtering cotton wool glued between two paper strips with openings. The unit contains an arrangement for material unloading and profiled cutting mechanism with a drive. In order to automate the prod'n. process, the unit is provided with a rolling arrangement for paper strips and two pairs of transporting rollers for paper strip doubling, two needle rollers for sepn. and transportation of the paper strip, and a pair of pulling rolls for paper strip and filtering material connection. The unit is also provided with an arrangement for application of glue onto one of the paper strips, heating elements for gluing paper strip edges, with filtering cotton between them, and knives for ready filters cutting. One of the knives is kinematically connected to profiled cutting mechanism.

Each needle roller has sprung fork levers for impalling strip onto the roller. The arrangement for glue application onto one of the paper strips contains a bath, whose base has an opening and corrugated roller. The drive is provided with a drive shaft with gears and parallel distribution shaft. The distribution shaft carries wheels with toothed sectors, which contact the gear, and discs with cylindrical protrusions. A plate with cylindrical groove is placed on each gear. The radius of the groove is equal to the disc protrusion radius.

Belov, V.F., Momisarov, S.P., Leonov, Yu.G. et al. Bul. 18/15.5.79. 31.1.77. as 447867 (6pp110)

SICO D13 00381Y/01 =SU-663-269
Mfr. of dried oil cake from vegetable matter - esp. lucern, with heat recovery from dehydrator exhaust fumes

SOC INTERET COLLECT AGRI (FRLU-) 25.02.75-FR-005831
C03 Q76 (20.05.79) *FR2302-048 A23k-01/14

Vegetable raw material such as lucern, clover etc., is pressed and heat-treated to produce a dehydrated oil-cake and conc. juice prods. Exhaust fumes from the dehydration operation, which are at about 100°C and at atmos. pressure, and contains a high proportion of water vapour, are passed through a heat exchanger. This condenses some, at least of the water vapour. The heat recovered in this way is utilised in the processing of the oil cake and/or the expressed juice.

Pref. the exhaust fumes are used as a heating fluid in the first effect of a multiple-effect evaporator employed in concentrating serum sepd. from the juice. Residual heat from first effect effluent heating fluid is used to pre-heat juice on its way from the pressing operation to further processing.

De Matan, O. Bul. 18/15.5.79. 25.2.76. as 324513 (5pp)

AMSU= ★ D13 08856C/05 ★SU-663-364
Storage-stable milk-based infant food paste mfr. - using skimmed milk inoculated with lactic flora bacteria with addn. of cream, vegetable oil, vitamin(s) dextrin, maltose, and stabilising sa

A MEDICINE SUPPLY 27.05.77-SU-493975
(28.05.79) A23c-09/12

Pastry soured milk product for infants is prepd. by thermally treating skimmed milk; concentrating it to a 30-32% solids content; introducing a souring preparation contg. acidophilic bacilli; effecting souring; admixing cream, a vegetable oil and oil-soluble vitamins; adjusting the milk fat content to the desired level; (pref. 14-16%) homogenising the mixt., cooling; and introducing dextrin-maltose mix.

The storage stability of the product and its consistency are improved by adding a stabilising salt (e.g. tripotassium citrate) to the skimmed milk; adding (after concentrating) a mixt. of a vegetable oil, cream and oil-soluble vitamins, and also dextrin-maltose; cooling and souring to 200-230°T acidity (pH 4.0-4.3). Iron glycerophosphate can be added in the form of an aq. soln.

Korobkina, G.S., Kalinina, N.N., Pyatkova, N.P. et al. Bul. 19/25.5.79. 27.5.77. as 493975 (2pp70)

RORE= ★ D13 08857C/05 ★SU-663-365
Chocolate coated ice-cream prepn. - using cocoa, coating chocolate, milk fat, fine sugar powder and vegetable confectionery fat

ROST REFRIGERATION 14.05.76-SU-351706
(28.05.79) A23g-09

Addition of a vegetable confectionery fat, improves the quality of the coating, and reduces its cost of mfr.

The compsn. contains (in wt. %) cocoa 3-6, coating chocolate 30-15, vegetable confectionery fat 15-20, sugar powder 6.5-13; the balance is an animal fat (e.g. country butter). The glaze should be applied at a temp. not exceeding 38°C.

Drynkina, V.V., Smirnov, N.V., Mindalova, N.K. et al. Bul. 19/25.5.79. 14.5.76. as 351706 (2pp70)

KHSU= ★ D13 08858C/05 ★SU-663-366
Meat broth concentrate prod'n. - includes processing waste bones and freezing meat broth prior to cooking

KHARK SUPPLY INST 16.01.78-SU-570761
(28.05.79) A23l-01 C09h-01

Intermediate product for the preparation of broth is produced by comminuting bones to 3-5 mm. pieces, adding 10-15% (w.r.t. the bones) of a meat broth, and freezing the mixt. at a temp. between -30 and -35°C (in metallic containers lined with a polyethylene film).

By this method, the storage stability of bones is enhanced, the subsequent cooking is accelerated (to 2h), and the quality of the broth is improved.

Belyaev, M.I., Vinokurov, E.A. Bul. 19/25.5.79. 16.1.78. as 570761 (2pp70)

CONF= ★ D13 08859C/05 ★SU-663-367
Halva-type confectionery compsn. - includes cocoa and milk powders, vegetable oil, cream and caramel

CONFECTIONERY IND 18.02.77-SU-454487
(25.05.79) A23l-01/36

Prod'n. of halva from a vegetable oil and proteins is improved by using cocoa proteins and milk proteins, where-by the biological value of the product is increased. The

compsn. contains (in wt. %) proteinaceous cocoa products 18.5-26.5, milk proteins 28.5-36.5, the balance is vegetable oil.

Halva is produced by heating a vegetable oil to 63°C and portionwise admixing cocoa product (which may contain 14% of cocoa butter) and milk protein. The total fat content should be at least 40%. The comps. may contain additives, such as foamed caramel, dry milk, dried cream, comminuted nuts, candied peel, raisins, vitamins. etc.

Kharlamova, O.S., Kafka, B.V., Kashaev, I.I. Bul. 19/25.5.79. 18.2.77. as 454487 (2pp70)

ADZH= ★ D13 08861C/05 ★SU-663-369
Citrous fruit juice heat treatment unit - has homogeniser jet-type heat exchanger and converging vacuum chamber followed by diffuser with vibration plates

ADZHAR CANNING IND (BATU=) 05.03.77-SU-461686
(28.05.79) A231-02/06 A231-03/18

The citrous fruit juice is obtd. for use in food mfr. by homogenising unit connected to the jet-type heat exchanger and vacuum chamber. The diffuser houses an oscillator loop made up of vibrating plates, while the converging section and the holding section are fitted in the jet-type heat exchanger and the vacuum chamber respectively.

The juice is fed into the exchanger by the nozzle, and is subject to intensive heating by live steam ensuring the contact sterilisation and partial homogenisation. This results in breaking of juice cells followed by suction into the converging section during the passage to the mixing chamber and diffuser.

Zhordaniya, I.Kh., Yakobashvili, R.A., Anikeichik, N. M. Bul. 19/25.5.79. 5.3.77. as 461686 (2pp89)

SALT= ★ D13 08919C/05 ★SU-663-662
Nutrient salt with improved moisture resistance for livestock - is prepd. by evapn. of waste brine obtd. in prodn. of cooking salt

SALT IND RES INST 19.05.77-SU-490811

C03 (28.05.79) A23k-01/17 C01d-03/06

Salt cpds. for livestock can be obtd. by evapn. of mother liquor produced as waste from prepn. of cooking salt. 400 m³ of collected liquor, contg. (in g/l) Na₂SO₄ 52, NaCl 255 and Na₂CO₃S, are evapd. in vacuum to give 130 t. of salt contg. (in wt. %) NaCl 88.7, Na₂SO₄ 10.7 and Na₂CO₃ 0.4. The crystals of NaCl are uniformly coated with a finely dispersed layer of Na₂SO₄, and the coating does not deteriorate over 4 months testing. By comparison, the salt prepd. by mixing cooking salt with a soln. of KI and adding clarified plant sol. to prevent moisture absorption had an unstable coating over the NaCl crystals which was easily damaged.

The starting materials for the improved salt cpd. do not require any pre-treatment, as did those for the previous method, thus reducing costs of prodn. and the apparatus required, and eliminating the salinisation of soil which occurred where the salts were obtd. by the evapn. method. Tests on mice and rats showed a toxic effect only at doses of 18-22 times the normal intake.

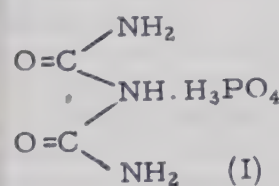
Bidusenko, A.A., Smirnov, I.A., Bezkrovnyi, G.M. et al. Bul. 19/25.5.79. 19.5.78. as 490811 (2pp815)

KORY/ ★ D13 08945C/05 ★SU-663-693
Biuret orthophosphate used as fodder additive - is prepd. by triturating stoichiometric amts. of biuret and phosphoric acid to a uniform mass

KORYAKIN A G 05.03.74-SU-002001

C03 (C04) (28.05.79) A23k-01/22 C07c-127/24

Prepn. of biuret orthophosphate of formula (I) involves trituration of the stoichiometric amts. of biuret (II) and 100% of phosphoric acid (III) until a uniform mass is obtd. It may be used as a fodder additive for making up deficiencies of protein and phosphorus in ruminants' fodder. Also it can be used as a nitrogen-phosphate



fertiliser for the cultivation of plants. (I) extends the choice of the synthetic sources of protein. The cpd. is described as new.

Koryakin, A.G., Sarbaev, A.N., Galperin, V.A. Bul. 19/25.5.79. 5.3.74. as 002001 (2pp48)

GENO D13 03840Y/02 =US RE30-197
Storage stable chewing gum comps. - contg. gum base, flavour, sugar and xylitol

GENERAL FOODS CORP 29.12.75-US-644701 (07.04.77-US-785407)

(22.01.80) *US4000-320 A23g-03/30

In a sugar sweetened chewing gum comps. of gum base, flavour and sugar, the improvement comprises adding xylitol to the comps. in an amt. < 10 wt. % of the total comps. Pref. the amt. of xylitol is < 5 wt. %, esp. 1-3.2 wt. % of the total comps.

The comps. has improved storage stability. Also the gum has greater, softness, flexibility and extensibility and freedom from cracking when bent cf. commercially available gums. The freshness of the gum can be preserved for long periods and/or necessity for extensive protective wrapping can be reduced. 7.4.77 as 785407 Reissue of 4000320 (4pp924)

GRIS/ ★ D13 08962C/05 ★US 4184-422
Homogenising egg contents within shell - inserting bent needle and rotating rapidly to create vortexing

GRISEFGJ 23.09.71-US-183118 (15.05.76-US-677450)

(22.01.80) A231-01/32 B01f-07/16

Contents of an egg are homogenised by piercing shell and membrane with a bent needle by holding the egg in one hand and pressing down onto the upwardly facing needle, sliding the needle almost wholly into the egg, and rapidly rotating the needle while holding the egg steady.

Needle pref. has a degree of flexibility and is held while the egg is pressed onto it. A needle of 0.020" diameter is preferred as the hole left on removing the needle is too small for the contents to leak. Homogenisation is rapid as needle rotation produces a vortex. The needle is secured e.g. in the chuck of an electric motor for rotation.

13.11.78 as 959484 (+15.5.76-US-677450) (4pp1358)

PHIP D13 88722X/47 =US 4184-613
Patterned three coloured ice cream dispensed into container - from delivery head with piston shut-off valve

PHILLIPS PETROLEUM CO 30.12.74-US-537463 (31.08.76-US-719222)

+Q39 (22.01.80) *US3991-217 +B67d-05/60

Appts. for combining product streams of similar viscosity and temp., e.g. ice-creams of different flavour and/or colour, into a patterned product includes a tubular chamber divided into tubular pattern conduits each connected to a separate component supply, and a dispensing valve receiving a patterned stream from the chamber and delivering separated product segments.

The valve includes a tubular chamber and a piston movable to alternately open and cover the inlet from the combining chamber. Each conduit is pref. parallel to the chamber axis, and the chamber is divided into three conduits of each cross-sectional area, each forming a sector of the chamber circular section. 31.8.76 as 719222 Div.ex 3991217 (12pp1358)

KRFT D13 79095B/43 =US 4184-825
Appts. for pressing and deaeration of curd cheese - with vacuum drawn in space between press plate and receptacle cover

KRAFT INC 27.03.78-US-890526

P13 (22.01.80) *WP7900-837 A01j-25/11

Appts. for moulding curd into a cheese block before curing comprises a rigid open-top receptacle with straight sides adjacent the top to form a pressing zone, with top flanges forming a bearing surface. A press plate fits in the receptacle top to float on a curd mass and has an upturned peripheral flange to form a fluid reservoir on the upper surface, which has at least one through hole.

A rigid top cover has a resilient seal fixed to it to engage the bearing surface and a vacuum can be applied between cover and plate so that the plate is forced against the curd and whey is pressed out through the hole to collect in the reservoir from which it is pref. removed while the vacuum is still applied. 27.3.78 as 890526 (4pp1358)

CIBA D13 86132A/48 = US 4185-091
Avilamycin antibiotic as animal feed additive - stimulates growth and gives improved weight gain feed ratio, esp. for pigs, poultry, calves and ruminants

CIBA GEIGY CORP 26.05.77-CH-006494
B04 C03 (D16) (22.01.80) *BE-867-449 + A61k-35

Growth of domestic or productive animals is promoted by admin. of a fodder contg. 1-500 (5-50) ppm. avilamycin. Animals are esp. pigs, poultry or ruminants.

The cpd. harmonise with intestinal flora and has an inhibitory effect on clostridia and enterococci, while preserving the lactobacilli; it avoids excessive development of gram-negative coliform flora at the expense of the above. Cpd does not have human therapeutic use, nor is there cross-resistance between avilamycin and antibiotics important in human medicine. 22.5.78 as 908499 (5pp963)

NEST D13 65264A/37 = US 4185-121
Ultrafiltration of vegetable acid hydrolysate - gives food seasoning of low colouration and also food colourant

SOC ASSIST TECHN NE 17.03.77-CH-003334
(22.01.80) *BE-864-123 A23I-01/27

In the treatment of an acid hydrolysate of protein rich vegetable matter for sepg. it into dark and light coloured fractions, the hydrolysate is contacted with ≥ 1 semipermeable membrane, which is stable in an acidic medium under a pressure of 4-50 kg/cm² to produce a first lightly coloured liquid or permeate which passes through the membrane (the average colour intensity of which, measured by its extinction, is $\sim 1/10$ th of that of the hydrolysate), and a second strongly coloured liquid or retentate which does not pass through the membrane.

The permeate and retentate can be concd. to a paste or dried to a powder and incorporated into food products such as soups and sources as seasonings. The retentate can also be used as a colouring agent as a replacement for caramel. 13.3.78 as 885688 (8pp990)

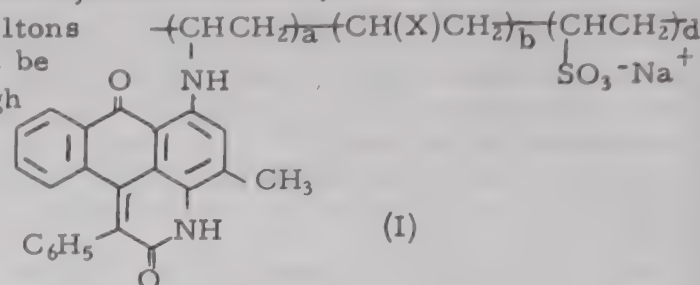
DYNL ★ D13 09141C/05 ★ US 4185-122
Foam-free aq. soln. coloured with polymeric dye prepn. - by incorporating glycerol mono and/or di:oleate foam inhibitor, esp. used in beverages

DYNAPOL 08.08.78-US-932085
A97 E17 (E24) (22.01.80) A23I-01/27

Prepn. comprises mixing water with the of formula (I) with a foam inhibitor selectd from glycerol mono- and/or dioleate 80-98 (pref. 95)% of the X gps. are -NHCO(CH₃), while the remaining X gps. are -NH₂, a+b+d = 900.

Beverage comprising water, flavouring, sweeteners, (I) and foam inhibitor is also claimed. It may be impregnated

with CO₂. (I) does not contravene U.S. food regulations as it does not have systemic toxicity. The molecular size is 1000-2000 Daltons and thus can not be absorbed through the walls of the gastrointestinal tract.



8.8.78 as 932085 (6pp966)

WENG- D13 74221A/41 = US 4185-123
Meat analogue formed by extruding vegetable protein - in two serially connected extruders one having two chokes

WENGER MFG 15.07.77-US-816005 (26.04.78-US-900071)
(D12) (22.01.80) *US4118-164 A23j-03 A23p-01

Uniformly layered meat analogue is produced at high output by placing hot moist vegetable protein into an extruder barrel, pushing along the barrel to form a compacted mass, moving material away from the mass so that it sub-divides and forms small beadlets, then moving further for uniform heating and distribution of moisture.

The material is then recombined to form another compact mass and this is extruded to form a dense layered product. Material is pref. moved from the first mass into a region of greater free volume, the pressure being such that steam is flashed from it to produce greater subdivision, this steam providing the uniform heating and moisture dispersion. The parent patent claims the appts. 26.4.78 as 900071, Div. ex. 4118164 (11pp1358)

BEAF ★ D13 09143C/05 ★ US 4185-126
Reconstituting cheese trimmings into horns - by grinding trimmings and subjecting to pressure in mould

BEATRICE FOODS CO 01.09.78-US-938899 (11.11.77-US-850683)
(22.01.80) A23c-19/02

The trimmings are held at 42-55°F to inhibit bacterial growth, and are ground to form particles up to 9/16 inch. dia. and 1/2-5 ins. long. The particles are rammed into a closed mould at a sufficient press. and for a length of time to cause the particles to bond together to form a solidified, self supporting cheese block.

The method reconstitutes block cheese trimmings into horns, which may be sliced and packaged in the same way as the original product. 1.9.78 as 938899 (7pp295)

See Also

D16 DL 137941	D16 GB 1560021	D16 GB 1560022
D16 GB 1560060	D16 GB 1560208	D16 GB 2026028
D16 J5 4157890		

D14: FOODSTUFF MACHINERY

JETS- ★ D14 07361C/05 ★ BE-878-105
Machine cycle timing controller for dispensing e.g. water and potatoes - with optional pre:rinse and post:rinse stages programmed by logic circuits

JET SPRAY CORP 21.08.78-US-935179
R26 (03.12.79) A23n G05b

An operating cycle timing controller for a machine dispensing a prod. contg. a liq. is claimed. Starting the delivery of prod. initiates a dispensing cycle for raw material. As soon as prod. delivery stops, the end of the raw material dispensing cycle is signalled. The signal also triggers the restart of at least one further complete operating cycle.

The dispensed prod. is pref. a mixt. made in the machine, of the raw material and the liq., in partic. a mixt. of potatoes and water. The cycle pref. includes a pre-rinse stage of water alone. The pre-rinse lasts for a predetermined period and then delivery of potatoes commences. At the end of the main mixing stage, the water supply can be continued slightly after dispensation of potatoes to provide a positive, post-rinsing period. Alternatively, a negative post-rinse can be programmed so that potato delivery continues for a brief period after water supply has been terminated.

Used in cyclic mixing of raw material and a liq. partic.

potatoes and water. Improved quality control of final prod. is achieved. Optional pre-rinse and post-rinse. Easy adjustment of quantity of prod. delivered. 6.8.79 as 878105 (19pp448)

BULL/ ★ D14 07381C/05 ★ BE-878-481
Removable in/line filter for piped liq. partic. milk - esp. for detecting clots in flow from individual cow on milking machine

BULLOCK G P 05.12.78-GB-047195 (09.09.78-GB-036287)
J01 Q69 (17.12.79) B01d F17d

Filter comprises a hollow body with a slot into which a sliding member can be inserted and withdrawn. The sliding member is fitted with a filter element which is made operable by inserting the sliding member. The member is a push fit in the slot so that the assembly is made leakproof simply by insertion of the member. The member pref. has an O-ring on each of its opposite faces, around the element. The O-rings provide a leakproof seal between the sliding member and the filter body. When the sliding member is inserted in the body it pref. provides a restricted by-pass in parallel to the passage through the filter element. The body is pref. made of a transparent plastic such as nylon so that the element can be viewed through the body.

Filter is used specifically to detect clots in milk flowing

through a pipeline, esp. from a milking machine, so that clotting problems can be related to specific animals. It is easily fitted in individual lines of a milking machine. Clotting can be observed through the body without withdrawing the filter element. Milk can continue to flow even when the element is completely blocked. 28.8.79 as 878481 (13pp)

LOCH/ ★ D14 07413C/05 ★BE-878-593
Conditioning sausages, fish etc. - in chamber atmos. controlled by fraction of make up air only
LOCHEN C 04.09.78-BE-878593
(31.12.79) A23b

The food prod. is contacted with a current of air in a closed chamber. A fraction of the air circulating in the chamber is extracted and measurements taken of physical characteristics of the fraction partic. temp. and relative humidity.

A make-up supply of fresh air is given treatment related to the measurements of extracted fraction characteristics. The treated fresh air is mixed with extracted air and the mixt. is blown into the chamber.

The mixt. of air blown into the chamber should have relative humidity and temp. suitable for conditioning the food prod., i.e. pref. 70-80% relative humidity and temp. 16-20°C. The mixt. is pref. such that the chamber air is renewed 30-40 times per hour, pref. at an air speed of 12-16m/s.

Only fresh air is passed through treatment equipment which does not therefore, become fouled up as when treating recycled air. This is achieved without reducing the re-cycling rate below about 65%. so energy requirements are reduced. 4.9.79 as 878593 (18pp448)

PENO- D14 30092V/16 =DS 2349-195
Smoky flavouring chamber for food - using circulating air with aromatic flavouring vapour
PENOVA AB 02.10.72-SW-012699
(24.01.80) *NL7313-276 A23b-04/04

A smoking chamber for food uses a number of atomiser nozzles to spray a condensate against heated surfaces outside the space of the chamber. The condensate is produced by mixing the smoke from smouldering wood (juniper) with a liq. and by removing the noxious substances. The condensate evaporates on the heated surfaces and is entrained by a ventilator, mixed with air, and injected into the smoking chamber.

The very thorough mixing of air and evaporated condensate results in a more uniform distribution, without any dripping liq. particles. The appts. is simple and requires little space. 1.10.73 as 349195 (4pp39)

SNAM D14 04054B/03 =GB 1560-209
Sterilising milk and other liquid foods with hydrogen peroxide - followed by treatment with immobilised catalase enzyme
SNAMPROGETTI SPA 12.07.77-IT-025625
(30.01.80) *BE-868-948 A23c-03/08

Milk, or other foodstuffs in the form of a liq. or aq. suspension, is sterilised by treatment with hydrogen peroxide, and the subsequent decompsn. of peroxide to water and O₂ using catalase immobilised in fibre.

Pref. the fibre contg. immobilised catalase is placed in the liq./suspension and removed on completion of the conversion; or placed in a reactor through which the liq./suspension flows after peroxide treatment.

The use of hydrogen peroxide by the process keeps the milk prod. sterile during shipping and storage, thus minimising refrigeration problems, without causing its chemical modification. 31.5.78 as 025019. (3pp931)

DAIZ ★ D14 08096C/05 ★J5 4158-324
Crusher teeth for food liquidiser - of chromium alloy steel having Rockwell hardness of greater than fifty
DAIDO TOKUSHOKO KK 06.06.78-JA-067238
M27 P28 (14.12.79) A47j-42/22 C22c-38/18

Crusher teeth for working a solid food of soybean, maize sweet potatoe, fish or the like into liq. consists of C 1.00-3.20%, Si < 2.0%, Mn < 2.0%, Cr 15.0 - 30.0%, ≥ 1 of W, Mo, W, Zr, Nb and Ti 0.10-1.0% resp. and the balance Fe, and has a hardness HRC > 50 with good resistance to rust as well as wear. 6.6.78 as 067238 (4pp53)

POLI/ ★ D14 08822C/05 ★SU-662-783
Drying food cans - by interaction with heat carrier jets and flame
POLIN M N 02.07.75-SU-151068
Q76 (15.05.79) F26b-03/04

The drying method can be used for food conservation cans drying, and involves can displacement through jets of heat carrier. In order to intensify the process, the cans are additionally affected by flame.

The cans to be dried are placed on the conveyor. The cans rotate about their own axis and are effected by air jets and flame. The air stream removes the moisture droplets and the flame removes the moisture film. The flame temp., is 1500-1800°C.

Polin, M.N., Kutsevol, N.V. Bul. 18/15.5.79. 2.7.75. as 151068 (2pp110)

MOGI= ★ D14 08860C/05 ★SU-663-368
Vacuum deaerator for liq. food prodn. - has vertically moved separator blade with troughed section with outer wall at specified angle to rotor

MOGILEV TECHN INST 09.11.77-SU-541383
P13 (25.05.79) A01j-11/04 A23l-02/32 B01d-19

The deaeration is enhanced by vertical displacement of the blade made as a ring trough set with its base upwards. The slope of the outer side of the blade with respect to the rotor is 1-7°, and the edge of the inner surface of the blade forms a broken line of triangular profile. The centrifugal film deaerator has a water ring vacuum pump, the juice fed inside the rotor at a temp. of 45-50°C.

The centrifugal force gives rise to a juice film on the conical surface of the rotor promoting air separation. The deaerated product is collected through the annular wedge slot, while the weakly deaerated juice is forced to the inner surface of the blade and released in droplets for repeat deaeration.

Fedorov, G.S., Pozdnyakov, V.E., Kirkor, A.V. Bul. 19/25.5.79. 9.11.77. as 541383 (3pp89)

RAQU/ ★ D14 08963C/05 ★US 4184-423
Fruit section appts. with indexed rotatable table - having apertures through which fruit is forced onto blades

RAQUE G F 07.09.78-US-940258
P62 (22.01.80) A23n-15 A23p-01 B26d-03/24

A cutter for dividing fruit into sections includes a circular rotating table having a series of apertures each having a dia. greater than the fruit dia. The apertures are arranged in a circle around the centre of the table. Each aperture is covered with a deformable support which covers cutting blades positioned beneath the aperture. The table is indexed through processing stations at one of which a pusher is extended downwards to press the fruit through its deformable support and onto the cutter blades.

The appts. rapidly sections fruit or vegetables e.g. apples, pears oranges, tomatoes or potatoes. 7.9.78 as 940258 (8pp295)

RAUE/ ★ D14 08980C/05 ★US 4184-538
Ventilating heat exchanger for barns - with conducting heat transfer wall formed of corrugated aluminium removable for cleaning
RAUENHORST G W 22.12.77-US-863230
(22.01.80) A23c-03/02

A ventilating and heat exchange system for a barn is mounted adjacent the ceiling and comprises an elongate exhaust air duct and an elongate air intake duct. The ducts are mounted adjacent each other and have a common wall formed of heat conducting material and extending for substantially their full length.

The exhaust duct has a discharge end adjacent the inlet end of the intake duct. A conduit is connected to one of the adjacent ends to separate the source and delivery locations of the intake and exhaust air ducts. The receiving end of the exhaust duct and the outlet end of the intake duct are adjacent each other near the centre of the barn. Fresh air is directed horizontally towards the outer walls of the barn. A fan induces flow of foul warm air through the exhaust duct. 22.12.77 as 863230 (11pp295)

D15: WATER TREATMENT

JODE/ ★ D15 07415C/05 ★BE-878-606
Purifying water by flocculation - with mixt. based on lignin sulphate, cerium salt and aluminium sulphate
JODEHL P A 07.09.78-SW-009415
(31.12.79) C02b

Purificn. of aq. media by flocculation comprises mixing them with a prod. (A) obtd. by dissolving a lignin sulphate in water, mixing with a predetermined amt. of Ce salt and adding $Al_2(SO_4)_3$. The treated water is then agitated to flocculate polluting substances, and the insoluble flocculate removed. Pref. (A) is added as an aq. dispersion and agitation is by bubbling air through.

Used for treating waste waters or domestic and industrial effluents. (A) gives superior purificn. compared with known flocculants; in many cases giving an aq. phase suitable directly for use as drinking water. 5.9.79 as 878606 (12pp1251)

FUCH/ ★ D15 07440C/05 ★BE-878-731
Flotation treatment of polluted liq., partic. cq. emulsion or colloid - circulates liq. repeatedly via reactor and flotation zones (OE 15.11.79)
FUCHS H 25.09.78-DT-841700
(31.12.79) B01d C02c-01/06

An installation for the treatment of polluted liq. is claimed partic. for the purificn. of polluted water. The installation comprise a long, open-topped vessel having a partitioned section at one end to be used as a reactor tank in which the liq. is aerated. The rest of the vessel is supplied with liq. from the reactor tank and is used as a flotation tank with a surface skimmer.

The reaction tank employs a high speed, rotary turbine on a vertical shaft, and the outlet of a pipe delivering gas e.g. compressed air, or a liq. The turbine creates a prim. circulation in the reactor tank which is upwards centrally on the axis of the turbineshaft and down the side walls of the tank. A sec. circulation is induced in the flotation tank; current flows over the partition, longitudinally of the surface of the flotation tank, down its end wall and back along the base towards the partition. The flow path continues through a gap under the partition to join the prim. circulation in the reactor tank. Sedimentation pockets are pref. formed in the base of the two tanks.

Used in floatation treatment of polluted liq. partic. water. This may be combined with neutralisation of detergents and sepn. of sediments. Partic. applicable to the flocculation of colloids and emulsions. Highly efficient flotation is achieved by extensive recirculation of the liq. through the reaction tank for repeated injection of gas etc. 12.9.79 as 878731 (20pp441)

PRZE- ★ D15 07473C/05 ★DL-137-917
Biological sewage treatment tank - with fixed and moving aprons dividing bio sorption from bio-stabilising and settling stage (PT, 27.4.79)

PRZED INS INSTAL 18.07.78-PT-068315 (21.07.78-DL-206863)
(03.10.79) C02c-01/06 C02f-03/12

A circular-tank for the biological cleaning of sewage is divided by concentric fixed aprons into a central biosorption space, a biostabilising annulus and a settling annulus. Revolving aprons divide the first two spaces into two each and have guide floats for the aeration below water level. Both the fixed and the moving aprons are fitted with ribs, vanes and blades.

This creates a compact unit which treats sewage biologically with a high efficiency at low cost, independent of the size of the plant. 21.7.78 as 206863 (16pp39)

WASS- ★ D15 07474C/05 ★DL-137-918
Liquid pig manure treatment - by mixing with municipal sewage in specified ratio
INST WASSERWIRTSCHA 24.07.78-DL-206867
(03.10.79) C02c-01/06 C02c-05/10

Liq. pig manure from animal farms is processed by first separating the coarse solids and/or by a prior biological treatment. It is then mixed with municipal sewage and passes through a common clarification, thickening and

activated sludge treatment. The max. biochemical oxygen demand in five days (BOD_5) of the manure can be as much as 95% of that of the mixt. to reduce the BOD_5 per m^3 of the latter from 3Kg to 0.1kg in one or two stages.

This processes liq. pig manure in <24 hrs. to a state fit to be emitted to the waste water drainage system. 24.7.78 as 206867 (7pp39)

WASS- ★ D15 07475C/05 ★DL-137-919
Sewage sludge dewatering - saves flocculants by adsorbing foreign matter on recycled activated sludge
INST WASSERWIRTSCHA 24.07.78-DL-206889
(03.10.79) C02c-03

The liq. phase, derived from dewatering of organic sewage sludge is passed through a biological reclarification. This liq. phase contains solids, colloids, dissolved matter and toxic substances and is mixed with surplus activated sludge from the biological stages. The foreign substances are adsorbed by the flocks of activated sludge and are separated from the flocks and stabilised in a subsequent (anaerobic) stage.

No flocculants are required so that the operating costs are reduced significantly. The sludge is fit to be dumped and the liq. phase is discharged with a minimum of foreign matter. 24.7.78 as 206889 (6pp39)

WASS- ★ D15 07476C/05 ★DL-137-920
Liquid manure treatment - by biological stages and mixing with lightly laden sewage for activated sludge stages
INST WASSERWIRTSCHA 24.07.78-DL-206866
(03.10.79) C02c-05/02

In a system for the treatment of organically heavily laden sewage such as liq. manure from animal farms, a first stage removes part of the organic contents and toxic substances by activated sludge admixture. In a second stage, municipal sewage or lightly laden industrial wastes are added. Solids are separated in a third stage and the remaining fluid is freed from organic components in activated sludge stages.

This processes heavily laden sewage at low cost to acceptable residues without pollution to the environment. 24.7.78 as 206866 (11pp39)

WASS- ★ D15 07477C/05 ★DL-137-921
Liquid manure treatment - by recycled surplus sludge from biological stages and digested sludge
INST WASSERWIRTSCHA 24.07.78-DL-206890
(03.10.79) C02c-05/02

Organically heavily laden sewage, e.g. liq. manure from animal farms, is mixed with surplus sludge from a biological stage and/or with digested sludge, in a ratio of >0.1 pts. by vol. of a sludge to 1 pt. of the sewage. The sludge flocks absorb 30-70% of the organic and toxic substances; they are extracted and digested. The liq. phase is treated on the activated sludge principle.

This system reduces the treatment costs for heavily laden sewage. There are savings in reactor volume and no artificial reagents (slag, activated carbon) are required. 24.7.78 as 206890 (8pp39)

OSBA/ ★ D15 07478C/05 ★DL-137-922
Purifying waste water from synthetic fibre prodn. - by activated sludge treatment with specially adapted microorganisms
OSBAR W 05.06.78-DL-205785
A32 F01 (03.10.79) C02c-05/10

Purificn. of waste water contg. toxic organic components generated as by prods. of synthetic fibre mfr., comprises supplying to a stirred pond the waste water and recycled microorganisms which are adapted to grow in the prevailing medium which is deficient in easily-assimilated organic nutrients. The components are mixed and aerated with standard aeration equipment so that all organic components are biologically degraded.

The adapted microorganism can use the toxic materials as nutrients. The method has low investment costs and reduced demands for energy, labour and maintenance. The treated water can be discharged without additional dilution

5.6.78 as 205785 (7pp1251)

LIEP/ ★ D15 07489C/05 ★DL-137-942
Froth dissipation device - with inclined vanes on truncated cone stator and rotor driven by vertical shaft
LIEPE F 20.07.78-DL-206817
(D16) (03.10.79) C12b-01/18

A device for the dissipation of froth in fermentation engineering, sewage treatment and liq. manure processing includes a housing with an axial cylinder for the ascending supply of froth. A truncated cone system at the top of the cylinder is closed by a horizontal cover plate and has radial stator vanes at an inclination of 30-60°. A rotor with a base plate has radial blades, inclined to the vertical axis of its drive shaft by the same angle.

This breaks up the froth by shear action between stator and rotor blades. The device has a high efficiency, is easy to keep sterile and has a good self-cleaning effect. 20.7.78 as 206817 (9pp39)

LANG/ ★ D15 07490C/05 ★DL-137-943
Froth dissipation device - with inclined stator vanes and wire brushes urged against inclined perforated rotor shroud
LANGHANS G 20.07.78-DL-206818
(D16) (03.10.79) C12b-01/18

A device for the dissipation of froth in fermentation engineering, sewage treatment and liq. manure processing includes a housing with an axial vertical cylinder for the ascending supply of froth. A stator consists of three inclined vanes and three inclined cleaning wire brushes, all equally distributed and at an angle of 45° to the vertical. Springs urge the wire brushes against the expanded metal shroud of the rotor which carries on the other side guide vanes.

This breakd up the froth by a combination of shear action, friction and centrifugal force with a high efficiency and a good self-cleaning action. Froth of high density can be processed at high throughput rates. 20.7.78 as 206818 (13pp39)

LIEP/ ★ D15 07518C/05 ★DL-138-038
Aeration of non-coalescent sewage - by inclined air-fluid injector and submerged stirring mechanism for second dispersion pulse
LIEPE F 31.07.78-DL-207032
(10.10.79) B01f-03/04

Industrial wastes of the chemical industry and municipal sewage which does not impede the coalescence are aerated in a circular tank. A first dispersion pulse is effected by directing a mixt. of recirculated fluid with air through an inclined injector against the surface to produce a circulatory flow of the air bubbles. When the bubbles have coalesced to twice their size, a second dispersion pulse is effected by a driven, nearly horizontal shaft with an impeller.

This system produces an efficient mass exchange for a minimum of power consumption. The settling of sludge at the bottom of the tank is effectively prevented. 31.7.78 as 207032 (17pp39)

RODE/ ★ D15 07519C/05 ★DL-138-039
Viscous liquid metering system - with metering pump passing viscous liquid to intake of mixing and diluent feeding pump
RODEL K 31.07.78-DL-207031
J04 (10.10.79) B01j-04/02

A metering system for liqs. of high viscosity, e.g. flocculant solution in sewage treatment of syrup and fruit extracts in the soft drink industry, uses the diluent tank as a static pressure, storage and overflow vessel. Its outflow pipe feeds a combined mixing and metering feed pump. The flocculant is injected by a metering pump from its storage tank into a point of the suction pipe of the feed pump.

This metering system requires a minimum of appts. It ensures precise dosages of the flocculant and saves flocculant consumption without requiring a safety valve in the system. The feed pump requires no valves which could give trouble. 31.7.78 as 207031 (10pp39)

BUNA ★ D15 07524C/05 ★DL-138-057
Treating aq. effluents contg. polymer dispersions - by addn. of fly ash to break dispersion and ppt. polymer
CHEM WERK BUNA VEB 31.07.78-DL-207027
A35 (10.10.79) C02c-05/02

Effluent waters contg. polymer dispersions are treated with power station fly ash to break the dispersion and to separate the pptd. polymer. Process is efficient, cheap and economical. It is equally suitable for large scale continuous treatment plants and for small scale local discontinuous treatments. The pptd. polymer-contg. sediment can be burnt as a fuel or used as a soil improvement agent.

Process is suitable for treatment of effluents contg. dispersions of butadiene-styrene, ABS, butadiene-acrylonitrile, polychloroprene, acrylic polymers, PVA, PVC, natural rubber etc. The treatment may be carried out e.g. at 0-100°C. Breaking of the dispersion takes place e.g. in 1-20 mins. 31.7.78 as 207027 (10pp513)

NEUG/ ★ D15 07572C/05 ★DL-138-196
Treating waste water from unsatd. nitrile prodn. - by fractional distillation and condensation giving cyanide-enriched and depleted fractions
NEUGEBAUER B 13.07.78-DL-206693
A41 E16 (17.10.79) C02c-05

Treatment of waste water contg. nitriles and (sic) cyanides, generated as by prod. during prodn. of unsatd. nitriles such as (meth)acrylonitrile, comprises distilling (dis)continuously the fraction of b. pt. $\leq 100^\circ\text{C}$ from the reaction water formed in the condensation.

Distn. is under normal or reduced pressure with fractional condensation. The middle fraction (30-60vol. % of the reaction water) has very low content of organic components while the last fraction (lowest condensation temp.) is enriched in HCN.

Heavily contaminated water can be treated with simple equipment and useful by-prods. may be recovered. The low-organic content middle fraction can be purified or used in place of fresh water in the nitrile prodn. process. 13.7.78 as 206693 (10pp1251)

EICH/ ★ D15 07617C/05 ★DL-138-404
Liquid manure decontamination - in steam heated heat exchanger with wall wipers and stirring tank
EICHLER D 16.08.78-DL-207298
(31.10.79) A23k-01

The biosludge, produced by biological treatment plants for liq. manure from animal farms, is passed by a metering pump to a heat exchanger with a steam heated jacket and an inside revolving wiper system which allows only a thin film. The sludge is transferred at 120-150°C to a tank with a paddle mixer. After a retention time of 30 mins. the sludge is discharged through a heat exchanger.

This eliminates incrustations of the biosludge and deterioration of the heat transfer. The heat is efficiently recovered. 16.8.78 as 207298 (7pp39)

KNOS/ ★ D15 07625C/05 ★DL-138-421
Mechanical surface water aeration - by impeller with bottom intake and guided surface outflow in vertical shroud cylinder
KNOSCHER 21.08.78-DL-207387
(31.10.79) C02b-09

A device for the aeration of standing surface waters, to improve the conditions of pisciculture or water supply, consists of an aeration impellet on a vertical shaft which is surrounded by a stationary cylinder. The cylinder has on one side at the bottom an intake opening for the water, and on the surface at the opposite side a delivery outlet for the aerated water. A tangential guide plate extends the outflow opening in the direction of rotation.

These aeration devices can be produced at low cost in large sizes. The intensely directional flow improves the aeration efficiency. Already aerated water is prevented from being recycled. A plate at the cylinder bottom eliminates wash-outs of the floor. 21.8.78 as 207387 (6pp39)

SILC D15 14893Y/09 = DS 2537-640
Treatment of aq. condensates and effluents from coking plants - with alkali salts of weak acids, to expel ammonia
STILL C & CO GMBH 23.08.75-DT-537640
E35 H09 (24.01.80) *DT2537-640 C01c-01/10

Bound NH_3 is expelled from aq. liqs. (I), esp. the aq. condensates from the low temp. carbonisation and coking of mineral coal and lignite, bitumen shales and peat and the waste waters from the processing of low temp. carbonisation- or coking gases (II), in which the NH_3 is bonded to strong acids of low volatility. (I) are mixed with aq. solns. or suspensions of sulphidic alkaline materials, which serve to absorb H_2S from the gases (II); and then the mixt. is heated.

The novelty is that the aq. alkaline solns. used are Na-, K- or Li waste liqs. which have been used for the H_2S washes of coke or sulphur gases which have been previously purified with NH_3 . 23.8.75 as 537640 (4pp481)

ZINI D15 36751A/21 = DS 2651-438
Water additives preventing deposit-formation of heating surfaces - prepd. from unsaturated fat derivs. and maleic acid and/or anhydride (NL 16.5.78)

GRILLO WERKE AG (TAPR-) 11.11.76-DT-651438

A97 (24.01.80) *DT2651-438 C02b-05/06

Method for preventing formation of deposits at $\leq 140^\circ\text{C}$. on heating surfaces of appts. through which flows water contg. dissolved inorganic salts comprises adding a water-soluble reaction prod (I) to the water in substoichiometric amts. (I) is obtd. by reaction of (A) an unsatd., non-conjugated aliphatic cpd. having a C chain length of 10-20C and a terminal carboxy, ester or alcohol gp., and an iodine number of 80-200, with (B) maleic acid and/or maleic anhydride.

(A) and (B) are reacted at $150-200^\circ\text{C}$. in the absence of solvents and catalysts, in a ratio of (A) to (B) of 1:1-2.5. Alkali salts of (I) may be used in place of (I). Method is esp. applicable to sea water thermal desalination plants. 11.11.76 as 651438 (3pp927)

STRA- D15 52749B/29 = DS 2800-556
Sewage venting assembly - with ball valve for large vent and cylinder actuated small vent for gas bleed

FA STRATE W 07.01.78-DT-800556

Q66 (24.01.80) *DT2800-556 F16k-24

A venting valve for pipelines, esp. for sewage pipes, consists of a housing with two parallel floats for one large and one small opening. The large float is a ball which seals against a seat at the bottom end of the tube which protrudes downwards in the housing. The small float is a cylinder which terminates in a pin, guided by an O-ring in the smaller seat. The larger seat for the ball is situated at a water level, when the smaller seat has just been closed.

This valve has a simple design and is safe against wedging of both floats. The closure of the large seat causes no pressure peaks and the valve requires little maintenance over long periods. 7.1.78 as 800556 (7pp39)

UGIN D15 06080B/04 = DS 2832-947
Continuous prepn. of zeolite-A of uniform quality - from sodium silicate and sodium aluminate solns.

PCUK-PROD CHIM KUH 29.07.77-FR-023373

J01 (24.01.80) *BE-869-156 C01b-33/26

Zeolite A of constant and uniform quality is prepd. by intensively mixing Na silicate and Na aluminate solns. by continuously feeding the solns. to a turbine positioned between 2 saucer-like plates whose concave surfaces face the turbine and enclose a space into which both solns. are sprayed or sucked.

Crystallisation of the prod. is then effected at an NaOH content of 26-135 g/l. and the crystals are sepd., washed and dried. Starting material requirements are minimised and environmental pollution is reduced. Prod. is esp. useful in washing agents for softening hard water. 27.7.78 as 832947 (7pp927)

STAN- ★ D15 07710C/05 ★DT 2830-514
Desalination plant - with two independent heat exchanger circuits for brine through expansion and heat recovery sections

STANDARD-MESSO DUIS 12.07.78-DT-830514

(24.01.80) C02b-01/06

A desalination plant to produce drinking water from sea water includes an expensive evaporator with multi-stage cooling and heat recovery sections. The heat exchangers in both sections are kept in separate circuits. The brine flows through the heat exchanger and is divided into two strands, pref. of equal throughput, and with an independent control.

This ensures that there is no interruption in the drinking water supply during any necessary cleaning operations or in case of mechanical trouble in one section. No emergency stores of drinking water need therefore be kept. 12.7.78 as 830514. (15pp39)

MAGN- ★ D15 07735C/05 ★DT 2830-956
Water activation system - exposing water molecules to strong magnetic and electric fields

MAGNET ACTIV MUNZER 14.07.78-DT-830956

J04 (24.01.80) B01j-01/10 C02b-09

When water molecules are exposed to the action of a strong magnetic field between two permanent magnets, their dipole moment can be affected so that the molecules become activated. In that state they can cling more strongly to other molecules and ions of organic and inorganic matter and can cure surface tension problems. Apart from the permanent magnets, a Au electrode, contacting the water surface is connected to the positive pole of a d.c. source, and a Pt electrode in the wall of a glass tank forms the negative pole. A crystal at the water surface was kept at 18°C to emit IR radiation in the water.

Magnetised water was used to water plants and resulted in more luxurious growth. 14.7.78 as 830956. (8pp39)

STEM ★ D15 07740C/05 ★DT 2830-987
Potable water producing plant with reverse osmosis system - uses receiver vessels with flexible membrane, and which fill and empty at high and low pressures

STEINMULLER L & C GMBH 14.07.78-DT-830987

(24.01.80) B01d-13

The feed soln. is fed into a vessel contg. a membrane and at the same time spent soln. is displaced from the other side of the membrane. When the vessel is full, valves are changed over to pump the fresh soln. to the membrane unit.

The soln. is pumped at high pressure through the unit and the spent liquor returns to the same vessel but the other side of the membrane. When it has been completely pumped round, the vessels are changed over again to displace the spent liq. In this way the energy consumption is much reduced.

Used for obtaining potable and service water from brackish and sea water. Reduces the energy requirements. 14.7.78 as 830987. (18pp1053)

ZENI ★ D15 07741C/05 ★DT 2830-990
Sludge digestion tower - with rocking sludge distributor and stirrer in gas dome

ZENITH RADIO CORP 14.07.78-DT-830990

(24.01.80) C02c-01/16

A digestion tower for sewage treatment has in its top a gas cowl with a sludge preventer. A tubular frame which can be reciprocated in the gas space is used both for the distribution of the feed of recirculating or fresh sludge and for stirring up the floating sludge layer.

This prevents the formation of a solid crust which would interfere with the digestion process by its detrimental effect on the action of the bacteria. No manual work is necessary and explosion risks are eliminated. 14.7.78 as 830990. (9pp39)

KANZ/ ★ D15 07789C/05 ★DT 2926-520
Pulp waste water purification - by contact with liq. water-insoluble ion exchanger, followed by exchanger regeneration and recovery of chemicals (OE 15.9.79)

KANZLER H 04.07.78-OE-004822

F09 (24.01.80) D21c-11

In process for pulp mill waste water purificn. and for the recovery of chemicals, e.g. SO_2 , chlorides, sulphates, HCOOH , AcOH , furfural, HCHO , etc., the waste waters are contacted counter-currently with liq., water-insoluble ion-exchangers, e.g. phosphate esters, phosphine oxides, sulphonic- and phosphonic acids, or their solns. in water-insoluble, organic solvents, e.g. paraffins.

The ion-exchangers are regenerated and the chemicals are recovered together or selectively, by extn., rectification or by stripping with a base. When lixiviating waters directly from cellulose digestion, the lignin cpds. can be pptd. or flocculated before extn.

Steaming of waste liquors can be avoided. Purificn. can reach 90% in vapour condensates. 30.6.79 as 926520. (7pp200)

NENG- D15 66223Y/37 =GB 1559-809
Ion exchange to remove protein from effluent water - using a cellulose based ion exchange medium

NORTHERN ENG IND (CLAR) 00.00.75-GB-042857

J01 (30.01.80) *NL7702-147 +A23c-09/14 B01j-47/10

Ion exchange between cellulosic medium and proteinaceous liq. is performed in an agitated vessel having a filter at the bottom. The materials are mixed in the vessel and liq. is removed by applying air pressure to leave loaded medium in the vessel. This is then washed and regenerated by adding regenerant which removes proteinaceous material and leaves the medium. The process is then repeated.

The process is used for treating e.g., effluent from food and drink processing plants, such as milk whey. Large throughputs (60,000 gallons/day) can be handled. 20.12.76. (17pp976)

DIAS D15 56148Y/32 =GB 1559-844
Nonflammable, nontoxic compsn. for dispersing oil spillages - comprises ester emulsifier, diester solvent and glycol ether as pour-point depressant

DIAMOND SHAMROCK EU (LANK) 07.11.75-GB-046255

A97 E17 H03 (E14) (30.01.80) *FR2330-653 C02f-01/40

Concentrate for dispersing oil spillages is free from hydrocarbon solvent and comprises (a) 20-75wt.% emulsifier comprising monoester of aliphatic carboxylic acid and polyoxyalkylene glycol, of formula $R-CO-O-(C_mH_{2m}O)_2-H$ (I); (b) 77-15wt.% solvent (II); and (c) ≥ 3 wt.% pour point depressant (III).

(II) comprises a diester of an aromatic or aliphatic dicarboxylic acid with 1 or 2 monohydric aliphatic alcohols, of formula $R_2-OC(=O)-R_3-C(=O)OR_4$. (III) is a monoalkyl ether of (polyoxy)alkylene glycol, of formula $HO-(C_nH_{2n}O)_f-R_5$.

In the formulae, R is aliphatic, hydrocarbyl radical of ≥ 10 C fatty acid; each m is independently 2, 3 or 4; e is integer ≥ 2 ; there is ≥ 1 C_2H_4O gp. per molecule of (I); R_2 and R_4 are each ≥ 5 C aliphatic hydrocarbyl; $-CO-R_3-CO-$ is the diacyl radical of an aromatic or aliphatic dicarboxylic acid; n is an integer 2-4; f is an integer 1-5; and R_5 is 1-6C alkyl.

Detergent concentrate can be diluted on site with sea water or fresh water, is efficient in dispersing the spilled oil and is free from fine hazard. 5.11.76. (12pp936)

NORM- D15 23830Y/14 =GB 1559-868
Sewage surface aeration impeller - with larger suction inlet and smaller overall height for better oxygen intermixing (NL280377)

NORM AMC AG (KAEL) 24.09.75-CH-012401

+Q56 (30.01.80) *DT2559-170 B01f-03/04

A surface aerator has a hollow body which rotates about a vertical axis and diverges from a lower suction opening to an upper discharge opening, and an array of blades which are fixed to the inside of the body and are shaped to define channels between a part of the blades and the body.

In use, liq. enters the suction opening and is thrown out radially of the axis through the channels. The ratio of the outer dia. of the aerator to the dia. of the suction opening is 1.3-1.7:1, and to the height of the aerator is 2.5 to 5.5:1. An annular guide wall is disposed around the outer ends of the channels. A higher O_2 dissolution per unit power is achieved. 23.9.76 as 039454. (5pp1376)

FARH D15 44075A/25 =GB 1560-138
Purifying aq. liquor from caustic fusion of arylsulphonic acids - by oxidising with oxygen or oxygen-contg. gas at high temp. under pressure

HOECHST AG 16.12.76-DT-657011

E14 (30.01.80) *BE-861-944 +C02f-01/74

Treatment of aq. soln. of alkali metal sulphite and ≥ 1 organic cpd., the soln. having been formed in the prepn. of a hydroxy-aromatic cpd., comprises oxidising (some of)

the solute using O_2 at elevated temp. and ≥ 1 atmos. pressure, esp. 180-300°C and 30-150 bars pressure.

The soln. is esp. formed in prepn. of resorcinol or β -naphthol, by dissolving the reaction prods. of a melt comprising an alkali and benzene-1,3-disulphonic acid or disulphonate, or naphthalene-2-sulphonic acid or sulphonate. Method is simple, low-cost, and can produce alkali metal sulphates suitable for re-use. 16.12.77 as 052432. (8pp)

DORO ★ D15 07917C/05 ★GB 2025-780
Sedimentation tank for gravity settling suspended solids - has diffuser for guiding liquor into tank designed to minimise turbulence

DORR OLIVER INC 19.07.78-US-926060

(30.01.80) B01d-21/24

Sedimentation tank for the gravity settling of solids in a liquor has one or more diffusers for guiding liquor into the tank along a feed axis. Each diffuser is formed with a fully enclosing wall which diverges from an inlet to a discharge opening and has a flare angle, measured between opposing segments.

The size of the discharge opening is selected so that its cross-sectional area exceeds that of the inlet by an amt. sufficient to achieve a redn. of the flow rate of the incoming liquor over the length of the diffuser. The ratio of the length of the diffuser w.r.t. a characteristic dimension of the inlet, e.g. radius, length or height, is selected together with the flare angle to produce a flow regime within the diffuser without appreciable stall and to avoid turbulence within the diffuser.

Liq. shear conditions are so low inside the diffuser that excessive break-up of flocs does not occur. 12.10.78 as 040268. (20pp67)

GOOD/ ★ D15 07951C/05 ★GB 2025-920
Method and apparatus for waste water treatment - using fluidised bed with inlet conduit having downwardly facing nozzles

GOODSON M G 15.06.79-GB-020943 (19.06.78-GB-027274)

(30.01.80) C02f-03/06

Waste water is biologically treated by causing it to flow upwardly through, and to fluidise, a bed of particulate material. The waste water is introduced into the bed through orifices arranged at many places across the bed.

At some of these locations the waste water is forced to flow downwardly prior to rising upwardly in the bed. This is achieved pref. by introducing the water through a pipe which has orifices facing downwardly.

The method and appts. is used to treat waste water which contains biologically decomposable pollutants. The inlets do not tend to block as they face downwards. 15.6.79 as 020943. (9pp295)

TABA/ ★ D15 08068C/05 ★J5 4158-055
Coagulation and sedimentation of impurities from water - using a synergistic combination of a montmorillonite type clay and papain

TABARA Y 03.06.78-JA-067063

(D16) (13.12.79) C02b-01/20

Polluted water is purified by coagulation and sedimentation. The purifying agent is prepd. by adding starch to an aq. soln. of papain, followed by fermentation and then adding a montmorillonite-type clay powder to disperse colloiddally in the broth.

Pollutants and floating matter in the water are rapidly and almost completely removed by sedimentation from the water. The clay powder and papain act synergistically. The purifying agent does not contain any other chemicals and has no harmful effect on fish or shellfish. Papain is a harmless plant enzyme, and is effective under acidic, alkali and neutral pH conditions. 3.6.78 as 067063 (2pp34)

NIES ★ D15 08069C/05 ★J5 4158-057
Cutting oil-contg. waste water treatment - involves filtration, ultrafiltration, reverse osmosis and final oxidn. step

JAPAN METAL & CHEM 02.06.78-JA-065723

H07 (13.12.79) C02c-05/02

A water soluble cutting oil-contg. effluent, e.g. discharged from mechanical processing, e.g. cutting processing etc. is effectively purified by: introducing it into strainer to filter off coarse floating granules as a sludge; subjecting the effluent thus treated to ultra-filtration to separate it into an oil rich conc. liquor and permeated filtrate;

subjecting the filtrate (COD value is decreased from scores of thousands ppm to 5,000-10,000 ppm in this step) to initial reverse osmosis filtration treatment to remove therefrom the greater part of ions and low mol. material which are not removed by the ultra-filtration > 90% of COD matters are removed in this step); further subjecting the permeated clarified liquor to secondary reverse osmosis filtration treatment under elevated pressure to remove therefrom a remaining portion of ions and low mol. material; and subsequently adding H_2O_2 and iron salt to the clarified filtrate to decompose by oxidn. a remaining portion of organic material. 2.6.78 as 065723 (4pp34)

HIEJ ★ D15 08070C/05 ★J5 4158-059
Purificn. of waste water from chemical copper plating process - involves pptn. in presence of palladium chloride with subsequent oxidn. and treatment with active charcoal
HITACHI PLANT ENG CONST 31.05.78-JA-066132
M11 (13.12.79) C02c-05/02

Organic pollutants are effectively removed from chemical Cu-plating waste water, e.g. contg. EDTA, formaldehyde and Cu etc. by: adding alkali, e.g. NaOH etc. to adjust its pH to > 12; adding $PdCl_2$ and heating at a temp. of 30-80°C to form sediment; and adding mineral acid, e.g. H_2SO_4 etc. to clarified water sepd. from the sediment to adjust its pH to 1-3.

This is followed by sepn. of sediment, adding oxidising agent, e.g. H_2O_2 etc. followed by stirring and addn. of alkali to adjust its pH to 2-4; and subsequently adding activated charcoal followed by solid liq. sepn. The COD of the waste water is effectively lower. 31.5.78 as 066132 (2pp34)

HOOL ★ D15 08071C/05 ★J5 4158-061
Washing zinc phosphate coated metal - with water which is regenerated by DC electrolytic treatment
NIHON PARKERIZING 05.06.78-JA-066814
M13 (13.12.79) C02c-05/12 C23f-07/26

An effluent contg. 0.004-0.4% Zn, 0.001-0.1% Ni, 0.02-2% PO_4^{3-} and 0.01-1% NO_3 , etc., resulting from washing the surface of Zn phosphate film-coated metal is treated with water to remove Zn phosphate chemical treating liquor still adhering after application of the chemical liquor thereon by impregnation or spraying.

The improvement comprises arrangeing alternately anion exchange membranes and cation exchange membranes between cathode and anode, immersed in the washing effluent; passing the washing effluent through each intermediate chamber while passing a direct current, using liquor taken-out from the intermediate chambers as the washing water after the chemical Zn phosphate treatment, and removing conc. liquor from the other intermediate chambers and recirculating a portion or all of it to chemical phosphate film treating vessel.

Thus the amts. of water and chemical phosphate treating agent, to be consumed are reduced without discharge of the polluted washing effluent. 5.6.78 as 066814 (5pp34)

YANA/ ★ D15 08072C/05 ★J5 4158-062
Waste water treatment by insolubilisation and filtration - using a minimum of chemicals and being very rapid
YANAGASE K 03.06.78-JA-066910
(13.12.79) B01d-25/12 C02c-05/02

Waste water is purified without any separation of sediment by converting dissolved harmful components into insoluble fine granules by the use of the minimum amt. of chemicals and immediately subjecting it to filtration in a filter press. The insolubilisation of the dissolved harmful components proceeds rapidly and hardly any ageing treatment is necessary.

In an example, $NaClO$ soln. is added to acidic almost transparent waste water (pH=3.3; Fe^{2+} =26 ppm; Pb^{2+} =5 ppm; Zn^{2+} =8 ppm) to oxidise Fe^{2+} to Fe^{3+} instantaneously. The pH is then made 7 with NaOH soln. to ppte. $Fe(OH)_3$ completely, the Pb^{2+} and Zn^{2+} being coppted. as hydroxides. The liquor obtd. is immediately passed through a filter press to give clarified purified water. An agent may be precoated onto the surface of the filter press to facilitate removal of remaining residues. 3.6.78 as 066910 (6pp34)

NISI ★ D15 08114C/05 ★J5 4158-374
Reducing COD of waste soluble oil used in cold rolling steel - by sepg. into oil and aq. phases and adding hydrogen peroxide in presence of acid
NISSHIN STEEL KK 05.06.78-JA-066795
H07 M21 (14.12.79) C02c-05/04

Waste soluble oil from the cool-rolling of steel plate has its COD value lowered without generation of by-products and sec. contamination by sepg. into oil component and aq. phase, e.g. by salting-out, and subsequently adding to the aq. phase H_2O_2 in the presence of acid, the amt. of which is 0.5-1.5 N calculated in terms of H_2SO_4 , at 60-100°C.

In an example, H_2SO_4 is added to 1 litre waste soluble oil in such an amt. that H_2SO_4 concn. is 1N, followed by heating at 80°C to carry-out salting-out (oil-water sepn.) treatment. The COD value of the sepd. water is 1135 ppm. One gram equiv. of H_2O_2 is added to the sepd. water, followed by oxidn. decomposition at 80°C for 25 mins. and neutralisation with $Ca(OH)_2$ soln. while adding coagulant. The COD value of supernatant liquor was 200 ppm. 5.6.78 as 066795 (4pp34)

TEIJ ★ D15 08119C/05 ★J5 4158-379
Semipermeable membrane for desalination of sea water or brine - is prepd. by crosslinking a polyepoxy cpd. poly:amino cpd. with an aromatic, alicyclic or heterocyclic cpd.
TEIJIN KK 06.06.78-JA-067183
A88 J01 (14.12.79) B01d-13 C08j-05/18

The thin membrane is formed by crosslinking the addn. polymerisation prod. of a polyepoxy compd. with a poly-amino cpd. having ≥ 2 amino gps. capable of reacting with the epoxy gp., with an aromatic, alicyclic or heterocyclic cpd. having ≥ 2 functional gps. selected from acid halide sulphonyl halide, isocyanate and acid anhydride.

The membrane has high selectivity, water permeability flexibility and resistance to compression and chemical or biological deterioration. The membrane is useful for producing pure water from sea water or brine.

The polyepoxy cpd. is e.g. glycerin di- or tri- glycidyl ether, trimethylolpropane diclycidyl ether, diglycidyl isocyanurate, triglycidyl isocyanurate, etc. The polyamino cpd. is e.g. $H_2N(CH_2-CH_2-NH)_mH$, $NC-CH_2-CH_2-NH(CH_2-CH_2-NH)_mH$, etc. (where $m = 2-10$). The polyfunctional cpd. used for crosslinking is e.g. isophthalic acid chloride, terephthalic acid chloride, 3-chlorosulphonylisophthalic acid chloride, etc. 6.6.78 as 067183 (28pp50)

TOKU ★ D15 08126C/05 ★J5 4158-388
Cation exchange membrane prodn. - by contacting high polymer film contg. acid halide gps. with alkali soln., treating with prim. and/or sec. amine and then with alkali soln.
TOKUYAMA SODA KK 05.06.78-JA-066661
A91 J01 (14.12.79) B01d-13/04 C08j-05/22

Prodn. of cation-exchange membrane having acid amide groups on one face alone comprises contacting one face of high polymer film contg. acid halide gps. uniformly statistically distributed, with alkali soln. to hydrolyse the acid halide gps. treating the film with prim. and/or sec. amine soln., and immersing it in alkali soln. to hydrolyse the acid halide gps. remaining in the film.

The membrane has excellent electrochemical characteristics and can be used effectively for desalinating from sea water. 5.6.78 as 066661 (11pp50)

NIKO- ★ D15 08129C/05 ★J5 4158-391
Oil adsorbent prodn. - by admixing cellulose phosphate fibres with paraffin wax sizing agent, treating with multivalent metal salt, moulding and drying
NIPPON KODOSHI KOGY (SAKB) 05.06.78-JA-067914
A97 H03 (A11) (14.12.79) B01d-15

Prodn. of adsorbent for use in the collection of spillage oil in rivers, seas, waste water, etc. comprises (a) admixing (i) 80-99 pts. wt. cellulose phosphate fibre obtd. by dipping natural pulp in ammonium phosphate soln., dry-ing and esterifying at 130-170°C, with (ii) 1-20 pts. wt. paraffin wax sizing agent; (b) treating with multivalent metal salt as a fixing agent, e.g. Al-, Fe-, Zn-, Cu-, Ni-, Mn-, or Mg sulphate, Al-, Fe-, K-, Na-, or Cr alum, Fe, Cl_3 or $ZnCl_2$ at pH 2.0-5.5, and (c) moulding

and drying at 100-125°C to obtain an adsorbent of a bulk specific gravity 0.10-0.075.

Adsorbent has high oil adsorption and oil holding capacities and is easily treated by incineration without emitting black smoke or causing damage to the incinerator. 5.6.78 as 067914 (7pp117)

MITO ★ D15 08185C/05 ★ J5 4158-598
Treating waste liq. contg. boric acid from atomic power plant - by passing through ultrafilter to reduce turbidity and passing through ion exchange resin

MITSUBISHI HEAVY IND KK 05.06.78-JA-066744

K07 (14.12.79) C02c-05/02 G21f-09/12

Waste liq. contg. boric acid is drained from an atomic powder plant. Coolant-grade waste liq. contained therein is treated by an ultrafilter to remove a turbid component from the waste liq. The coolant-grade waste liq. is treated with ion exchange to remove ionic impurity materials from the waste liq. The amt. of materials to be solidified is reduced.

Coolant-grade waste liq. is stored in a tank and fed to a circulation tank by a feed pump. The waste liq. is passed through a filter by a circulation pump and fed to an ultrafilter module. The conc. waste liq. is returned to the circulation tank. The filtered liq. is stored in a storage tank and fed to an ion exchange resin column by a feed pump. The treated liq. is stored in a storage tank. The conc. liq. is supplied from the circulation tank to an evaporator. 5.6.78 as 066744 (4pp86)

SHAF ★ D15 08240C/05 ★ J5 4159-293
Reducing COD of sample soln. contg. chlorine ions - by addn. of silver ions so as to ppte. silver chloride and adding more sample soln. to react with unreacted silver ions

SHARP KK 06.06.78-JA-068642

R16 (15.12.79) G01n-33/18

Method comprises adding silver ion to sample water in a measuring tank to react it with the chlorine ion in sample soln. and measuring COD value of the sample water with a fixed reagent. Method includes further introducing fresh sample soln. into the measuring tank to react the chlorine ion in the fresh water with unreacted residual silver ion and recovering the AgCl produced.

The structure of the instrument for the method is simplified and produced at low cost. Salt does not have to be fed to the discharged water as a sample soln. on each measurement. 6.6.78 as 068642 (3pp90)

GADE- ★ D15 08269C/05 ★ J5 4159-377
Multistage evaporator for fresh water prodn. from brine - where gaseous components are removed by passing through packed bed

GADELIUS KK 07.06.78-JA-067848

(17.12.79) B01d-01/06 C02b-01/06

A multi-stage evapn. appts. for producing plain water from sea water, comprises a pair of coaxially disposed, inner and outer cylindrical casings defining a first annular chamber between them, a number of vertically extending condenser tubes disposed in the annular chamber for receiving the vapour to be cooled and condensed to water by cooling tubes extending respectively through the individual condenser tubes, a third cylindrical casing disposed coaxially within the inner casing and defining a second annular chamber which is divided into segmental compartments by circumferentially spaced partition walls each including an opening near its bottom end, each compartment incorporating a baffle plate whereby flush evaporation is effected as the water flows over the top of the baffle plate, and a degassing unit including a packed bed. Gaseous components are sepd. from the material water as it passes downwardly through the packed bed and then flows into the multistage evapn. chamber through an inlet port formed in the cylindrical wall of the third casing near its bottom end. 7.6.78 as 067848 (4pp47)

SAKB ★ D15 08273C/05 ★ J5 4159-386
Polymeric adsorbent for treating waste dye water - prepd. by condensing modified polysaccharide contg. aldehyde gps. with amino cpd. and reacting prod. with polyfunctional crosslinking agent

OTSUKA KAGAKU YAKUHI 06.06.78-JA-068644

A97 J01 (A11) (17.12.79) B01d-15/04 B01j-01/08

The method comprises converting a polysaccharide to a partial aldehyde type polysaccharide, condensing the partial aldehyde type polysaccharide with an amino cpd., and reacting the condensed cpd. with a polyfunctional cross-linking agent to produce the polymer type adsorbing agent.

Pref. the polysaccharide is pulp residue, defatted soybean, or coffee bean extd. residue; the amino cpd. is melamine, aminoethyl cellulose, or albumin; the cross-linking agent is 1,3,5-acryloylhexahydro-S-triazine, hexamethylol melamine, or bis-β hydroxy ethylsulphone.

In an example, 17 pts. of NaO₄ was dissolved in 400 pts. of water to obtain an aq. soln. 100 pts. of pulp residue was mixed with the aq. soln. at 30°C for 1 hour to obtain a partial aldehyde type polysaccharide. The polysaccharide was condensed with 90 pts. of melamine at 90-100°C to obtain a condensed cpd. This was dried to obtain a powder type adsorbing agent. 6.6.78 as 068644 (6pp51)

MITK ★ D15 08274C/05 ★ J5 4159-387

Pelletised oil absorbent for oil-water mixts. - is prepd. by mixing thermoplastic resin with volatile cpd. and/or foaming agents, extruding and cutting

MITSUI TOATSU CHEM INC 07.06.78-JA-067628

A97 J01 (17.12.79) B01d-15

Adsorbent is prepd. by mixing a thermo-plastic resin high in oil adsorbance property with a volatile cpd. (e.g. pentane or butane) and/or a foaming agent (e.g. azodicarbon amide or Na bicarbonate) mixt. is extruded through slit to form a net type filter network, > 1. of which is piled and cut into pellets. The thermoplastic resin is a copolymer of propylene and ethylene, polyethylene, a styrene polymer or a polyester.

In an example, 100 pts. wt. polypropylene were mixed with 10 pts. wt. azodicarbon amide, pellets bulk density 0.05-0.10 g/cm³ were formed. 7.6.78 as 067628 (6pp51)

MITR ★ D15 08350C/05 ★ J5 4159-774

Treating material for oil-contg. waste water - comprising surfactant held on surface of granular substance e.g. silica or alumina gel

MITSUBISHI RAYON KK 08.06.78-JA-069167

A97 (17.12.79) B01d-15 B01d-17/02

A treating material suitable for use in purification of oil-contg. waste water, e.g. cutting oil-, rolling oil-, oil tank-washing-, paint factory-, or food factory-waste water comprises a granular substance, e.g. silica gel, alumina silica gel, alumina gel, natural zeolite, reformed zeolite or synthetic zeolite, and surfactant held on the surface of the granular substance.

The surfactants may be cationic, e.g. octadecylamineacetate, tetradecylamineacetate, dodecyltrimethylammonium chloride, hardened beef tallow alkyltrimethylammonium chloride, or amine- or amide-type nonionic surfactants, e.g. oxyethylenedodecylamine, polyoxyethyleneoctadecylamine, polyoxyethylene beef tallow alkylamine, laurylic diethanolamide etc.

The material may be produced by immersing the granular substance in an aq. soln. of the surfactant (conc.: 0.1 to 10%) for > 30 mins. and exhibits improved oil removing properties. 8.6.78 as 069167 (4pp34)

MITR ★ D15 08351C/05 ★ J5 4159-775

Treating material for oil-contg. waste water - comprising surfactant held on surface of organic polymer material, e.g. nonwoven cloth

MITSUBISHI RAYON KK 08.06.78-JA-069168

A97 (17.12.79) B01d-15 B01d-17/02

A treating material suitable for use in purification of oil-contg. waste water, e.g. cutting oil, rolling oil-, oil tank-washing, paint factory- or food factory-waste water comprises organic polymer material having a specific surface area > 0.01 m²/g., e.g. (hollow) fibre, non-woven cloth or fibre assembly having three dimensional net-like structure, made of polypropylene, polyethylene, polyester, PAN, nylon, acetate, rayon, cotton and hemp. etc., or foams, tips or fibril-like matter, made of polyurethane, polystyrene, polypropylene, PVAc, polyethylene, nylon, PVC, phenol resin, urea resin, polyester or copolymers, or porous rubber matter etc., and cationic surfactant or cationic amine-type nonionic surfactant held on the surface of the organic polymer material, e.g. octadecylamineacetate, tetradecylamineacetate, dodecyltrimethylamm-

onium chloride, hardened beef tallow alkyl trimethylammonium chloride, hexadecyldimethylbenzylammonium chloride, polyoxyethylenedodecylmonomethylammonium chloride, oxyethylenedodecylamine, polyoxyethylenedodecylamine etc.

The material exhibits improved oil removing properties. 8.6.78 as 069168 (5pp34)

JAOR ★ D15 08353C/05 ★ J5 4160-051
Desalination method employing mixed bed ion exchange towers - ensuring high purity water prodn. even when sea water acting as coolant leaks into condensate

JAPAN ORGANO KK 08.06.78-JA-068298
(18.12.79) B01j-01/06 C02b-01/70

Where sea water (cooling water) leaks into the condensate in a condensate desalination appts. in which ammonia-contg. boiler condensate having high temp. and pressure is passed in parallel through mixed bed-type ion exchange towers contg. a combination of ammonium-type cation exchange resin and OH-type anion exchange resin, the condensate is treated instantaneously with the mixed bed-type ion exchange towers in which one of the towers contains a combination of H-type cation exchange resin and OH-type anion exchange resin, and subsequently the ratio of the combination of H-type cation exchange resin and OH-type anion exchange resin is increased in the mixed bed-type ion exchange tower so as to decrease the ratio of the combination of ammonium-type cation exchange resin and OH-type anion exchange resin in the mixed bed-type ion exchange tower. 8.6.78 as 068298 (6pp34)

ALME- ★ D15 08354C/05 ★ J5 4160-057
Electrolytic treatment of waste water - with hydrogen ion concn. of water maintained constant to allow simultaneous isoelectric point decrease of impurities and electrolysis

ALMER SANGYO KK 06.06.78-JA-068099
J03 (18.12.79) C02c-05/12

In electrolytic treatment of waste water, the hydrogen ion concn. of the waste water is maintained constant, so that isoelectric point decrease of impurities is carried out simultaneously with electrolysis of the waste water, higher purification effect being obtained, and electric power consumption being reduced.

The appts. comprises an electrolysis vessel equipped with opposing electrodes and assisting electrode, a detector for hydrogen ion concn. equilibrium, connected to the assisting electrode, polarity change-over setting-up arrangement (I) for receiving power from the detector, polarity change-over arrangement for receiving electric current direction change-over signal from (I), and electric source for receiving increase-decrease indicating signal from (I) and sending applied electric energy to the electric vessel via the polarity change over arrangement. 6.6.78 as 068099 (5pp34)

EBAI ★ D15 08355C/05 ★ J5 4160-059
Waste water treatment with aerobic and anaerobic digestion - to accelerate denitrification and reduce sludge formation without addition of expensive chemicals

EBARA INFILCO KK 08.06.78-JA-069179
(D16) (18.12.79) C02c-01/17

Some of the microorganism-contg. granules from the aerobic digester are transferred to the anaerobic digester. Digestion of the aerobic bacteria gives a gas and a hydrogen donor for the anaerobic bacteria. This hydrogen donor replaces chemicals, e.g. MeOH, EtOH in prior art processes.

Some of the granules from the anaerobic digester are transferred to the aerobic digester where they become the substrate for the aerobic bacteria. The appts. is of reduced size. 8.6.78 as 069179 (3pp34)

TOKZ ★ D15 08523C/05 ★ J5 4160-721
Fungicidal, algicidal complex - obtd. by contacting polysaccharide with copper cpd. in ammonia or amine soln. then adjusting pH

TOKYO ORG CHEM IND KK 06.06.78-JA-067245
C01 (19.12.79) A01n-09

Nonmedical fungicidal and algicidal agent contains as active component a complex obtd. by contacting polysaccharide with Cu cpd. in ammonia or amine soln. and then ad-

justing the pH of the resulting soln. with acid to pH 3-9.

The agent has a very low toxicity to humans, has a very low phytotoxicity to valuable crops, and can be obtd. in low cost. Polysaccharides include, e.g. sucrose, lactose, maltose, cellulose, starch, etc. Copper cpds. include, e.g. hydroxide, sulphate, chloride, nitrate, basic Cu sulfate basic Cu carbonate, carbonate, oxide, phosphate, etc. Amines includes, e.g. methylamine, ethylamine dimethylamine, n-propylamine, butylamine, octylamine, dodecylamine, etc. 6.6.78 as 067245 (5pp108)

TOKZ ★ D15 08524C/05 ★ J5 4160-722
Fungicide and algicide for treating crops - contains complex obtd. by contacting mono:saccharide with copper cpd. in ammonia soln. or amine soln. and acidifying

TOKYO ORG CHEM IND KK 06.06.78-JA-067246
C01 (19.12.79) A01n-09

Non-medical fungicide and algicide contains as active component, the complex obtd. by contacting monosaccharide with copper cpd. in ammonia soln. or amine soln. and adjusting the soln. to pH 3-9 with acid. The fungicide and algicide has a very low toxicity to human body, has a very low phytotoxicity to valuable crops. Prod. is obtd. at low cost.

In an example, 550 g of 10% ammonia water is added to a mixt. of 100 g of Cu(OH)₂ and 120 g of D-glucose, and the mixt. is stirred for 1 hour at room temp. Minor amt. of insol. material is removed by filtration. The filtrate is adjusted to pH 8 by addn. of propionic acid. The soln. is spray-dried to give the complex. 6.6.78 as 067246 (5pp108)

TOKZ ★ D15 08525C/05 ★ J5 4160-723
Fungicide and algicide for treating crops - contains a complex obtd. by contacting polyhydric alcohol with copper cpd. in ammonia or amine soln.

TOKYO ORG CHEM IND KK 06.06.78-JA-067247
C01 (19.12.79) A01n-09

Nonmedical fungicide and algae-killing agent contains as active component a complex which is obtained by contacting polyhydric alcohol with copper cpd. in ammonia solution or amine solution and then adjusting the resulting solution to pH 3-9.

The fungicide and agent has a very low toxicity to human body, has a very low phytotoxicity to valuable crops, and can be obtd. at low cost. In an example 550 g of 10% ammonia water is added to a mixture of 100 g of copper hydroxide and 154 g of triethyleneglycol, and the resulting solution is stirred for 1 hour. Minor amount of insoluble material is removed by filtration. The filtrate is adjusted to pH 7-8 with addition of propionic acid. The resulting solution is spray-dried to give the complex. 6.6.78 as 067247 (5pp108)

SHIJ ★ D15 08531C/05 ★ J5 4160-730
Chemical sterilisation tablets contg. chlorine contg. fungicide - are prepd. by tableting mixt. of tri:chloro isocyanuric acid and alkali metal isocyanurate

SHIKOKU CHEM IND KK 07.06.78-JA-069041
C02 (19.12.79) A01n-09/22

Tablets are prepd. by (a) admixing (i) trichloroisocyanuric acid and (ii) alkali metal isocyanurate as 3-20 wt. % of (i) and (b) tableting and moulding. Tablets are useful for disinfection and sterilisation of swimming pools etc.; they have good storage-stability and are readily disintegrable on contact with water. 7.6.78 as 069041 (3pp69)

MITP ★ D15 08576C/05 ★ J8 0000-115
Electrodialysis device for waste water - where water is passed through electrode chambers to coagulate floating material then through settling tank and filter

MITSUBISHI PETROCH KK 29.08.72-JA-086472
(05.01.80) B01d-13/02 C02f-01/46

Device comprises two electrode chambers (I) contg. electrode made of metal capable of forming floccular substance by electrochemical reaction, electrodialysis chambers (II),(III) sandwiched between (I), settling tank (IV) and filter (I). Feed water is passed through (I) for coagulating floating substances by the floc, then through (IV) and (V) for separating the floc, and fed to (II) and

(III). 29. 8.72 as 086472 G02f-1/46, B01d-13/02 (5.1.80)
 MITSUBISHI PETROCH KK (4pp83)(J49042144)

SAKB ★ D15 08577C/05 ★ J8 0000-116
 Removal of oxygen from water - by adding hydrazine and cobalt salt of maleic hydrazide
 OTSUKA KAGAKU YAKUHI 03.03.71-JA-011493
 (05.01.80) C02f-01/58 C23f-15

Method comprise adding hydrazine (I) and Co salt of maleic hydrazide (II) to water. Used for treating water for boiler. (II) is used at 0.01-2 pts.wt. per 100 pts.wt. hydrazine. (II) accelerates reaction of (I) with O₂, without decomposing (I). 3.3.71 as 011493 C02f-1/58 C23f-15/00 (5.1.80) OTSUKA KAGAKU YAKUHI (4pp83)(J47030154)

TOYM ★ D15 08578C/05 ★ J8 0000-117
 Treatment of waste water with ozone - using series of chambers with successively lower ozone content
 TOYOBO KK 31.05.75-JA-066165
 (05.01.80) C02f-01/78

Method comprises passing waste water through a several treating chambers connected in series, and feeding ozone to the chambers in such a manner that feed rate at a chamber is smaller than the preceding chamber by 30-75%. Particularly suitable for treating water contg. coloured organic substances. 31.5.75 as 066165 C02f-1/78 (5.1.80) TOYOBO KK (4pp83)(J51141468)

STER D15 01861T/02 = J8 0000-118
 Biological treatment of sludge liquid - from heat-treated or moist air oxidised sludge
 STERLING DRUG INC 22.06.70-US-048070
 (05.01.80) *DT2130-922 + C02f-03/12

Liquids, obtained by dehydrating heat-conditioned organic sludge solids, are charged to aeration tank without appreciable dilution, at a rate of 1-5 kg biological O₂ requirement (BOD) per day per kg mixture of mixed liquor volatile suspended solids. In process, liquids are (a) charged to aeration tank, pref. kept at 25-40°C containing previously conditioned biological sludge, (b) mixture is stirred in tank with O₂ containing gas (air) over 2 hrs. until sufficient O₂ is present to support aerobic biological growth, (c) mixture is transferred to settling tank to separate accumulated biological sludge, (d) settled biological sludge is recycled to aeration tank and (e) removed at rate appr. equiv. to biological sludge accumulation rate. P is pref. added to achieve max. biological growth rate. 22.6.71 as 045172 C02f-3/12 (5.1.80) STERLING DRUG INC (4pp)(J47001786)

KOGY D15 45921Y/26 = J8 0000-119
 Waste water treatment apparatus - enriching water with oxygen after carbon dioxide removal to improve biological purificn.
 IND RES INST OF JAPAN (INRE-) 11.11.75-JA-135387
 (05.01.80) *J52059-955 + C02f-03/12

A waste water contg. BOD components is subjected to a purificn. by treatment with an O₂-rich water by contacting water contg. CO₂ (generated by biochemical oxidn) with the air to remove CO₂ followed by contacting it with a gas having high O₂ concn. By removing effectively CO₂ from the water, none can be adsorbed which improves purificn. of the waste water. It becomes impossible to carry-out the O₂-enriching process in the presence of a large amt. of dissolved CO₂ due to the fact the solubility of CO₂ (against H₂O) is more than 30 times that of O₂ (at 25°C). 11.11.75 as 135387 C02f-3/12 (5.1.80) IND RES INST JAPAN (4pp)(J52059955)

TAKU- ★ D15 08579C/05 ★ J8 0000-120
 Activated sludge treatment of sewage - in aerating tank with deodorising device, sedimentation pond and raw sludge concentrator
 TAKUMA KK 22.08.72-JA-083913
 (05.01.80) C02f-03/12

Sewage is treated in an active sludge treating device connected to an aerating tank for treating a separated liquid from the sewage. The tank is connected to a deodorising device and a sedimentation pond, which is connected to the aerating tank and raw sludge concentrator. 22.8.72 as 083913 C02f-3/12 (5.1.80) TAKUMA KK

(4pp26)(J49039267)

TASH/ ★ D15 08589C/05 ★ J8 0000-347
 alumite plant waste water treatment - involves neutralisation and pptn. of calcium aluminate and sulphoaluminate
 TASHIRO H 12.04.73-JA-041619
 L02 (07.01.80) C02f-09 C04b-07/32 C04b-31/10

Method comprises (i) reacting milk of lime, with some of the acidic waste water to form CaSO₄ (I); (ii) neutralising the rest of the acidic waste water with alkaline waste water, (iii) reacting sludge formed with additional alkaline waste water to form alkali aluminate and -sulphoaluminate, (iv) reacting these with milk of lime to give NaOH soln. (II) and ppte. (III) of column aluminate and -sulphoaluminate, (v) mixing (I) with (III) to give expandable alumina cement, and (vi) returning (II) to the step (ii). 12.4.73 as 041619 C04b-7/32, 31/10 C02f-9/00 (7.1.80) TASHIRO H (12pp83)(J49128932)

ASAH- D15 72092B/40 = J8 0000-645
 Aq. salt soln. disposal - with water sprays in combustion chamber and in gas-liquid separator tank
 ASAH ENG KK 23.03.78-JA-032302
 F09 J04 + Q73 (09.01.80) *DT2911-113 F23g-07/04

A waste product, e.g. from the cellulose industry, containing a salt which has explosive properties when submerged in water in the fused state, is treated by spraying its aq. solution downward into a vertical combustion chamber. The fused salt drops on an inclined (5°-60°) guide plate in a horizontal tank. Water sprays keep the salt cool and immersed as it moves along to a perforated plate leading to the discharge openings.

This ensures a cool enough temp. to avoid any risk of an explosion. The salt is recovered in the form of an aq. soln. 23.3.78 as 032302 F23g-7/04 (9.1.80) ASAH ENG KK (8pp)(J54125882)

TEIJ D15 46283B/25 = J8 0000-738
 Bromide removal from waste photographic developer soln. - using ion exchange membrane electrodialytic cell
 TEIJIN KK 17.10.77-JA-123605
 E36 G06 J03 R23 (09.01.80) *J54058-028 G03c-05

Method of removing bromide from waste developing soln. uses an ion exchange membrane electrodialytic cell which is constructed by cathode chamber, anode chamber, concentrating rooms and desalting rooms, which are formed by partitioning off between cathode and anode with alternate arrangement of anion and cation exchange membranes.

Waste developing soln. is applied to the desalting rooms and water is applied to circulating system connecting the concentrating rooms and then direct electric current is applied between the cathode and the anode chambers. 17.10.77 as 123605 G03c-5/00 (9.1.80) TEIJIN KK (7pp)(J54058028)

RUTH/ ★ D15 C/05 ★ OE 7901-550
 Working up rubbish and sewage slurries
 RUTHNER O 01.03.79-OE-001550
 (15.01.80) C02f-11/18

TORI- ★ D15 C/05 ★ PT--69-653
 Textile yarn tension regulator for circular loom - has shuttle driven along circular guide and rotatable cylindrical yarn feeder between yarn supplier and tension variation absorbers
 TORII WINDING MACH 29.11.78-JA-148530
 Q36 (15.01.80) B65h D03d

VIME= ★ D15 08649C/05 ★ SU -614-621
 Low conductivity metal plating waste water purificn. - by adding sodium chloride, electrolysis and cascade floc adsorption to improve heavy metal removal
 VILIN MECHAN AUTO 06.01.76-SU-311024
 M11 (05.08.79) C02c-05/12

Low electrical conductivity metal plating or metallurgical aq. effluent is freed from heavy metal ions by dividing it into 2 streams and operating as follows: in one stream sorbent flocs are obtd. by hydrolysis; these flocs are then added to the second stream.

Energy requirements are reduced and purification efficiency is improved by operating in this modified way.

Water conductivity is increased to 3-5. $10^{-3}\text{ohm}^{-1}\cdot\text{cm}^{-1}$ with added NaCl before electrolysis at pH 9.5-11 and the flocs are concentrated and de-watered.

Budilovskii, Yu. Ya., Ryskin, S. Ya. Bul. 27/25. 7. 79. 6.1. 76. as 311024 (2pp835)

VIME= ★ D15 08651C/05 ★SU -617-914
Removal of heavy metal ions from metal plating aq. effluent - includes floccular absorption and treating flocs with acid and alkali for consolidation

VILIN MECH AUTO 05.04.76-SU-342079

M11 (05.08.79) C02c-05/12

Plating effluent is freed from heavy metal ions by electrolysis to obtd coagulant flocs which absorb the metal ions. The flocs are then coagulated and sepd. from the liquor.

The volume of deposit is minimised and its filterability improved, by operating as follows: the flocs are treated firstly with 0.02-0.04 g. equiv. HCl per 1 kg. deposit and then with 0.04-0.08 g. equiv. alkali per 1 kg deposit. Budilovskii, Yu. Ya., Grigorovich, M. M., Daubaras, R. Yu. et al. Bul. 27/25. 7. 79. 5.4. 76. as 342079 (3pp835)

VIME= ★ D15 08653C/05 ★SU -626-551
Metal plating etc. waste water purificn. - includes additional treatment of sludge with iron hydroxide flocs to improve heavy metals removal

VILIN MECHAN AUTO 05.04.76-SU-342080

M11 (05.08.79) C02c-05/02

Aq. effluent from non-ferrous metallurgy or plating shop etc., is freed from heavy metal ions by adsorbing the latter on flocculated $\text{Fe}(\text{OH})_3$. Less $\text{Fe}(\text{OH})_3$ is required by operating as follows: flocs with adsorbed ions from one portion of effluent are added to further raw effluent and slurried; further flocculated $\text{Fe}(\text{OH})_3$ is added to this slurry.

Budilovskii, Yu. Ya., Ryskin, S. Ya. Bul. 27/25. 7. 79. 5.4. 76. as 342080 (3pp835)

AUTO- D15 00001W/01 =SU -663-297
Effluent purification by biological rotary contactor - which is rotated by air which displaces liquid from radial pockets

AUTOTROL CORP 15.06.73-US-370219

(15.05.79) *BE-816-248 C02c-01/04

The contactor comprises a drum adapted to rotate on a horizontal axis with part of its circumference immersed in effluent liq. Regularly pitched radial pockets are provided around the full circumference of the drum, and air or other oxygenated gas is released below the drum so as to fill pockets on one side only of the axis of the drum with gas, the gas-filled pockets then rising to the surface so that the drum rotates. This form of drive is cheaper, more compact and less troublesome than conventional drive by electric motor, gears, roller chain etc. The gas liberates supplementary oxygen which accelerates the purificn. treatment, and the pockets provide extra area for the growth of biomass. Prosser, D.G. Bul. 18/15. 5. 79. 14.6. 74. as 039868 (3pp)

NCPO= ★ D15 08889C/05 ★SU -663-436
Hydrocyclone for removing mechanical impurities from water - has turbine with brushes on thread-grooved body of filter element with apertures

NOVCH POLY 12.12.77-SU-552719

P41 (25.05.79) B04c-05/13

The hydrocyclone comprises a cylindro conical housing with tangential inlet, sand outlet and drain outlet with filtering element on a perforated body. For more efficient cleaning, it has a turbine with brushes and rectangular jet guide ribs, on the body of the filter element, which has thread-like angled grooves between which there are apertures in staggered pattern.

Pleshakov, V.D., Serpokrylov, N.S., Semenov, V.I. Bul. 19/25. 5. 79. 12.12. 77. as 552719 (2pp18)

CAMP- ★ D15 09004C/05 ★US 4184-789
Waste water treatment system with annular ridges - planted with grass compatible with heavy irrigation

CAMPBELL SOUP CO 25.08.78-US-936739

P13 (22.01.80) A01g-25 C02c-05

A system for treating waste water comprises utilising a circular land surface area having relatively impervious

soil. The area is contoured to provide a series of concentric annular terraces each sloping down radially towards a concentric annular drain.

A water-tolerant grass crop is grown on the terraces and a distribution device is used to deliver the waste water to the grass on each of the terraces. The gradual slope of the terraces allows a slow movement of the water through the crop to the adjoining drain. The distribution device comprises a radial conduit pivotally fixed at the centre of the terraces and adapted for movement around the area. The conduit has a series of spaced nozzles along its length

The system is partic. for treating waste water from food processing plants but may also be used for treating sewage. 25.8.78 as 936739 (11pp295)

ANDE/ ★ D15 09034C/05 ★US 4184-892
Washing walls of organic digester - with rotatable roof supported using pressurised methane gas

ANDERSON J 01.07.77-US-812144 (11.07.75-US-595176)

C04 E17 H09 P43 (22.01.80) B08b-03 B08b-09

An organic digester has a wall and a movable roof. A liq. is maintained between the wall and the roof to provide a gas-tight seal to exclude oxygen from the digester. The roof is supported on pressurised gas produced by the digester. The inside surfaces of the digester are washed by first removing all the organic material from the digester and then directing water against the walls. Pref. the roof is rotatable during washing,

The method is used to wash the inside walls of the digester of US 4046551. A manned capsule is supported beneath the roof within the digester. Rotation of the roof during washing allows inspection of the walls and manual direction of the washing jet. 1.7.77 as 812144 Div.ex 4046551 (11pp295)

KATO/ D15 02469A/02 =US 4184-946
Sewage treatment tank with paddle mixer - and filled with plastic crosslinked filter media for better microorganism contacting

KATO M (EISH-) 11.06.76-JA-069509

(22.01.80) *DT2726-167 C02c-01/06

Sewage is treated in a tank filled with a filter medium consisting of a nest of short net tubes one in the other and pressed flat and welded together at one or more points to hold the flat shape. The tubes are of plastics and have a s. g. less than 1.

The medium and sewage are agitated in the tank by a vertical or horizontal rotatable shaft carrying stirring elements or radial arms supporting scoops. The medium acts as a contact surface for aerobic microorganisms and improves the contact of these with sewage and air. The tubes are e. g. of polyethylene or polypropylene. 9.6.77 as 805225 (16pp1358)

DEMI/ ★ D15 09061C/05 ★US 4184-947
Sewage treatment e.g. for effluent from septic tank - by percolation through bed of soil mixed with red mud

DEMISCH R R 01.08.77-US-820888

(22.01.80) C02c-01/02

Method for treating sewage in a leaching bed having a distribution system comprises (a) mixing red mud from bauxite processing with a soil having a permeability coeff. $K \geq 10^{-5} \text{ cm/sec}$; (b) applying a layer of the mixt. in the leaching bed below the distribution system and (c) allowing sewage to percolate through the layer in the presence of air.

Phosphates are removed and retained, and so prevented from reaching the water table. The BOD is reduced and breakdown of coliform organisms is promoted. 1.8.77 as 820888 (6pp955)

ROHM D15 91658A/51 =US 4184-948
Deionisation of water streams contg. monovalent and divalent cations - involves use of double layered bed of same ion exchange resin which is thermally regenerated and in different states in each bed

ROHM & HAAS CO 31.05.77-US-802142

(22.01.80) *DT2822-280 C02b-01/40

The concn. of dissolved salts in an aq. fluid is reduced by passing the fluid through a bed of a single, thermally regeneratable ion exchange resin having a greater affinity

for divalent than for monovalent ions. The salts are present in the fluid at a concn. of $< 20 \text{ mm/L}$ and contain divalent and monovalent cations in a mole ratio of 3:1-1:3.

The bed has two distinct zones, the useful cation exchange capacity of the freshly regenerated resin in the first zone being in the monovalent ion form; and the useful cation exchange capacity of the freshly regenerated resin in the second zone being in the H-form.

The sizes of the zones are (a) calculated based on the pre-determined content of divalent and monovalent cations in the fluid and the respective capacities of the resin for these cations, (b) controlled to the sizes calculated by controlling the respective volumes of fluid and regenerant passing through the column during a treatment and regeneration cycle, and (c) such that the useful cation exchange capacity of the resin in the first zone, becomes exhausted by exchange of monovalent cations with divalent cations from the fluid at approx. the same time that the useful cation exchange capacity of the resin in the second zone, becomes exhausted by exchange of H ions with monovalent cations. 31.5.77 as 802142 (7pp924)

SADE/ D15 42459A/24 =US 4184-949
Hydrocarbon separation from waste water purification layers - by adding quat. ammonium salt to upper layer and a mixt. of heteroside or holoside and coagulant to bottom layer

SADER G 03.12.76-FR-036440

H07 (22.01.80) *DT2750-431 C02b-01/20

Treatment of waste water contg. residues from dewaxing processes in which the protective films of monomer or polymer hydrocarbons on vehicles, machine tools etc. are cleaned off by means of pressurised water, is described.

The process comprises (a) allowing the residues to settle from the waste water until sepn. into an organic phase layer and an aq. phase layer is achieved, (b) removing the organic phase, (c) treating the organic phase under agitation, with 0.05-10 pts. wt. per 100 pts. of the layer, of quat. ammonium salt, to obtain a reusable hydrocarbon fraction and an organic waste fraction, and (d) treating the aq. phase under agitation with 1-20 pts. wt. per 100 pts. of the aq. layer, of a mixt. of 10-90 pts. of polyholoside and 90-10 pts. of alum, to obtain a reusable hydrocarbon fraction and clean water fraction. 30.11.77 as 856171 (3pp924)

HEND- ★ D15 09062C/05 ★US 4184-950
Apparatus for dewatering paper mill sludge - facilitates drainage by reducing compaction of the lower layers of sludge

HENDRICK MFG CO 21.02.78-US-879047 (24.07.75-US-598571)

F09 (22.01.80) B01d-37/04

A first sludge layer is formed over a support screen, which is immersed in a support liquid, by withdrawing support liquid from below the screen for replacement by liquid draining from the first sludge. At least one drainage slab slopes upwards and extends outwards from one side of the screen. This slab supports a second sludge alongside the first sludge and directs liquid draining to the slab from the second sludge to the support liquid. This further replaces support liquid withdrawn from below the screen, the slab continuing to support a second sludge.

Large volume of sludge is processed over a large area with the result that the compaction of underlying sludge by overlying sludge can be minimised. 21.2.78 as 879047 (clg. 22.2.77-US-770367)(6pp1307)

PETE/ ★ D15 09065C/05 ★US 4184-954
Sedimentation device for clarifying waste water - comprises two basins and horizontal tube settler backflushed to remove particulates

PETERSON A C 23.03.79-US-023177

(22.01.80) B01d-21/14 B01d-23/02

Sedimentation device for clarifying waste water comprises two basins and two horizontal tube settler having tubes for the flow of liq. between the two basins. Waste water flows from one basin to the other through the tube settler and particulate matter suspended in the waste water settles onto the lower surface of the tubes. The waste water is cyclically backflushed so that the particulate matter settled on the tube lower surfaces is drawn with the backflush water from the tubes into a sludge disposal duct.

Continuous clarification of waste water is possible because the tube settler tubes are maintained clean. 23.3.79 as 023177 (8pp67)

ARVA/ ★ D15 09066C/05 ★US 4184-955
Solids settler for contaminated liquids - with frusto/conical inserts within container for acceleration of settling rate
ARVANITAKIS K S 03.10.77-US-838753 (30.09.75-US-618137)
(22.01.80) B01d-21/06

Apps. for gravitational sepn. of solids from a contaminated liq. comprises a container holding the liq. and carrying concentric frusto-conical sections. The liquid is admitted to the container through an inlet positioned beneath the normal liq. level. A turbulence suppressor quiesces the inlet flow.

A back pressure is produced on the liq. passing from the inlet to the frusto-conical sections for facilitating the settling of solids. Settled solids are removed from the container, and a clarified liq. stream is discharged.

The settling rate of solids is accelerated and therefore the size of clarifier can be reduced compared with conventional equipment. The discharge is a uniform quality clarified liq. 3.10.77 as 838753 (8pp295)

CGRR D15 45991B/25 =US 4184-956
Irradiation of waste water with electrons from linear accelerator - with treatment monitored automatically pref. by microprocessor
CGR MEV INC 16.09.77-FR-028072
K08 (22.01.80) *FR2403-302 +C02b-03

Waste water and sludge are treated using an irradiation beam of accelerated electrons, in an appts. comprising a treatment circuit equipped with valves, and electromagnetic regulator providing a constant flow of fluid to be treated, systems for controlling fluid flow and the characteristics of the irradiation beams, and a microprocessor associated with the flow control systems for controlling at least the automatic closure of a shut-off valve and the opening of a purge valve.

Good quality results are obtd. with low cost. 14.9.78 as 942197 (9pp976)

BOTS/ D15 32314A/18 =US 4184-957
Trash screens and rake for water intake - in which two screens close together are cleaned by single travelling rake
BOTSCH B (MGEI) 21.10.76-DT-647539
Q42 (22.01.80) *DT2647-539 B01d-35/28 C02c-01/22

Coarse screening appts for flowing fluid, e. g. for sewage treatment plant, includes upstream and downstream screens, and a system for removing screenings from both screens simultaneously. Both screens pref. consist of vertical bars, those of the downstream screen being more closely spaced and all extending above liquid level.

The upstream screen is pref. at $100-120^\circ$ and the downstream at $90-100^\circ$ to the flow direction and the screens are anchored to the flow channel base. The cleaning system comprises a common rake located mainly upstream of the upstream screen and having at least as many teeth engaging the downstream screen as engage the upstream. 20.10.77 as 843826 (7pp1358)

MANC/ D15 43257Y/24 =US 4184-958
Treating oil field or sewage sumps with lime - to stiffen contents which are subsequently dried for three weeks
MANCHAK F 15.10.73-US-406349 (06.06.77-US-803794)
H01 L02 +Q42 (22.01.80) *US4028-240 +B01f-03/14 E02f-03/60

Appts for mixing a pile of powder at one side of a sump holding pasty material, partic. lime with oil well sump material, comprises two scoops each with a transverse blade extending downwardly and forwardly from a rear end wall, two laterally spaced pulleys anchored on the pile side of the sump, and two power winches at the opposite side and operable concurrently to rotate in opposite directions.

A drag line engages the winches and crosses the sump to engage the pulleys so that the scoops are moved through the pile to carry powder into the sump and mix it with the pasty material which passes through the scoop and is discharged through scoop wall apertures. The parent patent claims the mixing method. 6.6.77 as 803794 Div. ex 4028240 (10pp1358)

LENO- D15 00395C/01 =US 4184-967
 Appts. for removing floating solids from settling tank - with rotating multi-bladed scoops delivering removed solids to central outlet
LENOX INST RES INC 22.06.78-US-917954
F09 + P41 (22.01.8.) *GB2023-444 + B03d-03
 Appts for clarifying paper and pulp industry effluent comprises an open-top cylindrical tank with a central sludge outlet and an axially rotatable scoop support. This is movable around the tank top and carries more than two equally spaced scoop blades radially positioned about a centre line and inclined from the tank wall towards the centre and further from the centre line towards the tank wall to form a horizontal lip engaging floating sludge.
 The blades have end face plates and an axial deflector along the turned in part on the rear side. A tube is attached to the end face plate at the centre leading to the sludge outlet and is divided axially by baffles forming troughs for each blade to feed sludge continuously and reduce the danger of clogging of the tube. 22.6.78 as 917954 (7pp1358)

WARD/ ★ D15 09176C/05 ★ WP 8000-077
 Solar distn. appts. esp. for sea water - has lens system for concentrating solar energy and heat exchanger for condensing vapour
WARDEN JC 04.06.79-US-044901 (13.06.78-US-915001)
Q74 (24.01.80) C02b-01/06 F24j-03/02
D/S: N(BR, CH, DT, GB, JA, SU)

The appts. comprises an inclined conduit through which a heat exchange fluid flows disposed below a lens system for concentrating solar energy and above a container for liq. to be distilled. The conc. solar energy causes liq. in the container to evaporate. The resulting vapour condenses on the outside of the conduit and flows along it to the lower end from which it is discharged.

The appts. is used for the distn. of sea water and is of high efficiency because a portion of the heat of condensn. of the liq. is absorbed by the heat exchange fluid in the conduit.

13.6.79. as GB0101 (69pp67).
 (E) ISR: GB1497953; DT2650482; DT2644737; US3224948; US3357898; US3655517; FR2357836; DT2730839.

See Also

D25 GB 1560056

D16: FERMENTATION INDUSTRY

GILM/ ★ D16 07364C/05 ★ BE -878-430
 Pasteurellosis vaccine for cattle and sheep - contains A1 serotype capsular extract and A2 serotype heat killed entire *Pasteurella haemolytica* antigenic material
GILMOUR N 24.08.78-GB-034525
B04 C03 (17.12.79) A61k C12k

Pasteurellosis vaccine contains antigenic material derived from A1 and A2 sero-types of *Pasteurella haemolytica*; the serotype A1 antigenic material comprising the capsular extract and the serotype A2 antigenic material comprising the entire organisms killed by heat.

Used for prophylactic and therapeutic treatment of pasteurellosis (shipping fever, haemorrhagic septicaemia) in bovine and ovine animals. The vaccine is usually administered by sub-cutaneous injection using 1-2 ml of vaccine contg. 0.1-20mg, pref. 0.5-10 mg. e.g. 5mg of antigenic material of each serotype. In lambs it is pref. administered about 4 weeks after birth. 24.8.79 as 878430 (29pp395)

CORP ★ D16 07376C/05 ★ BE -878-466
 Glucoamylase of high thermal stability - prod. by *Talaromyces duponti*, useful in prodn. of glucose syrup from starch
CPC INTERNATIONAL INC 01.09.78-JA-106354
(D17) (17.12.79) C12d C12k

New glucoamylase prepn. (I) retains $\geq 90\%$ of its initial activity when maintained at pH 4.5 and 70°C for 10 min., and has max. activity at about 75°C (measured over 10 min. on a 2% maltodextrin soln. at pH 4.5). (I) is made by cultivating *Talaromyces duponti*, esp. the strain FERM-4566.

Prodn. of high-dextrose syrup is also claimed which comprises treating a liquefied starch at $\geq 60^\circ\text{C}$ with (I), esp. at pH 4-5.

The much superior heat stability of (I) compared with known glucoamylases allows high-temp. conversion of starch in a continuous process (using (I) immobilised in a column). 28.8.79 as 878466 (21pp1251)

OSTR- ★ D16 07488C/05 ★ DL -137-941
 Conidia contg. *Penicillium* suspensions prodn. - by submerged fermentation in closed tank then flushing with saline
VEB OSTRA ENTWICKLU 28.06.78-DL-206321
(D12 D13) (03.10.79) C12b-01/04

Prodn. of conidia-contg. *Penicillium* suspensions used a closed fermentor (4) having horizontal trays (3) arranged in a cage. The trays are supplied, via main feed line (2) with alternating liq. nutrient media from reservoirs (1, 8, 10). The first medium is inoculated with the strain being cultivated.

After conidia have been formed, excess nutrient medium not required for growth is drawn off from under the

layers of *Penicillium* via line (2). Then, via the same line, the fermentor is flooded with physiological saline to recover the conidia. One or more nutrient media can be used before flooding; esp. the last one used is physiological saline.

Growing time is reduced; storage life of the culture increased and economics of the process improved. The culture can be kept free of contamination. The *penicillium* cultures are esp. useful in the dairy and meat-producing industries. 28.6.72 as 206321 (10pp1251)

SETZ/ ★ D16 07491C/05 ★ DL -137-944
 Kiln-dried malt having high diastatic capacity - is prepd. by soaking, germinating and drying non de-husked barley
SETZER F 21.07.78-DL-206846
(03.10.79) C12c-01/04

In distillery kiln-dried malt prepn., non-dehusked barley is (a) soaked 30 hrs., (b) germinated ≤ 7 days with gibberellic acid addn. or ≤ 9 days without gibberellic acid, and then (c) dried 16 hrs. at 40°C, measured 1cm. away from kiln floor.

The malt can be used for starch saccharification in distilleries. Use of non-dehusked, in place of dehusked, barley increases diastatic capacity, e.g. to 500 Windisch-Kolbach units in dry solids; recedes soaking-, germinating and drying time and also drying temp. 21.7.78 as 206846 (6pp200)

BORM/ ★ D16 07492C/05 ★ DL -137-945
 Streptomycin prodn. by fermentation - with aeration rate of 1-2 g oxygen per litre per hour and nitrogen concn. of 2.5-3.5 g per litre
BORMANN E J 17.03.77-DL-197896
B03 (03.10.79) C12d-09/16

In a new process for the prodn. of streptomycin by cultivation of *Streptomyces griseus* in a stirred and aerated fermenter system, the aeration rate is maintained at an oxygen transfer rate of 1-2g. O₂ per litre per hr., and the organic nitrogen content of the nutrient medium is adjusted to twice this level (pref. 2.5-3.5 g. nitrogen per l.).

The specified aeration rates and nitrogen concns. enable streptomycin yields of ≥ 10000 IU/ml. to be achieved in fermenters with stirrers operating at less than 2kW per m³ culture soln. The oxygen in carbohydrate components of the nutrient medium to be utilised in mycelium formation, leading to increased production of streptomycin 17.3.77 as 197896 (6pp280)

DEAK ★ D16 07511C/05 ★DL-138-016
Spin-labelled adenosine triphosphate prodn. - by reaction of ATP with the imidazolidine of 2,2,5,5-tetra:methyl-3-carboxy-1-pyrrolidinyl:oxy

AKAD WISSENSCHAFT DDR 22.04.77-DL-198546

B02 (10.10.79) C07h-17/02

In the prodn. of a spin-labelled adenosine triphosphate deriv. by reaction of 2,2,5,5-tetramethyl-3-carboxyl-pyrrolidinyl:oxy (I) with N,N'-carbonyldiimidazole in the presence of a small amt. of an aprotic solvent (pref. dimethylformamide) under anhydrous conditions at room temp., subsequent reaction of the resulting imidazolidine with an aq. soln. of adenosine triphosphate (ATP) and chromatographic sepn. of the resulting ATP deriv. from unreacted ATP, the reaction is carried out without isolation of the intermediately formed imidazolidine, and the sepn. is carried out by column chromatography using n-butanol/water/glacial acetic 7:2:1 to 5:3:2 as eluant.

The prod. is 2'- and/or 3'-O-(2,2,5,5-tetramethyl-3-carboxyl-1-pyrrolidinyl:oxy)-adenosine triphosphate, which is used for biochemical studies, esp. in the elucidation of the mechanism of action of enzymes. Omitting isolation of the imidazolidine does not give a loss in yield. Use of the specified solvent mixt. and column chromatography gives rapid separation of the prod. from by-products., so that the process can be completed within 1 day. The spin-labelled prod. is obtd. in an overall yield of 36%. 22.4.77 as 198546 (6pp280)

DEAK ★ D16 07594C/05 ★DL-138-247
Micro-test for detecting bovine leukaemia virus - by cultivating leucocytes, concentrating virus, then examining for revertase

AKAD WISSENSCHAFT DDR 20.12.77-DL-202821

B04 C03 R16 (17.10.79) G01n-33/16

Microtest for detecting bovine leukaemia virus (BVL) comprises cultivating peripheral bovine leucocytes, recovering a virus-contg. sediment from the cell supernatant, then detecting revertase using a synthetic engogenous template. Cultivation is for 24-30 hrs; virus concn. is by PEG pptn. and revertase is detected at 25°C.

Compared with the standard revertase method this process requires less sample and avoids the use of expensive foetal serum and ultracentrifuges. The specificity and sensitivity are improved since the short incubation gives a virus yield 3-times higher than the standard method and detection at 25°C rather than 37°C gives 6-times greater incorporation of 3H-thymidine triphosphate (TTP). 10.12.77 as 202821 (7pp1251)

DEAK ★ D16 07596C/05 ★DL-138-273
Macrolide antibiotic medicated feedstuff premix - produced by granulation and drying of mycelium without binding agent

AKAD WISSENSCHAFT DDR 21.08.78-DL-207377

B03 (24.10.79) A23k-01/17

In the production of an active substance premix for medicated feed based in a macrolide antibiotic, the fermentation soln. and/or its concentrate or a submerged mycelium separated from the fermentation soln., alone or in admixture with the antibiotic (in the form of the pure base or of a salt or deriv.) is subjected to granulation/drying without additional binding agents.

The product has good physiochemical properties and good miscibility with other feed components without the use of additional binding agents. The process is suitable for the production of premixes of macrolide antibiotics such as turimycin and tylosin. 21.8.78 as 207377 (7pp280)

TEIC/ ★ D16 07605C/05 ★DL-138-327
Cultivating microorganisms on liq. hydrocarbon contg. medium - with organic additives, including surfactant, present during cultivation and cell recovery

TEICH W 10.02.76-DL-191169

A97 H04 (24.10.79) C12b-01/20 C12c-11/18

Cultivation of microorganisms using liq. hydrocarbons as only (source is carried out in presence of an aq. nutrient salt soln. and free O₂ contg. gas, then the microorganisms are sepd. from the mixt. Now ≥2 organic substances are present during cultivation and sepn. stages; one is a surfactant (A) while the other (B) is a linear polymer, polyhydroxy cpd. protein or fatty acid. (A) and (B) can be

added together or separately to the same of different stages. Pref. the C source and (some of) the salt soln. are pre-emulsified before the cultivation stage, and the additives serve to stabilise the emulsion. (A) may be anionic, amphoteric or esp. nonionic.

These additives improve phase sepn. of the fermentation mixt. which forms 3 phases in 10 mins. (light phase: (source+salt soln.; middle phase: salt soln.; heavy-phase: cells+salt soln.). Since the additives are not salts they do not cause additional corrosion. 10.2.76 as 191169 (10pp)

TEIC/ ★ D16 07606C/05 ★DL-138-328
Cultivating microorganisms on liq. hydrocarbon - in presence of nutrient soln. contg. surfactant and additional salt

TEICH W 25.07.75-DL-187467

H04 (24.10.79) C12c-11/24

In the cultivation of microorganisms using liq. hydrocarbons as sole C source in presence of aq. nutrient soln. and free O₂-contg. gas, then sepg. the microorganisms, a mixt. of (A) a surfactant (I) and (B) a metal and/or non-metal salt is supplied to the fermentor. These additives are present during both fermentation and sepn. steps.

(I) is pref. nonionic, anionic and/or amphoteric, esp. a nonionic surfactant used at ≥0.05g/l in the aq. salt soln. Pref. (B) is an alkali(ne earth) or NH₄ sulphate and/or phosphate used at an excess of ≥0.5g/l based on usual nutrient salt components.

Additives inhibit attachment of oil droplets to microorganisms and after removal from the fermentor the mixt. separates in about 5 mins. into 3 phases (lightest: hydrocarbon or its emulsion in the nutrient soln.; middle: aq. salt soln., heaviest: microorganisms suspended in aq. soln.). During fermentation O₂ transport to the aq. phase is improved by 20-40% and the residual hydrocarbon content of the prod. is only 1-2%. 25.7.75 as 187467 (9pp1251)

SACH- ★ D16 07607C/05 ★DL-138-329
Tetanus vaccine prodn. from intracellular toxin - recovered by saline extraction of bacterial cultures, free of ballast materials

SACHSISCHES SERUMWE 04.08.78-DL-207116

B04 C03 (24.10.79) C12k-05

Prodn. of tetanus vaccine comprises using as toxoid an intracellular toxin prped. from a sedimented and washed bacterial mass by extraction with aq. soln. solns., esp. isotonic NaCl soln. The toxoid can be processed to give a fluid vaccine or, after adding an inorganic adsorbent, an adsorbed vaccine. Alternatively it is combined with other immunogens to give a multivalent vaccine.

The vaccines are useful in human or veterinary medicine.

The toxoid is obtd. free of ballast materials which may cause local or general reactions; it has purity >1000 Lf (flocculation units) per mg. N. 4.8.78 as 207116 (6pp)

RESE D16 07910X/05 =DS 2531-176
Gonorrhoea antibodies detection - using radioactively labelled heat-sensitive neisseria gonorrhoeae antigen

RESEARCH CORP 12.07.74-US-487971

B04 K08 R16 +P31 R19 (24.01.80) *DT2531-176 G01n-33/16

Neisseria gonorrhoeae antibodies are radioimmunologically detected in human serum by converting them to radioactively marked antigen-antibody conjugates, with the help of heat-sensitive antigens produced in a culture of Neisseria gonorrhoeae and antihuman IgG.

The method comprises (a) mixing the serum with an aq. buffer and antihuman-IgG, (b) adding radioactively marked, heat sensitive antigens to the mixt., (c) incubating the mixt. for 2-24 hrs. at 4-45°C. and pH 6.5-8.6, and (d) determining the degree of radioactivity of the conjugate formed in (c) in the presence of antibodies.

Used for large scale screening for existing or previous gonorrhoeae infections, the method is simple, rapid, sensitive and specific. 11.7.75 as 531176 (5pp913)

TOKU D16 81470X/44 =DS 2605-921
L-Tartaric acid prepn from cis-epoxy-succinic acid - contacted with Nocardia species microorganism or enzyme hydrolysing epoxy ring

TOKUYAMA SODA KK 09.10.75-JA-121313 (14.02.75-JA-017973)

A97 E17 (24.01.80) *DT2605-921 C07c-59/14

Enzymatic prepn. of L-tartaric acid (I) from cis epoxysuccinic acid (II) comprises contacting Nocardia tartaricans

nov. sp., or the enzyme isolated from this microorganism, with (II) or its (in)organic salts in aq. medium at 20-60°C. and pH 6-10, pref. in the presence of a surfactant, e.g. a polyoxyethylene alkyl ether. (II) can be obtd. e.g. by epoxidation of maleic acid or maleic anhydride with H_2O_2 .

Prod. (I) resembling naturally occurring tartaric acid is obtd. from a cheap and readily available starting material (II). 13.2.76 as 605921 (17pp927)

BOEF **D16** **05764C/04 =DS 2831-580**
Glycerol determination using glycerol dehydrogenase - in presence of zinc salt for more rapid reaction

BOEHRINGER MANNHEIM GMBH 18.07.78-DT-831580
B04 E17 R16 (24.01.80) *EP--7-058 +G01n-31/14

Determn. of glycerol with glycerol dehydrogenase, electron transfer agents, NAD and tetrazolium salt comprises adding $\geq 1 \mu g$ Zn in the form of a Zn salt, pref. $ZnCl_2$, per 50 U glycerol dehydrogenase.

Pref. reagent for carrying out the determn. contains 5-20 U/ml. glycerol dehydrogenase, 0.2-1.4 U/ml. diaphorase, 0.5-5 mmole/l. NAD, 0.1-0.5 mmole/l. tetrazolium salt, 0.05-0.2 mole/l. buffer (pH 7.5-9.5), 0-0.5% detergent and 0.01-1.0 mmole/l. Zn salt.

Method reduces the reaction time to one third of that required when Zn salt is not present. 18.7.78 as 831580 (4pp927)

BOEF **D16** **07640C/05** **★DS 2834-705**
Enzymatic analysis using NADH or NADPH - with preliminary enzyme reaction to remove interfering substances without lag phase

BOEHRINGER MANNHEIM GMBH 08.08.78-DT-834705
B04 J04 R16 (24.01.80) G01n-31/14

In enzymatic analyses involving formation of reduced nicotinamide adenine dinucleotide or its phosphate (NAD(P)H) in which intermediates and non-specifically reacting substances are subjected to preliminary reaction, an NAD(P)H consuming enzymatic reaction is carried out simultaneously with the preliminary reaction so that the NAD(P)H form formed is oxidised completely to NAD(P).

The preliminary enzymatic reaction is terminated at the start of the measuring reaction, pref. by adding an inhibitor or removing the second substrate. Novel reagents for the process contain the NAD(P)H oxidising system and a terminator.

The process can be used in clinical, pharmaceutical, biochemical and food applications, for determining substrates or enzymes in serum, body fluids or other samples. Interfering intermediates, foreign substrates, etc. are eliminated without a lag-phase in the determn. 8.8.78 as 834705 (12pp941)

BEHW **D16** **07676C/05** **★DT 2829-741**
Hepatitis A virus recovery from monkey stools - for use in diagnosis, and vaccine and antibody prodn.

BEHRINGWERKE AG 06.07.78-DT-829741

B04 (24.01.80) A61k-39/12 C12k-01/04 C12k-07

Recovery of hepatitis A virus (HAV) comprises infecting monkeys (pref. of the Callithricidae family, esp. Callithrix jacchus) with HAV and recovering the HAV from the stools of the monkeys. The monkeys are pref. treated with immunosuppressants.

The isolated HAV is used as diagnostic reagent for detecting anti-HAV antibodies in patients with hepatic disorders, in the prodn. of vaccines and for recovery of hepatitis A antibodies against HAV. Sufficient HAV for 5,000 tests can be recovered from the stools of a single monkey. The process does not require operations, as in the prior art recovery of HAV from the liver of infected monkeys. 6.7.78 as 829741. (6pp941)

BLN/ **D16** **07687C/05** **★DT 2830-126**
Chemical and biochemical reactor - with first loop and second tube characteristic sections

BLNKE H 08.07.78-DT-830126

A13 J04 (24.01.80) B01j-01 B01j-10 C12b-01

Process for reactions in the liq. phase and in gas/liq. systems takes place in a first section when the reactor has a loop characteristic of adjustable recirculation and with large heat transmission surfaces. The second reaction section takes place in the directly following reactor part

which has a tube characteristic.

In the case of styrene polymerisation, good mixing in the loop part is followed by low reaction rate without back mixing in the tube part, resulting in a uniform high-polymer prod. A gas-liq. system for the prodn. of biomass (single cell protein), it combines the recirculation of the liq. phase in the loop part with the better recirculation of the gas in the tube part. 8.7.78 as 830126. (29pp39)

KERJ **D16** **07700C/05** **★DT 2830-327**
Alcohol oxidase prepn. by Hansenula polymorpha yeast fermentation - in methanol-contg. nutrient soln. admixed with nutrient soln. contg. glycerol, sorbitol or xylose

KERNFORSCHUNGS JULICH 10.07.78-DT-830327

E17 (24.01.80) C07g-07/03 C12d-13/10

In microbial alcohol oxidase prepn. by growing opt. MeOH-utilising Hansenula polymorpha yeast in a nutrient soln.(A), contg. inorganic nutrients, vitamins and MeOH as C- and energy source, further nutrient soln.(B), contg. as C- and energy source, 0.1-1% of ≥ 1 substrate having no catabolic repressing activity on alcohol oxidase, e.g. glycerol, sorbitol or xylose, is added continuously at a flow rate of 0.03-0.15 hr⁻¹.

Alcohol oxidase catalyses MeOH oxidn. to HCHO and H_2O_2 and can be used in the analytical determination of MeOH, EtOH, n-C₃H₇OH and n-BuOH. Alcohol oxidase yield is increased, e.g. to 26 units/mg. protein, and the cells obtd. have a higher alcohol oxidase activity. 10.7.78 as 830327. (9pp200)

PILL/ **D16** **07772C/05** **★DT 2849-290**
Domestic brewing appliance - with safety valve on top and dispensing valve in bottom of conical vessel

PILLA D P 10.07.78-CA-307100

(24.01.80) C12c-11

An appliance for the home-brewing of beet etc., consists of a conical vessel with a tight inlet screw cap and a tight outlet tap. The top includes a safety valve which opens at an adjustable internal pressure. Pref. the vessel is made of transparent plastic.

This creates a simple appliance of adequate capacity for domestic consumption. All fermentation stages are carried out in the same vessel and it also is used to store the finished beverage and to dispense it. 14.11.78 as 849290. (18pp39)

TECH- **D16** **07871C/05** **★FR 2422-602**
Pretreating strongly organic effluent from wine prodn. etc. - with daytime intermittent peak loads smoothed for steady overnight discharge

SOC GEN TECHN NOUV 11.04.78-FR-010605

(14.12.79) C02c-05/10

The plant has an intake screen leading to a storage tank from which liq. is recycled continuously through a percolating filter. The storage tank now has a capacity equal to ≥ 1 day's output of effluent, pref. to 2-7 days output. Recycling through a biofilter is continuous at constant rate. Discharge from the plant is regulated to follow a 24 hour cycle, e.g. by automatic programmer. Discharge of pretreated effluent pref. takes place at constant flow rate during night-time hours.

The biofilter pref. offers a percolating surface of ≥ 100 m² per m³ per day of effluent to be treated. The biofilter is pref. a plastics-packed percolative tower with a voidage $> 90\%$. 11.4.78 as 010605 (8pp448)

CHAU- **D16** **07878C/05** **★FR 2422-716**
Tartaric acid recovery from wine distillation residual liquors - by addn. of mixt. of calcium mono-sulphate and calcium carbonate

CHAUX DE PROVENCE 11.01.78-FR-001292

E17 (14.12.79) C12f-03/06

Compsn. for use in recovery of tartaric acid from residual liquors from wine distillation comprises a mixt. of calcium monosulphate and carbonate. Pref. 60% of monosulphate and 40% of carbonate are used. The monosulphate is pref. the residue from HF prodn. by degradation of spar with H_2SO_4 . The carbonate is pref. pure limestone. The recovery is of low cost. 11.1.78 as 001292 (4pp903)

DIAB/ ★ D16 07884C/05 ★FR 2422-907
Heater for recirculating liq. esp. fermenting must - comprises small calorifier with thermostatically controlled electric immersion heater
DIAVORINY B J 12.04.78-FR-011010
Q34 Q74 (14.12.79) B65d-87/38 C12g-01/02 C12l-11 F24h-01
The calorifier pref. uses an electric immersion heater controlled by a thermostat. The calorifier has an inlet and an outlet leading to the inlet of a pump.
The installation is used in the prodn. of wine, partic. to warm up must in a fermenting vessel when the ambient temp. is too low for satisfactory fermentation. It can serve also for spraying must back onto the head of the vessel.
2.4.78 as 011010 (8pp448)

JYAL- D16 13830A/07 =GB 1559-951
Maltase prepn. which can hydrolyse maltotetraose slowly - useful in amylase assays
UNIV OF ALABAMA 16.11.76-US-742240
B04 + R16 (30.01.80) *US4071-407 C12n-09/24
Maltase enzyme is prepd. by growing *Saccharomyces* ATCC 20488 yeast cells in a culture medium contg. ≥ 1 of maltose, maltotriose or malt extract derived from a plant source, releasing the enzyme from the yeast cells and recovering the enzyme. The medium has no glucose content or a glucose content up to 12% and a total maltose plus maltotriose content of 40-90%, based on total carbohydrate content.

Pref. the enzyme is free of nucleic acids, α - and β -amylase, ethanol, ethyl acetate, salts, peptides, alcohol dehydrogenase, aldehyde dehydrogenase, hexokinase, glucose-6-phosphate dehydrogenase, proteases, reduced nicotinamide adenine dinucleotide oxidase and other proteins.
The enzyme is used in amylase assay procedures.
1.10.77 as 041256. (10pp982)

GENE D16 32422A/18 =GB 1560-021
Biological lignocellulose decomposition - by impregnating with mineral nutrient soln., and cultivating inoculated *Chrysosporium pruinosum* (NL 24.4.78)

GENERAL ELECTRIC CO 20.10.76-US-734325
C03 F09 (D13) (30.01.80) *DT2746-872 C12n-01/22
Lignocellulose is degraded by first inoculating with *Chrysosporium pruinosum* (I) a substrate composed of lignocellulose dampened with nutrient mineral soln. at pH 4-5, the substrate comprising 10-80wt.% of lignocellulosic solids (II) based on total amt. of (II) and the soln. The inoculated substrate is maintained at 20-45°C to grow (I) which produces enzymes that degrade the lignocellulose. The mould is allowed to grow until a significant amt. of the lignocellulose is degraded.

Method is applicable to e.g., wood, manure fibre, paper, straw or agricultural waste. The obtd. lignin-depleted material can be used as cellulose- or sugar-rich animal feed or fermentation substrate. 22.8.77 as 035155. (7pp)

GENE D16 32423A/18 =GB 1560-022
Biological lignocellulose decomposition - by impregnating with nutrient soln., inoculating with *Chrysosporium pruinosum*, incubating and heating (NL 24.4.78)

GENERAL ELECTRIC CO 20.10.76-US-734324
C03 F09 (D13) (30.01.80) *DT2746-873 + C12n-01/22
Lignocellulose is degraded by first inoculating with *Chrysosporium pruinosum* (I) a substrate composed of lignocellulose dampened with nutrient mineral soln. at pH 4-5, the substrate comprising 10-80wt.% of lignocellulosic solids (II) based on total amt. of (II) and the soln. The inoculated substrate is maintained at 20-45°C to grow (I) which produces enzymes that degrade the lignocellulose. The temp. is then raised to 50-70°C, at which temp. (I) stops growing but degradation of the lignocellulose continues.

Method is applicable to e.g. wood, manure fibre, paper, straw or agricultural waste. The obtd. lignin-depleted material can be used as a cellulose- or sugar-rich animal feed or fermentation substrate. 22.8.77 as 035156. (9pp)

VME- D16 88285Y/50 =GB 1560-054
Distribution technique for determination of germs in milk - using nutritious medium, Petri box and Burri ring
SVENSKA MEJER RIKSF 11.08.76-SW-008954
R16 (30.01.80) *BE-857-642 + C12m-01/22
In pour plating a sample is washed from an inoculating loop

into a petri dish by the culture medium to be used in the dish. The loop is cleaned in steam or hot sterile water before the medium solidifies.

The appts. has the loop mounted on one part which passes through three stations. At the first a sample is received, at the second culture medium washes the sample into an advancing dish, and at the third the loop is cleaned.

Culture for bacterial counts of milk can be rapidly and safely prepd. 4.8.77 as 032764. (5pp1376)

PHIP D16 44073A/25 #GB 1560-060
Single cell protein prodn. from mixed thermophilic culture - contg. three symbiotic bacteria, esp. for conversion of methanol

PHILLIPS PETROLEUM CO 21.06.76-US-698251 (30.11.77-GB-049917)
C03 (D13) (30.01.80) *BE-861-934 C12n-01 C12r-01/07

Prodn. of single cell protein comprises aerobically culturing thermophilic bacteria (I) in an aq. medium contg. ≥ 1 oxygenated hydrocarbon (II) area source of assimilable C, a N source and necessary mineral salts and other growth factors, at 45-60°C. As (I) there is used a bacterial mixt. having the characteristics of NRRL B-8158, consisting of 3 separate species of bacteria.

Specifically, (II) is ≥ 1 water-soluble alcohol, ketone, ester, ether, acid or aldehyde contg. ≤ 10 C, e.g. methanol. Prod. is useful as a protein source for human consumption or in animal feeds. 30.11.77 as 049917. (11pp)

MERI D16 60477A/34 =GB 1560-185
Syncytial respiratory virus vaccine prepn. - by attenuation in human diploid pulmonary fibroblasts

MERCK & CO INC 17.08.77-US-825520 (09.02.77-US-766995)
B04 (30.01.80) *BE-863-676 A61k-39/12

Prepn. of attenuated respiratory syncytial virus comprises serially passing a respiratory syncytial virus in a culture of human diploid lung fibroblasts at an incubation temp. 30-38°C for 3-30 (pref. 4-15) serial passages, and harvesting the resulting virus. The virus retains its antigenicity and immunogenicity.

The fibroblasts are pref. WI-38 fibroblasts. The virus is pref. obtd. in frozen or lyophilised form together with a stabiliser such as gelatin and/or sorbitol.

The attenuated virus is administered parenterally.
6.2.78 as 004692. (3pp977)

NEST D16 70242B/39 =GB 1560-208
Stable plasmid- contg. *Lactobacillus* species culture prodn. - in culture medium contg. acetyl glucosamine as main carbon source

SOC PROD NESTLE SA 16.03.78-CH-002861
(D13) (30.01.80) *DT2907-721 A23c-09/12 C12n-01/20 + C12n-15

A stable culture of a microorganism of the genus *Lactobacillus* is prepd. contg. ≥ 1 extrachromosomal genetic element able to stimulate lactic acid prodn. from lactose whilst controlling N-acetyl D-glucosamine metabolism.

The microorganism is cultivated in a nutrient medium contg. N-acetyl D-glucosamine as the principal source of assimilable carbon. Pref. the microorganism is *L. helveticus* of the sub-species *jugurti*.

The culture prepd. is esp. used in the mfr. of milk-based prods. such as cheeses and yoghurts, whose lactic acid prodn. capacity does not diminish with time.
30.5.78 as 023794. (3pp931)

EAST D16 42201A/24 =GB 1560-246
Compsn. for analysing lactate in blood - contg. lactate oxidase pref. derived from *Streptococcus faecalis*, and a hydrogen peroxide detecting system

EASTMAN KODAK CO 10.12.76-US-749546
B04 J04 R16 + P31 (30.01.80) *BE-861-713 G01n-21/29 + C12n-09/04 C12q-01

Detecting or assaying of lactic acid (or lactates) in aq. liq. samples comprises treating sample with catalase-free (i.e. non-detectable) lactate oxidase (I) comps. which can cause prodn. of detectable H_2O_2 . Pref. (I) has specific activity of $\geq 0.1 \mu$ mole lactate per min. per mg. of protein. Pref. (I) has K_M value for lactate of ≥ 0.2 mM. (I) comps. pref. includes a substance (II) having peroxidative activity and a material undergoing detectable change in presence of H_2O_2 and (II). (I) is pref. obtd. from *Streptococcus faecalis* ATCC 12755.

Method is useful indicator in assessing severity of blood circulatory failure and in distinguishing between pancreatic diabetes and other disorders exhibiting decreased glucose tolerance. 9.12.77 as 051401. (12pp963)

KYOW ★ D16 07978C/05 ★GB 2025-979
Glycerol oxidase - used for quantitative determination of glycerol, e.g. in serum tri:glyceride level measurement
KYOW HAKKO KOGYO CO 21.07.78-JA-088261
B04 R16 (30.01.80) C12n-09/04 C12q-01 G01n-33/52

An oxidising enzyme of glycerol, glycerol oxidase (II, having the following properties, is new: (1) activity: oxidises glycerol in the presence of O_2 to form H_2O_2 and glyceraldehyde; (2) substrate specificity: a specific activity for glycerol and dihydroxyacetone; (3) optimum pH: 7.8-8.6; (4) stable pH: 7.5-10.0; (5) optimum temp. for action: $37^\circ C$; and (6) Michaelis constant against glycerol (K_m value): $8.0 \times 10^{-3} M$.

Quantitative determination of glycerol comprises enzymically oxidising the glycerol using the above enzyme in the presence of O_2 , and measuring the quantity of O_2 consumed, or the amt. of H_2O_2 produced, or the amt. of glyceraldehyde produced.

The enzyme is heat-resistant and has low K_m value, and it directly oxidises glycerol to form H_2O_2 stoichiometrically. The obtd. H_2O_2 or glyceraldehyde can easily be converted to a colouring system and the glycerol determination effected colourimetrically. The determination can be used in biochemistry, e.g. to measure triglyceride levels in serum (by hydrolysing the triglyceride to form glycerol and fatty acid, followed by measuring the glycerol as above). 19.7.79 as 025258. (16pp914)

MERE ★ D16 07991C/05 ★GB 2026-015
Compsn. for staining cell smears in a single step - comprises haematein, tri:phenyl-methane dye and fluorescein dye
MERCK PATENT GMBH 24.07.78-DT-832491
B04 R16 (30.01.80) C09b-67/42 G01n-01/28

The comps. is useful for staining cell smears in a simple and single step by mordanting the smears with a metal salt soln. and then contacting with the comps.

The images obtd. correspond to the Papanicolaou strains both in respect of the fine structure and colour character. 23.7.79 as 025561. (4pp957)

SPEC= ★ D16 07999C/05 ★GB 2026-028
Bacterially produced dietary supplement for humans and animals - obtd. by fermentation of nutrient medium using bacterial leaven of thermophilic and mesophilic bacteria
SPEC DES-CONS BUR 13.07.78-SU-631404
C03 (D13) (30.01.80) C12p-39

A dietary supplement comprises a prod. having a total protein content of 6-26%, a pH of 3.2-3.8, and a Turner acidity of 600-900°, and is obtd. by fermenting a nutrient medium contg. sources of C, N, mineral salts and biologically active cpds. using a bacterial leaver of thermophilic bacteria of the genus *Lactobacterium* or *Streptobacterium*, and mesophilic bacteria of the genus *Streptococcus*, *Azotobacterium*, *Shermanni*, *Bacterium acidipropionicum*, *E. Coli* or *Pseudomonas*, produced by long-term symbiosis and adaptation of the bacteria to a medium contg. above ingredients, and then sepg. the culture liq.

The prod. can be used in either liq. state or as a paste or dry powder tablets as a dietary supplement for humans or animals. 13.7.79 as 024507. (6pp957)

MOCH= ★ D16 C/05 ★IT 1035-502
Champagne-like drink prodn. and appts.
MOSC CHAMPAGNE WINE 12.09.66-IT-020940
(20.10.79) C12g

NIRA ★ D16 08034C/05 ★J5 4157-816
Fixing physiologically active substance to polymer substrate - involve initially introducing amino gps. onto the substrate surface
UNITIKA KK 27.05.78-JA-063660
B04 (13.12.79) A61k-09

Fixing of a physiologically active substance onto a solid surface comprises reacting the surface of a solid high polymer having hydroxyl substits. with a reagent having ≥ 2 OH-reactive functional gps. and an amino gp.; reacting the functional gps. thus introduced onto the surface with a

polyamine to form an amino gp. on the solid surface and then bonding the thus formed amino gp. with a physiologically active substance.

A large quantity of a physiologically active substance can be fixed on a solid surface. In partic. when urokinase is fixed an excellent antithrombosis activity can be obtd. Where the prod. is used as a carrier for chemical reactions or in sepn. purificn. or analyses, the appts. required can be small-sized, and the reactions or analyses can be performed rapidly. 27.5.78 as 063660 (4pp140)

SAPB ★ D16 08060C/05 ★J5 4157-890
Prepn. of microbial body contg. calcium, iron, iodine and/or cobalt - by culturing edible microbe in medium contg. water soluble cpds. of the elements
SAPPORO BREWERIES 29.05.78-JA-063386
C03 (D13) (13.12.79) C12b-01 C12b-03/02 C12c-11/16 C12k-01 C12k-03

Prepn. of microbial body contg. large amt. of Ca, Fe, I and/or Co is effected by culturing the edible microbe which can absorb the element(s) in the culture medium contg. water soluble cpds. of Ca, Fe, I or Co.

Microbial body contg. large amt. of various useful elements, can be prepd. and used as the enriching substance for food, feed, etc. Pref. water soluble cpds. are Ca gluconate, lactate or acetate, Fe (II) citrate, gluconate, fumarate or ferrous lactate, K iodide, iodine, K iodate or Co chloride, sulphate or nitrate. 29.5.78 as 063386 (6pp5)

ELED ★ D16 08061C/05 ★J5 4157-892
Fixing enzyme to granular gelatin - by reaction with water soluble polyfunctional reagent e.g. glutaraldehyde or polyacrolein:di:aldehyde
DENKI KAGAKU KOGYO CO 30.05.78-JA-064619
A97 (13.12.79) C07g-07/02 C12d-13/10

The method comprises reacting the enzyme which can not decompose protein, and water soluble polyfunctional reagent with granular gelatin in aq. medium. The enzyme is fixed on the surface of granular gelatin through the water soluble polyfunctional reagent. The prod. has sufficient strength, high enzymic density and high catalytic activity and can be used widely in enzymic reactions using fixed bed.

Pref. the granular gelatin has 0.1-2 esp. 0.2-1 mm and it is desirable to swell it previously with < 2 times the amt. of water. The fixation is effected at $10-30^\circ C$. As polyfunctional reagent glutaraldehyde, polyacrolein, dialdehyde starch, cyanogen bromide, etc. can be used. Usually enzyme and granular gelatin are used with the wt. proportion 1-2-100 pref. 1:5-20 and enzyme and polyfunctional reagent are used with the weight proportion 1:0.01-2 pref. 1:0.05-1. The enzyme is e.g. glucoamylase, glucoseisomerase, α -amylase, β -amylase, invertase, glucoseoxidase, catalase, etc. 30.5.78 as 064619 (5pp5)

CALP- ★ D16 08062C/05 ★J5 4157-894
3-Alpha-hydroxy-steroid dehydrogenase - useful in analysis of bile acid in body fluid or excreta

CALPIS SHOKUHIN KOG 16.05.78-JA-057124
B04 (B01) (13.12.79) C12d-13/10
3 α -Hydroxysteroid dehydrogenase (I) which has optimum pH 10.0-10.5 and optimum temp. of $30-40^\circ C$ is new. Stability of (I) can be increased by the existance of glycerin, DMCO, Co^{2+} , Mg^{2+} , or Ca^{2+} without need of mercaptoethanol as a stabilising substance, (I) dehydrogenates the 3 α -positioned hydroxyl gp. of steroids to form 3-ketosteroids.

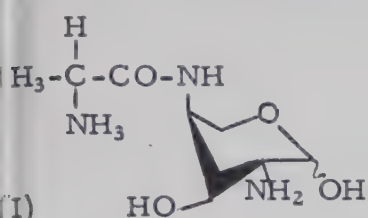
(I) is prepd. by cultivating a microorganism belonging to genus *Bacillus* (e.g. *Bacillus sphaericus* C-1163, FERM -P No. 4483) and recovering (I) from the culture.

Prepn. (I) contg. liquid comprises heating the enzyme contg. liquid obtd. during purification of the culture in the presence of a stabiliser.

(I) is useful as reagent in trace analysis of bile acid in the body fluid or the excretion. (I) has good thermal stability. 16.5.78 as 057124 (12pp14)

JIN ★ D16 08063C/05 ★ J5 4157-896
antibiotic 4-N-D-alanyl-2,4-di:amino-2,4 di:de:oxy:arabinose
repn. - by culturing pref. *Bacillus cereus* AJ 11252 FERM-P 4512
AJINOMOTO KK 01.06.78-JA-066180
B03 C02 (13.12.79) C12d-09/20

Title cpd. of formula (I): is prepd. by culturing (I)-producing microorganisms belonging to the *Bacillus* genus, and recovering (I) from the culture. (I) is effective to grey mould and sclerotinia rot in plants.



Cultivation is at 20-40, pref. 27-33°C and pH 6-8.5, aerobically for 2-4 days. (I) can be accumulated in the culture liq. in an amt. of 200-1,000 mg/litre. (I) can be recovered from the culture liq. using activated carbon absorption, ion exchange resin, gel filtration, etc. 1.6.78 as 066180 (3pp108)

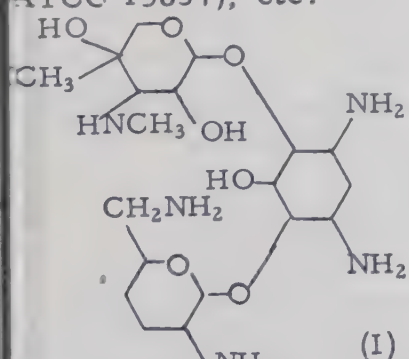
OXN ★ D16 08367C/05 ★ J5 4160-301
antibiotic aculeacin A-gamma - prepd. by culturing *Aspergillus* strain

TOYO JOZO KK 19.04.78-JA-046079
B04 (19.12.79) A61k-39 C07g-11 C12d-09/04 C12d-13/06
New antibiotic aculeacin A γ has specified properties including (a) elementary analysis: C: 54.70%, H: 8.23%, N: 10.51%; (b) mol. wt. Rast's method: 1021; Amino Acid Analysis: (860)_n (3.0 μ Mol of threonine is detected from hydrolysate of 2.6 mg of aculeacin A); (c) m. pt. 172-175°C; (d) specific rotation $[\alpha]_D^{25} = -47.4^\circ$ (c = 0.18, methanol); colour reactions positive in Fäilly's reaction, Folin's reaction, periodic acid-benzidine reaction and K permanganate decolouration reaction; false positive in Molisch reaction, biuret reaction, xanthoproteic reaction and Tollens reaction; negative in ninhydrin reaction Benedict reaction, Sakaguichi reaction, Ehrlich's reaction, FeCl₃ reaction, Dragendorff reaction and 2,4-dinitrophenylhydrazine reaction; and (f) solubility: soluble in lower alcohols; slightly soluble in ethyl acetate, sparingly soluble in acetone, chloroform, n-hexane, petroleum ether and water.

Antibiotic is prepd. e.g. by cultivating aculeacin A γ -producing strain belonging to genus *Aspergillus* (e.g. *Aspergillus aculeatus* M 4845, FERM-P No. 4023) and recovering aculeacin A γ from the culture. 19.4.78 as 046079 (9pp140)

YOW ★ D16 08550C/05 ★ J5 4160-795
antibiotic Gentamycin C-1A prepn. - by conversion of Sisomycin in presence of *Micromonospora* microorganism

KYOWA HAKKO KOGYO KK 09.06.78-JA-069484
B03 (19.12.79) C12d-09/14
Prepn. of Gentamycin C_{1a} of formula (I) comprises converting Sisomycin into Gentamycin C_{1a} in the presence of microorganism of *Micromonospora* genus which converts Sisomycin into Gentamycin C_{1a} or its treated substance. e.g. *Micromonospora sagamiensis* FERM-P 3575 (NRRL 11006), *Micromonospora sagamiensis* FERM-P 1477 (ATCC 21803), *Micromonospora purplea* NRRL 2953 (ATCC 15835), *Micromonospora equinospira* NRRL 2985 (ATCC 15837), etc.



(I) has a broad spectrum and strong antibacterial action to Gram-positive and Gram-negative bacteria.

1.6.78 as 069484 (6pp69)

OGO/ ★ D16 08573C/05 ★ J8 0000-004
cultivating mushrooms - in culture medium contg. decayed cane cake with max. carbon-nitrogen ratio of 20

TOGO Y 12.05.76-JA-053252
P13 (05.01.80) A01g-01/04

Method comprises culturing mushrooms in a culture medium contg. decayed cane cake which is obtd. by allowing cane cake (I) to decay to C/N ratio of ≤ 20 . Decayed cane cake contains a variety of nourishing substances, accelerating growth of mushrooms and giving high yield. (I) is a wet cake of non-sugar substance obtd. in the mfr. of cane sugar by liming sugar juice and filtering the ppte. 12.5.76 as 053252 A01g-1/04 (5.1.80) TOGO Y. FURUKAWA T. (4pp83) (J52136747)

KAPA D16 41979Y/24 = J8 0000-040
Immobilising enzymes or microbial cells - in photohardening resin contg. photopolymerisable ethylenically unsatd. gps. and ionic hydrophilic gps.

KANSAI PAINT KK 26.11.75-JA-140840
A97 B04 (05.01.80) *DT2629-693 + C12n-11/04
Process comprises an aq. dispersion of enzymes or microbial cells is mixed with a photo-hardening resin, having av. no. mol. wt. 300-30000 (500-20000). Resin contains ≥ 2 photo-polymerisable, ethylenically unsatd. gps./molecule as well as ionic hydrophilic gps. The mixts. is then irradiated with actinic radiation, pref. having wave-length 2500-6000 Å.

Prods. can be used safely in food and pharmaceutical industry. In use, prods. have ion exchange activity is stable. Enclosed enzymes or cells are retained well in matrix, use of actinic rays preventing degradation or cell activity during hardening. Prods. are free from monomers Shaping and casting present no difficulties.

In an example, urease was immobilised in resin having no. mol. wt. 20000, prepd. from 300 parts Et acrylate, 100 pts. methacrylic acid, 80 parts styrene, 20 parts P monoester of methacrylic acid and 50 parts glycidyl methacrylate. 26.11.75 as 140840 C12n-11/04 (5.1.80) KANSAI PAINT KK (5pp) (J5 2066682)

KURE D16 24864S/14 = J8 0000-363
Polysaccharide anti cancer agent

KUREHA CHEM IND KK 15.10.69-JA-081813
B04 (08.01.80) *BE-757-248 C12p-19/04 + A61k-37 A61k-39
Prodn. of muco-polysaccharide KM-77 substance of anti-cancer effect, comprises isolating KM-77 substance consisting of muco-polysaccharide, wherein all of triptophane-H₂SO₄ reaction, anthrone-H₂SO₄ reaction, Mohlisch's reaction, ninhydrin reaction and biuret reaction are positive, from cultured broth of KM-77 substance producible microorganism, belonging to specified genus.

KM-77 substance is useful as anti-tumour drug. Advantage is that large quantity of KM-77 substance of anti-cancer effect may be isolated from cultured broth, other than mycelium of the microorganism. 15.10.69 as 081813 A61k-37/00, 39/00, C12p-19/04 KIRENA CHEM IND KK (14pp68)

KIER/ ★ D16 08609C/05 ★ NL 7905-088
Conc. fruit flavoured alcoholic drink - prepd. from wine with addn. of alcohol or brandy, etc., sweetener and fruit flavouring

KIERTS 03.07.78-GB-028589
(07.01.80) C12g-03/06
Stimulating drink comprises a mixt. of (a) wine, (b) ethanol, brandy, rum or other strong alcoholic drink, (c) a sweetener, (d) fruit flavouring such as fruit juice, fruit oil or other fruit and (e) opt. other flavourings such as spices, spice extracts and synthetic flavourings such as brandy essence or rum essence. The alcohol content of the drink is ≥ 75 (esp. ≥ 100)% above the $\sim 12\%$ alcohol content of known wines.

The drinks have an enhanced fruit flavour and a consistency between that of wine and that of a liqueur. The drinks can be diluted to taste with water or soda water, thus allowing a wide variety of drinks to be made. On dilution with tap water to 12% alcohol content, a drink is produced with the same alcohol content as normal wine, but in which the reduction in taste of the original (red) wine base is masked by the fruit flavour present. On dilution with soda water, effervescent drinks which do not taste watery can be made. 29.6.79 as 005088 (9pp513).

IMMU- ★ D16 C/05 ★ OE 7809-220
Early summer meningoencephalitis virus vaccine
IMMUNO AG 22.12.78-OE-009220
B04 (15.01.80) A61k-39/12 C12n-07/02

MICR= ★ D16 08623C/05 ★ SU -328-749
Entomopathogenic microorganisms culture medium - contg. corn extract and polysaccharide e.g. starch base, useful in biological plant protection

MICROBIOL PLANT PRO 05.01.70-SU-393376
(15.09.79) C12d-07 C12k-01/06

Nutrient medium, contg. corn extract, carbon and nitrogen source cpds. and mineral salts, is used in growing entomopathogenic microbial biomass for control of insects which damage plants in agriculture, forestry etc.

The nutrient produces highly active microbial spores by the addn. of polysaccharide. The latter can be added to the nutrient in a pure form or as a component of the mixt. contg. other nutrients, (e.g., corn flour, starch contg. waste etc.).

Corn extract and polysaccharide based microbiological nutrient increased the yield of biomass and the concentration of microbial endotoxins. The biomass prodn. cost is reduced, owing to the low cost nutrients.

Faibich, M.M., Vasileva, E.V., Moronaya, V.P. et al
Bul. 34/15.9.79. 5.1.70. as 393376 (2pp938)

GSAM= ★ D16 08657C/05 ★ SU -639-933
Crude wine alcohol extractor - has sections connected to fractionation column by separate pipes with distillation residue transfer holes controlled by discs

GEORG SAMTREST IND 25.07.77-SU-510517
(30.12.78) C12f-01/02 C12g-03/12

Metered feed of lees and yeast residue into the section of the low-wines forming unit, and reduced losses of the final prod. are achieved with perforated discs carried on the shaft. The perforations form a channel for the product and features tubes, while each section is connected to the alcohol vapour discharge tubes of the fractionation column via a header. The first three sections have additional pipes for reflux from the dephlegmator.

The lees and residues are fed to the top section with the disc covering the discharge tube, and when the fill is completed, the float valve stops the inlet. With all sections loaded, the level sensing unit stops the pump, and the transfer takes place when the opening of the rotated disc is aligned with the discharge. The sections ensure the evaporation of alcohol with vapour diverted to the fractionation column, while the enriched vapour of alcohol is fed to the cooler.

Vasben, V.Z., Kurdadze, A.D. Bul. 48/30.12.78.
25.7.77. as 510517 (3pp89)

GSAM= ★ D16 08732C/05 ★ SU -662-581
Unit for must sulphitation in wine-making - includes a refractometric transducer for determining sugar content and proportional metering of sulphur dioxide

GEOR SAMTREST (INPR=) 13.04.77-SU-477272
(25.05.79) C12g-01/02

Precise metering of SO₂ for treating the wine material is controlled by the refractometric transducer and display instrument the shaft of which carries a contact roller. The end of the disc has plates corresp. to the given sugar content in the must, and the line feeding SO₂ to the tank has servo valves connected to the plates via delay lines.

The freshly-pressed must is fed to the tank, and when its level reaches a set limit, the transducer provides a signal to the relay and the valve stops the inflow. At the same time, the solenoid valve opens up the flow of must to the cuvette of refractometric transducer for measuring the sugar content and the signal is transmitted for recording. A delayed signal is fed to the solenoid valve for metering the SO₂ in accordance with the sugar level in the must.

Vasben, V.Z., Kurdadze, A.D., and Sagareishvili, S.B.
Bul. 18/15.5.79. 13.4.77. as 477272 (3pp89)

DAGE= ★ D16 08733C/05 ★ SU -662-582
Fruit juice extractor monitor - records and displays tilts of constant volumes vessel during filling, used in wine prodn.

DAGESTAN WINE 23.11.77-SU-547152
(25.05.79) C12g-01/02

The accuracy of controlling extn. in an auger press. is enhanced by evaluating the extrn. rate of liquid phase on the basis of flow changes in time when filling a vessel of constant volume. The juice is admitted to the left end of the vessel, and the limit switch turns on the relay closing the circuits of the counter.

The circuit transmits signals of the pulse generator to the counter while the signal lamp indicates the run of the filling. When the left end of the vessel is filled, it tilts over and trips another limit switch which disconnects the relay resulting in a single pulse fed to a second counter. At the same time, another lamp is illuminated, and the cycle is repeated

Portnov, Ya.L. Bul. 18/15.5.79. 23.11.77. as 547152
(2pp89)

CAUC= ★ D16 08734C/05 ★ SU -662-583
Prodn. of corn extract for use as microbial nutrient - includes specified evapn., repeated thermal treatment and phase sepn. to improve purity

CAUCASUS ANTI-PLAGU 06.10.77-SU-532790
(25.05.79) C12k-01/06

The purified corn extract, useful as microbiological nutrient base, is obtd. by evapn. of the crude corn extract at 100-110°C for 3-4 hrs. using 0.4-1.0 cm. thick extract layer, and the dilution of the resulting mass with water, followed by boiling. The resulting prod. is held to ppte. the impurities and the supernatant liquid is sepd. and then treated with an alkaline agent to pH 6.2-7.0 and then boiled again. The final prod. is sepd. by holding the resulting soln. in a refrigerator (e.g. for 48-72 hrs. at 4-8°C). The resulting clear supernatant liquid is sepd. and bottled.

The prod. purity and nutrient value are increased, and pathogenic microorganisms are destroyed.

Maiskii, V.G., Kutsemakina, A.Z. Bul. 18/15.5.79.
6.10.77. as 532790 (2pp938)

ASMI= ★ D16 08735C/05 ★ SU -662-584
Frozen microbial biomass disintegrating extruder - has pneumatic drive with piston rod carrying head of plunger, used in immunological laboratory etc.

AS USSR MICROORG (ASCH=) 23.12.77-SU-559897
(25.05.79) C12k-01/10

Maintenance of given parameters for disintegration of frozen biomass during the extrusion is ensured with a pneumatic chamber of the drive. The chamber houses a spring-loaded piston with rod carrying the holder of the plunger head. The unit features adjustment of compressed air flow rate into the chamber to match the temp. of the extruded biomass.

The adjusting mechanism comprises a solenoid valve connected to the compressed air pipe and to the pneumatic chamber. One input of the comparator is fed by the temperature setter while the other input is connected to the amplifier while the output controls the solenoid valve. The low inertia of the feedback prevents sudden breaks in the biomass flow, and increases the yield.

Alymov, A.V., Gurevich, G.A., Ushakov, V.M. et al.
Bul. 18/15.5.79. 23.12.77. as 559897 (3pp89)

BANE- D16 48402U/34 =SU -663-296
Biodegradable petroleum product emulsions - by addition of amino-acids phosphorus and oleophilic fatty acid

BANEXI BANQUE EXPAN (BAN-) 22.02.72-FR-005893
H04 + Q42 (15.05.79) *BE-795-309 C02b-09/02 C12b-03

A compsn. for forming biodegradable emulsions from petroleum prods. contains (a) a material which is rich in amino-acids and contains P, such as a vinasse, possibly enriched in amino-acids, and (b) ≥ 1 oleophilic fatty acid. The formation of a dispersion of the N and P components in a dilute emulsion, as with known compsns. is avoided. Even at extreme dilution, e.g. in a river or on the sea, the concns. of N and P components surrounding the hydrocarbons are sufficient to allow the growth of micro-

ganisms. Fuset, P. Bul. 18/15.5.79. 21.2.73. as 0152 (4pp)

HW- D16 09287X/06 =SU -663-329
 Determination of iso-enzymes of lactate dehydrogenase - by transformation of lactate and of nicotinamide adenine dinucleotide with pyruvate at specific pH values
 SCHWARZH KG 12.09.74-DT-443741
 B04 R16 + P31 (25.05.79) *BE-833-348 G01n-33/16
 Method is described for determination of the iso-enzymes of the lactate dehydrogenase (LDH), esp. enzymes 4 and either singly or mixed with each other or with other iso-enzymes. The lactate is transformed with nicotinamide-adenine-dinucleotide (NAD+) into the pyruvate at a specific pH value for a given buffer, esp. at pH values in the range 6 to 6.5. A diagnostic procedure is described also for the determination of pathological changes inside the female genital tract. Lamprecht, W. Bul. 18/15.5.79. 12.9.75. as 171403 (2pp)

DSU ★ D16 08868C/05 ★SU -663-404
 Fibrin monomer analytical biochemical prodn. - by treating fibrinogen soln. with iodo-acetic acid or its amide then with thrombin and urea soln.
 MOSCOW LOMONOSOV UNIV 30.12.76-SU-437992
 B04 (25.05.79) A61k-37/12
 Fibrin monomer, useful in analytical biochemistry physiology and pharmacology, is prepd. by treating fibrinogen soln. with thrombin followed by the sepn. of the resulting clot and its treatment with urea soln. The prod. is sepd. and freeze-dried.
 The yield of the final prod. is increased and the process is accelerated if the fibrinogen soln. prior to the sepn. of thrombin is pretreated with 0.001-0.05 mole/l. soln. of monoiodo-acetamide or monoiodo-acetic acid or epsilon-aminocaproic acid.
 Syapina, L.A., Ulyanov, A.M., Zhitnikova, E.S. Bul. 18/25.5.79. 30.12.76. as 437992 (2pp938)

LAN= ★ D16 08869C/05 ★SU -663-405
 Occidiodomycosis allergen prodn. - includes culturing pathogenic fungi in arthrospore phase on solid nutrient and prod. of antigen and purificn.
 VOLG ANTI-PLAGUE 02.07.76-SU-381070
 B04 C03 (25.05.79) A61k-39
 Microbiological prodn. of allergen for use in diagnosis of occidiodomycosis in man and animals includes culturing of occidiodomycosis immitis fungal strain and sepn. of the final prod. from nutrient medium.
 The specificity and the activity of the allergen are increased if the pathogenic imperfect fungi are cultured on dense culture medium (e.g. agar) in arthrospore phase. The final prod. is then extd. from the medium with aq. salt soln. and the extract is concd. by salting out and the concentrate dialysed and lyophilised, to give final prod. in a form of an amorphous powder.
 Klimova, I.M., Likholetov, S.M. Bul. 19/25.5.79. 1.7.76. as 381070 (2pp938)

WEIS- D16 44109B/24 =US 4184-269
 Organic garbage composting plant - with sectional aerators at tank bottom separately controlled by timing mechanisms
 GEBR WEISS KG 21.12.77-DT-757144
 +Q76 (22.01.80) *DS2757-144 +F26b-17/12
 Appts. for aerating and composting organic waste comprises a stationary cylinder with top inlet and bottom outlet, and an air counterflow from a base section divided into sectors. Compost is conveyed to the outlet from each sector so that moisture content from each sector can be checked and the amt. of air introduced into each sector regulated in accordance with moisture content.
 There is a common air supply for all air inlet ducts to sectors and a time switch for each duct to connect each in turn to the pipe. The ducts pref. extend radially outwardly from adjacent the cylinder vertical axis to adjust the side rail. 14.12.78 as 969686 (7pp1358)

USME- ★ D16 08969C/05 ★US 4184-483
 Culture collecting swab and culture medium - stored in separate chambers of test tube until required
 US MEDICAL RES & DE 25.03.77-US-781298 (08.05.73-US-358350)
 B04 P31 (22.01.80) A61b-10

A culture medium is retained within a test tube by a piston. This piston includes a chamber which can receive the tip of a swab inserted into the piston via an aperture in its proximal face but surrounded by resilient material to form a seal round the stem of the swab. When the swab is pressed fully into the piston it forces the piston downwards and causes culture medium to enter the piston chamber via valves located on its distal surface.

Pref. the proximal end of the swab is received within a cap by a controlled friction fitting. This permits the swab to be withdrawn from the piston chamber when required.

The appts. collects a sample on the swab and maintains its viability during transport by contacting it with a culture medium. 25.3.77 as 781298 C.i.p. 3890954, 4014746 (+23.6.75-US-589521) (16pp295)

MONS D16 68020B/37 =US 4184-916
 Apparatus for continuous cell culture - has filter mounted on rotating shaft supported in stationary sleeve
 MONSANTO CO 14.11.77-US-850987 (26.06.78-US-918898)
 (22.01.80) *US4166-768 +C12k-09

Mammalian cells are continuously cultured in an agitated suspension in culture liq. contg. amino acids, mineral salts, vitamins and carbohydrates with filtrate periodically removed. The appts. includes a flask with a top opening, a hollow shaft and a stationary sleeve within the flask.

The shaft is supported rotatably from the top and carries a filter unit at the lower end with no lower bearing or moving seals which could contact the cell suspension. The filter has a porous peripheral surface with pores smaller than cell size and its internal cavity is in communication with the shaft interior. The parent patent claims the appts. 26.6.78 as 918898 (7pp1358)

SANO D16 75219V/43 #US 4184-917
 Modified interferons with anti-viral activity - having prolonged half-lives in vivo
 SANDOZ AG 04.04.73-CH-004802 (01.04.74-US-456702)
 B04 (22.01.80) *NL7404-424 C12d-13/06

Prodn. of a structurally modified interferon comprises enzymatically splitting off the terminal galactose unit in asialointerferons by incubating with β -galactosidase, and recovering the modified interferon. Pref. the galactosidase is from *Concanavalia ensiformis*, *Phaseus vulgaris*, *Aspergillus niger*, *Clostridium perfringens* or esp. *Diplococcus pneumoniae*. The splitting off is pref. effected at pH 6.3-6.5.

The interferons are useful as antiviral agents and have longer half-lives than unmodified interferons. 19.9.77 as 834126 Div ex 4061538 (+1.4.74, 6.2.75-US-456702, 547782) (6pp997)

AJIN D16 84392A/47 =US 4184-918
 4-Formyl-2-amino-butyric acid prepn. by bacterial fermentation - using a *Brevibacterium* or *Corynebacterium* genus mutant under aerobic conditions, used as L tryptophan intermediate
 AJINOMOTO KK 02.05.77-JA-050930
 E16 (22.01.80) *DT2819-148 C12d-13/06

Prodn. of 4-formyl-2-amino-butyric acid (I) comprises culturing a mutant (II) of genus *Brevibacterium* or *Corynebacterium*. (II) pref. belongs to the species. *B. flavum*, *B. lactofermentum* or *C. glutamicum*. (II) is esp. *B. flavum* NRRLB-11,292, *B. lactofermentum* NRRLB-11,293, *B. flavum* NRRLB-11,295, or *C. glutamicum* NRRLB-11,294.

Culture medium pref. contains a reducing agent, medium is pref. adjusted to pH 4-10 and its temp. is pref. maintained at 20-40°C. Pref. (I) is recovered from the medium by absorption on a cation exchange resin, followed by elution with dilute aq. HCl.

Only the L-isomer of (I) is produced, useful as the starting material of L-tryptophan prodn. 28.4.78 as 901088 (3pp936)

SNOW D16 76176Y/43 = US 4184-919
Gelling microscopic cells having enzymatic activity - by mixing cell suspension with crosslinking reagent, freezing and thawing
SNOW BRAND MILK PRODUCTS (SNOW-) 31.03.76-JA-035249
J04 (22.01.80) *DT714-103 C07g-07/02

Enzyme-contg. microbial mycelia (I) are gelled by (a) forming a liq. suspension of (I); (b) adding crosslinking agent to the suspension; (c) freezing the suspension; and (d) thawing in an organic solvent or water to form a sponge-like gel.

Pref. (I) have a gelling capacity. Suspension is pref. prepd. by sepg. and collecting (I) from a culture medium and suspending in a buffer soln. Crosslinking agent pref. has bifunctional gps. and is esp. glutaraldehyde. Solvent is pref. acetone or (m)ethanol.

Gel may be used as a highly active enzyme prepn. Gelation immobilises the intracellular enzyme in (I). 29.3.78 as 8191217 (+23.2.77-US-780496)

KOCK-★ D16 09050C/05 ★US 4184-920
Stable, carrier adsorbed enzyme substrate compsns. - useful as time-temp. indicating device

KOCKUMS CHEMICAL AB 06.09.77-US-830957 (18.04.74-SW-005199)

B04 R16 (22.01.80) G01n-31/14

Compsn. capable of undergoing enzymatic reaction and indicating the formation of the prod. of the reaction consists of (a) a suspension of a carrier-substrate combination comprising (i) a solid, granular carrier of specific surface area 50 m²/g and (ii) a substrate (I)-contg. layer adsorbed on the carrier and prepd. by impregnation of the carrier with a non aq. (I) soln. followed by removal of solvent; (b) an enzyme for (I); and (c) an indicator to indicate the formation of the reaction prod.

(I) is an enzymatic substrate capable of undergoing an enzymatic reaction, has H₂O-solubility 0.1% by wt. at 20°, is stable and free from hydrolysis and dissolution in the absence of its specific enzyme, and is inert towards the carrier.

The simple, inexpensive compsn. contg. (I) adsorbed on the carrier is esp. useful for the standardisation and characterisation of enzymes, e.g. indicators in the time-temp. response indication of foodstuffs. 6.9.77 as 830957 Continuation of 4043871 (clg. 25.4.73, 18.7.74, 31.3.77-US-354412, 489667, 783509)(6pp478)

BOEF D16 74223Y/42 = US 4184-921
Enzymatic determination of cholesterol - with cholesterol oxidase, opt. cholesterol esterase and peroxidase, amino-phenol, surfactant and phenol with alkanol to prevent turbidity

BOEHRINGER MANNHEIM GMBH 25.03.76-DT-612725

B01 R16 (22.01.80) *DT2612-725 G01n-31/14

Determination of total cholesterol comprises saponifying any bound cholesterol in the sample by reaction with cholesterol esterase and determining free cholesterol utilising

cholesterol oxidase in the presence of peroxidase, p-quinol-phenazone, a surfactant and phenol.

At least one ≤ 4C alkanol is added to the test sample in an amt. to solubilise turbidity-causing complexes and then determining the formation of the resulting chromogen as a measure of the initial total cholesterol content.

Pref. 2-10 vol. % alkanol is added, referred to the total test sample. Use of alkanol minimises test error and deviations due to turbidity formation. 28.4.78 as 900958 (clg. 14.6.76-US-695332)(3pp936)

USGO ★ D16 09051C/05 ★US 4184-922
Cell culture in tube with two perfusion circuits - as interwoven ultrafiltration fibre bundles operated at different pressures

US GOVERNMENT 11.11.77-US-850810

(22.01.80) C12k-01/10 C12k-09

A cell culture unit includes a tube through which passes a bundle of capillary fibres. The fibres are interwoven in a predetermined sequence and the ends are interconnected so as to form two parallel yet isolated fibre bundles. Permeate is passed through each of these bundles but at different pressures. Cells may be seeded and retrieved from the extra capillary space e.g. by conduits connected to the tube.

The device provides a matrix or the high density growth of cultured cells in a continuous perfusion system. The unit can permit the observation of mass transfer of chemical species from one perfusion circuit into the other through the cell mass and induction of fluid filtration between perfusion circuits simulates lymphatic drainage of the cell mass.

The pressure difference between the two perfusion circuits produces convective currents in the extracapillary space and improves nutrient distribution. 11.11.77 as 850810 (7pp295)

GIVA D16 63478V/36 #US 4184-986
1,3-Phenylenediamine/glutaraldehyde condensation product - useful as substrate for immobilizing proteins, esp. enzymes

GIVAUDAN L & CIE SA 22.02.73-CH-002603 (19.09.75-US-605965)

A96 B04 (A21) (22.01.80) *DT2407-840 C12k-01 + C081-61/20

A protein bonded to the condensation prod. obtd. by reacting 1,3-phenylene diamine with glutandialdehyde, is claimed. The prod. comprises spherical, homogeneous particles capable of good filtration.

The proteins include e.g. polypeptides, antigens, antibodies, protein inhibitors and esp. enzymes. They remain highly biologically active and can be readily handled. The pref. ratio of aldehyde to diamine in the condensate is 3:1. 3.8.77 as 821663 (4pp997)

See Also

D13 BE 878568

D13 J5 4160787

D13 J8 0000023

D13 SU 581701

D13 US 4185091

D15 DL 137942

D15 DL 137943

D15 J5 4158055

D15 J5 4160059

D18 J5 4160800

D17: SUGAR; STARCH

BALC ★ D17 07659C/05 ★DT 2829-529
Sieves, esp. for used in continuous sugar centrifuges - made by electroforming of nickel covered by copper and then etching the copper with sodium chloride soln.

BALCO FILTERTECHNIK GMBH 05.07.78-DT-829529

M14 P75 (24.01.80) B41n-01/24 C25d-01/08

The sieves are made by electroforming, starting from an electrically conducting master or former which has both conducting and nonconducting zones on its surface. Electroforming is used to cover the conducting zones with a metal, followed by interrupting the process and then depositing another metal on metal to form a sieve with the desired thickness, but where some of the sieve slots have been closed by the sideways growth of metal during electrodeposition.

The sieve is next removed from the former, and is treated with a liq. etchant which dissolves metal but which does not attack metal. Etching is continued until the slots or holes in metal are opened to the required size. The etchant is pref. sprayed upwards through the holes in

metal onto metal.

Sieves contg. holes only 0.04-0.06 mm. wide can be made with smooth, tapered walls on the holes. 5.7.78 as 829529. (16pp1144)

GERL ★ D17 07721C/05 ★DT 2830-744
Pusher type centrifuge for dewatering sugar beet tops - with two coaxial revolving screens on common vertical shaft and horizontal top discharge for solids

GERLACH G 13.07.78-DT-830744

P41 (24.01.80) B04b-03/02 B04b-07/16 C13d-01

A multistage pusher-type of centrifuge, for use in dewatering sugar beet tops and fragments, has pref. two coaxially revolving screens, one of which can be moved axially relative to the other. Both screens revolve around a vertical axis. The feed is charged through a central funnel which is axially movable; the solids are discharged through a horizontal outlet above the outer screen drum.

This creates a power saving means of predrying the sugar beet tops which new laws forbid to be stored out-

doors; the dried material can now be sold as animal fodder. 13.7.78 as 830744. (18pp39)

See Also

D16 BE 878466

D18: SKINS; HIDES; LEATHER; TOBACCO

HENK ★ D18 07997C/05 ★GB 2026-026
Dressing fur skins - using water-insol. aluminosilicate as tanning agent

HENKEL KG AUF AKTIEN 21.07.78-DT-832089
E33 (30.01.80) C14c-03/04

Fur skins are dressed using an H_2O -insol., Al silicate of formula $(M_2/nO)_x \cdot Al_2O_3 \cdot (SiO_2)_y$ (I) as the tanning agent. (I) has Ca binding capacity 0-200 mg. of $CaO/g.$, and particle size 0.1 μ -5mm. In (I), M is alkali metal ion and/or a divalent and/or a trivalent cation; $n = 1-3$; $x = 0.5-1.8$; $y = 0.8-50$.

Use of (I) alone as tanning agent gives a degree of tanning sufficient for fur pelts, and much higher than that obtd. with basic Al tanning materials. A thin, light, soft leather skin is obtd., and the shrinkage temp. is 10-12° higher than that from conventional processes. Tanned skins are more resistant to toners and bleaching agents, and give better results in the dyeing process. In addn., (I) are non-toxic, unlike e.g. chrome tanning agents. 20.7.79 as 025456. (14pp478)

NISB ★ D18 08551C/05 ★J5 4160-800
Treating tobacco leaves and stems to give improved taste - using bacillus megaterium or subtilis

JAPAN TOBACCO & SALT PUB 09.06.78-JA-068779
P15 (D16) (19.12.79) A24b-15

Bacillus megaterium and/or subtilis is added to low quality tobacco leaves and/or stems, to improve the taste.

The moisture content of the tobacco is adjusted to 15-50 wt. % before the addition of the bacteria (I). The tobacco is aged for 1-10 days after (I) is added. (I) is incubated in a suitable culture medium at 30-45°C. Pref. 35-42°C and the mycelia are collected by centrifugation. They are suspended in phosphate buffer and stored at 1-5°C. The suspension is uniformly sprayed onto the surface of the tobacco at $10^6 - 10^9$, pref. $10^7 - 10^8$, (I) per g tobacco. After ageing, the tobacco is fried and used. 9.6.78 as 068779 (7pp42)

MOCH= ★ D18 08656C/05 ★SU -632-782
Abrasive and colourant rubber-based material - contg. butadiene-styrene and isoprene rubber mixt., vulcanising agents, filler, abrasive and pigment etc. used for restoring suede

MOSC CHEM IND RES 01.10.76-SU-408333

A82 (A12) (27.04.79) C081-09/06 C14c-03/14 D061-01

A polymeric compsn. (I) contains (pts. wt.): butadiene-styrene rubber 60-70, isoprene rubber 30-40, a S-based vulcanising system 2-3, softener 5-9, light coloured filler 55-60, abrasive 80-147 and colorant (e.g. a mixt. of C black and nigrosine) 40-147.

The components are mixed on rolls at 30-45°C. The prod. is vulcanised as 15 mm. sheet for 10 mins. in a press at 130-150°C.

It remains useful and elastic for 3 years on the surface of suede leather. It does not glaze or become greasy in use but wears away, exposing fresh abrasive. It loosens the pile of the suede and restores colour to whitish areas, without soiling the hands.

Dubov, O.E., Severinovskii, S.E., Gnedin, A.V. et al.
Bul. 42/15.11.78. 1.10.76. as 408333 (3pp1360)

PHIM D18 76208Y/43 =US 4184-495
Aromatised cellulose mfr., e.g. for cigarette filters - by impregnating cellulosic substrate with soln. contg. liquid ammonia and aromatising substance

PHILIP MORRIS INC 07.04.76-US-674613 (29.06.78-US-920631)

A88 P15 (A11) (22.01.80) *DT2715-469 A24d-01

Stable, flavoured unitary smoking article comprises a tubular paper wrapped enclosing a tobacco (substitute) filler. At least the tipping portion of the wrapper contains 0.2-2% of a volatile flavourant (based on dry wt. of wrapper) which is physically entrapped by and in contact with the wrapper

The flavourant is not released until the wrapper is contacted with either heat or moisture. The flavoured wrap-pings are produced by impregnating a dry cellulosic substrate with anhydrous ammonia soln. of a volatile flavourant, and then subjecting the impregnated substrate to temp and pressure conditions sufficient to evaporate the impregnated solvent. 29.6.78 as 920631 Div ex 4123592 (4pp924)

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

DOWO D21 80048A/44 =DS 2829-388
Emulsions of polar liq. in methyl-siloxane fluid - contg. polysiloxane-polyoxyalkylene copolymer and surfactant

DOW CORNING CORP 27.07.77-US-819210

A96 C03 (A26) (24.01.80) *US4122-029 A61k-07 C08j-03/02
C081-71/02 C081-83/04

Water-in-oil emulsion is made up from (a) 1-70 wt.% polar liq. as the disperse phase, (b) liq. methyl polysiloxane with an average unit formula $(CH_3)_n SiO(4-n)/2$ (I) (where n is 2.0-3), opt. with a liq. paraffinic hydrocarbon as a non-polar base liq. forming the continuous phase, the base liq. having a 25°C. viscosity of ≤ 100 millipascal-sec., (c) 0.5-3.0 wt.% organic surfactant of HLB-value 2-10, acting as a w/o tenside.

Further (d) 1-10 wt.% polydiorganosiloxane-polyoxyalkylene-copolymer with at least a polydiorganosiloxane segment made up of siloxane units $R_b SiO_4(4-b)/2$ (II) (where b is 0-3; R is (m)ethyl, vinyl, phenyl or divalent bridge; average of 2R residues per Si atom for all siloxane units; and $\geq 95\%$ R are methyl); the copolymer further contains a polyoxyalkylene segment with an average mol. wt. ≥ 1000

and 0-50 mol.% polyoxyethylene units; the polyoxyalkylene and polydiorganosiloxane units are mutually bonded, at least one terminal part of the polyoxyalkylene segment is bonded to the polydiorganosiloxane, the other unbonded terminal part being satd. by an end gp.

The wt. ratio of polydiorganosiloxane segments:polyoxyalkylene segments in the copolymer is 2-8, and $(a+b+c+d) = 100$ wt.%. Emulsions are used in which (a) is an aq. soln. of e.g. antiperspirant, (de)odourant, insect repellent, antiseptic, sunscreen, cleaner. 4.7.78 as 829388 (8pp913)

KAOS ★ D21 07802C/05 ★DT 2927-278
Hair shampoo compsn. - contains anionic, nonionic or amphoteric surfactant, anionic phosphate ester activator and EDTA, to improve brushing and combing

KAO SOAP KK 13.07.78-JA-085462

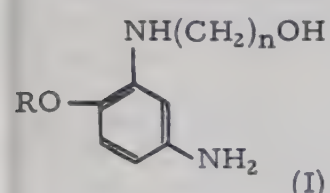
E19 (24.01.80) A61k-07/06 C11d-03/36

Hair shampoo compsn. contains ≥ 1 anionic, nonionic or amphoteric surfactant as main component and, by wt. w.r.t. shampoo compsn., (a) 0.8-20(1-5)% anionic phosphate ester activator having formula $A-M-O-P(=O)(OB)(OX)$ (I) (where A is opt. branched, opt. satd. 10-18C hydrocar-

The method of treating hair, to improve its feel and handling, and to reduce the tendency to become greasy after washing, by using the agent, is also claimed. Pref. the compsn. is in the form of a stable liq. suspension and pref. also contains the prod. of ethoxylation of a 16-18C satd. alcohol with 1-8 (2-7) moles of ethylene oxide per mole of alcohol and water. 24.2.78 as 007397. (16pp977)

OREA ★ D21 07964C/05 ★GB 2025-958
1-Alkoxy-4-amino-2-(hydroxyalkyl)aminobenzene(s) - useful as hair dyes, giving blue colour with oxidative base or red if used with para-aminophenol(s)
L'OREAL SA 12.07.78-FR-020848
E24 (30.01.80) A61k-07/13 C07c-93/14

m-Phenylenediamines (I) its acid salts are new (where R = 1-4C alkyl; n = 1-3).



(I) are useful as hair dyes. Thus with most p-phenylenediamines in an oxidising alkaline medium, (I) impart light-, washing-, and weather-resistant blue colourations to hair. In addn., when associated with p-amino-

phenols, (I) give stable red colourations. Specifically claimed are (I; n = 2, R = Me or Et) (and the HCl salts). 11.7.79 as 024169. (12pp478)

NONC- ★ D21 08048C/05 ★J5 4157-833
Liq. deodorant comprising sodium acrylate in aq. medium - with high effectiveness over long periods
NONCHIKK 31.05.78-JA-065420
A96 E12 P34 (D22) (13.12.79) A611-09/*

Liq. deodorants comprise an aq. medium and sodium acrylate as the active component. Compsns. are highly effective over long periods of time.

Pref. the aq. medium is water and opt. an organic solvent (e.g. alcohol, ketone, ether, ester). The deodorant is prepd. by dissolving the active component in the aq. medium. Since the deodorising effect is not obtd. when the concn. of the Na acrylate is too high, the deodorant is used as a dil. aq. soln. It is possible to use Na acrylate in combination with Na polyacrylate, acrylamide, polyacrylamide, Na acrylate-acrylamide copolymer, etc., and the combination may increase the deodorising effect. The viscosity and stability of the liquid can be improved by adding glycerine, ethylene glycol, Na CMC, methylcellulose, hydroxyethylcellulose, surfactant, aroma- or pH-adjusting agent fungicides or antiseptics. Prods. can be used as toilet dust boxes, kitchen refrigerators shoes or underarm deodorants.

In an example, an aq. soln. contg. 0.1% Na acrylate is prepd. and diluted 100-500 times for use in a refrigerator, 2000 times for use as an aerosol, or 1000-4000 times for removing general bad smell (as in chemical factories). 31.5.78 as 065420 (3pp108)

NONC- ★ D21 08049C/05 ★J5 4157-834
Liq. deodorant comprising sodium polyacrylate in aq. medium - with high effectiveness over long periods
NONCHIKK 01.06.78-JA-065936
A96 P34 (D22) (13.12.79) A611-09/*

Liq. deodorants comprise an aq. medium and sodium polyacrylate as the active component. Compsns. are highly effective over long periods of time.

Pref. the aq. medium is water and opt. an organic solvent (e.g. alcohol, ketone, ether, ester). The deodorant is prepd. by dissolving the active component in the aq. medium. Since the deodorising effect is not obtd. when the concn. of Na polyacrylate is too high, the deodorant is used as a dil. aq. soln. It is possible to use Na polyacrylate in combination with Na acrylate, acrylamide, polyacrylamide, Na acrylate-acrylamide copolymer, etc., and the combination may increase the deodorising effect. The viscosity and stability of the liquid can be improved by adding glycerine, ethylene glycol, Na CMC, ethylcellulose, hydroxyethylcellulose, surfactant, aroma- or pH-adjusting agents, fungicides or antiseptics. Prods. can be used as toilet, dust box, kitchen, refrigerator, shoes or underarm deodorants.

In an example an aq. soln. contg. 0.1% of Na polyacrylate is diluted 100 times with water, and its pH is adjusted to 3 with fumaric acid. 100 ml. of this deodorant is placed in a glass vessel, ammonia is introduced at 600 ppm, and the vessel is sealed. After 1 hour no ammonia can be detected. 1.6.78 as 065936 (2pp108)

NONC- ★ D21 08050C/05 ★J5 4157-835
Liq. deodorant comprising acrylamide in aq. medium - with high effectiveness over long periods

NONCHIKK 02.06.78-JA-066343

A96 E16 P34 (D22) (13.12.79) A611-09/*

Liq. deodorants comprise an aq. medium and acrylamide as the active component

Pref. the aq. medium is water and opt. an organic solvent (e.g. alcohol, ketone, ether, ester). The deodorant is prepd. by dissolving the active component in the aq. medium. Since the deodorising effect is not obtd. when the concn. of acrylamide is too high, the deodorant is used as a dil. aq. soln. It is possible to use acrylamide in combination with Na acrylate, Na polyacrylate, polyacrylamide, Na acrylate-acrylamide copolymer, etc., and the combination may increase the deodorising effect. The viscosity and stability of the liquid can be improved by adding glycerine, ethylene glycol, Na CMC, methylcellulose, hydroxyethylcellulose, surfactant, aroma- or pH-adjusting agents, fungicides or antiseptics. Prods. can be used as toilet, dust box, kitchen, refrigerator, shoe, or underarm deodorants. They are effective for removing SO₂, H₂S, mercaptan, alkyl sulfide, NH₃ and NO₂ odours.

In an example, an aq. soln. contg. 0.1% acrylamide is prepared and diluted 0-10,000 times with water. 2.6.78 as 066343 (3pp108)

LIOY ★ D21 08054C/05 ★J5 4157-841
Hair conditioning compsn. - contains anionic and/or amphoteric surfactant, polymer having quat. nitrogen and hydrous alcohol
LION FAT & OIL KK 30.05.78-JA-064595
A96 (13.12.79) A61k-07/06

The compsn. contains (a) 0.05-5 w/w% of anionic surfactant and/or amphoteric surfactant, (b) 0.05-5 w/w% of the polymer having quat. nitrogen and (c) hydrous alcohol. Weight proportion of alcohol: water is 97-50 : 3-50.

The compsn. has excellent protecting effect for hair and hair-finishing effect. It also gives lustering, moisturising and emollient effect on hair. The conditioner is improved by combining the complex salt of the polymer and surfactant. The complex salt can be dissolved easily in the mixed solvent of alcohol and water. The amphoteric surfactant is amideamine-type and imidazole-type surfactant, giving uniform transparent hair conditioner. 30.5.78 as 064595 (9pp5)

SHOY ★ D21 08074C/05 ★J5 4158-094
Two/part tooth root canal filling compsn. - which is water soluble and gives viscous material
SHOWA YAKUHI KAKO KK 01.06.78-JA-066370
A96 (13.12.79) A61k-05/08

Material A is ≥ 1 of polyethylene glycol, glycerine, propylene glycol and silicone resin. Material B is ≥ 1 of sodium polyacrylate, polyvinyl alcohol, sodium carboxymethyl cellulose, methylcellulose, sodium alginate and dextran. They are mixed with each other and then with water.

In an example, the material is formed by thorough mixing, at room temp., of 500g. propylene glycol, 500 g. glycerine, 100 g. NaCMC, 50 g. Na polyacrylate and 450 g. water. 1.6.78 as 066370 (3pp64)

TOKD ★ D21 08076C/05 ★J5 4158-099
Mfg. artificial bones or teeth - includes adding calcium cpd. to calcium phosphate, heating in air or steam, pressing and sintering
TOKYO IKA SHIKA UNI 25.05.77-JA-059829
L02 P32 (13.12.79) A61c-08 A61f-01

Method comprises (1) adding aq. soln. of phosphoric acid or phosphate is ≥ 1 Ca cpd. selected from Ca(OH)₂, CaO, CaCO₃, CaF₂ and CaCl₂ at 20 to 60°C and pH of 7 to 13 to form a calcium phosphate with the ratio of Ca to P of 1.50 to 1.67, (2) drying the Ca₃(PO₄)₂ to form a powder, (3) adding 0.1 to 30 wt. % of ≥ 1 other Ca cpd. selected from Ca(OH)₂, Ca(NO₃)₂, Ca(COO)₂ and Ca(CH₃COO)₂ to form a mixt. (4) heating the mixt. in air or steam at 600 to 1100°C to form a CaO-P₂O₅ powder, (5) pressing the powder in a mould at 500 to 3000 g/cm² to form a pressed body and (6) sintering the pressed body.

The prod. is useful in dental surgery and has high mechanical strength. 25.5.77 as 059829 (6pp64)

LIOY ★ D21 08286C/05 ★ J5 4159-415
 Liq. shampoo compsn. with improved stability - contg. metal olefin and oxyalkylene or paraffin sulphonate anionic surfactants, polyoxyalkylene nonionic surfactants
 LION FAT & OIL KK 06.06.78-JA-068094
 A97 (A25) (17.12.79) C11d-01/83

A liquid shampoo compsn. contains (a) 3-30 wt. % (pref. 7-20 wt. %) of anionic surface active agent of type O/S-M, (b) 0.5-20 wt. % (pref. 5-15 wt. %) anionic surface active agent of type $R_1O(C(R')HCH_2O)_mSO_3M$, or pS-M and (c) 0.1-15 wt. % (pref. 0.5-7 wt. %) of nonionic surface active agent of type $(R_2)(R_3)CHO(C(R')HCH_2O)_nH$, or $(R_2)(R_3)-CHCH_2O(C(R')HCH_2O)_nH$, in wt. ratio falling in the region surrounded by the four lines linking the four pts. ((a) 90 : (b) 5 : (c) 5); ((a) 20 : (b) 75 : (c) 5); ((a) 20 : (b) 40 : (c) 40) and ((a) 55 : (b) 5 : (c) 40) in their triangle diagram.

In the formula O/S is an acid gp. of 10-16C olefin-sulphonate, ps is an acid group of 10-18C paraffin-sulphonate, R is (un)branched 8-18C alkyl; R_2 and R_3 are (un)branched 2-16C alkyl providing $R_2 + R_3 = 9-33C$, R' is H, CH_3 or C_2H_5 , M is alkali metal, or alkaline earth metal; m is 1-6, n is 3-15).

The compsns. has high cleaning power and foaming ability. It has prominent stability at low temp., and deterioration does not occur during long term storage.
 6.6.78 as 068094 (6pp170)

LIOY ★ D21 08287C/05 ★ J5 4159-416
 Liq. cleaning compsns. with anionic and cationic surfactant components - which do not irritate skin, are of low viscosity and have high effectiveness even towards oils
 LION FAT & OIL KK 07.06.78-JA-068534
 A97 (A25) (17.12.79) C11d-01/65

Liq. cleaning compsns. contain anionic (I) and cationic (II) surfactants at a mol. ratio of (I):(II) = 8-1:1 (pref. 4-1:1) and at (I) + (II) = 1-40 pref. 5-25 wt. %. R' is 8-16C alkyl. R'' is H or CH_3 . m is 1-6. M is alkali metal, ammonium or organic amine, R_1 is 8-14C alkyl. R_2 and R_3 are each CH_3 , C_2H_4OH or $(C_2H_4O)_2H$. R_4 is CH_3 , C_2H_4OH , $(C_2H_4O)_2H$ or benzyl. X is halogen, CH_3SO_4 or $C_3H_5SO_4$.

(I) is e.g. the sulphate ester salt of an alkylether obtd. by the addition of 3 mols. of ethylene oxide to lauryl alcohol or the sulphate ester salt of an alkylether prepd. by the addition of 3 mols of ethyleneoxide to an 11-15C aliphatic satd. alcohol made by oxosynthesis. (II) is e.g. octyltrimethylammonium chloride, lauryltrimethylammonium chloride, lauryldimethylbenzylammonium chloride. Compsns. may also contain fillers, builders, dissolving aids, pH modulators, stabilisers, perfumes, pigments etc. 7.6.78 as 068534 (6pp170)

NISW ★ D21 08372C/05 ★ J5 4160-314
 Esterified cpd. useful in cosmetic materials - obtained by reacting modified polymer poly:ol with satd. aliphatic di:carboxylic acid and/or hydroxy:di:carboxylic acid

NISSHIN OIL MILLS KK 07.06.78-JA-067812

A96 (A25) (19.12.79) A61k-07 C07c-69/34 C08g-63/46

The esterified cpd. is obtained by reacting (I) a modified polymer polyol formed by the addition of ethylene oxide and/or propylene oxide to a tetravalent or higher polyhydric alcohol (mole number thus added per molecule of the polyhydric alcohol being 0-20 mol. of ethylene oxide, 0-100 mol. of propylene oxide, and the total mole number of ethylene oxide and propylene oxide thus added being not lower than the number of OH gps. of the polyol), and (2) a satd. aliphatic dicarboxylic acid and/or hydroxydicarboxylic acid.

The esterified cpd. functions as a gelling agent, dispersing agent, solubilising agent and moisture-retaining agent, and, therefore, a cosmetic agent contg. the cpd. is pref. used as a skin cream or lotion, or as a hair cosmetic. 7.6.78 as 067812 (6pp75)

DAUC ★ D21 08373C/05 ★ J5 4160-315
 Pantethine fatty acid ester(s) - useful in cosmetics for accelerating secretion of sebum

DAICHI SEIYAKU KK 05.06.78-JA-066768

E17 (19.12.79) A61k-07/06 C07c-149/42

Pantethine fatty acid esters are of formula (I)



where R is 10-20C alkyl.

A specif cpd. is 2', 4'-dipalmitoyl-pantethine. The compound esters have an excellent action for accelerating the secretion of sebum, and thus are useful in the cosmetic field.

The esters can be prepd. by subjecting pantethine to conventional acylation reaction. In an example, pantethine is dissolved in a solvent having deoxidation effect, (e.g. pyridine), and the soln. is allowed to react with a slight excess of fatty acid halide, pref. 1.1-1.3 times excess. The reaction proceeds at room temp. and usually completes in several hrs. 5.6.78 as 066768 (3pp75)

FUJI/ ★ D21 08412C/05 ★ J5 4160-406
 Aerosol hand cleaner compsn. for use when water is not available - contg. liq. paraffin, nonionic surfactant, lanolin and water

FUJINOK 08.06.78-JA-069674

(19.12.79) C11d-01/66 C11d-03/38 C11d-10/02 C11d-17

Hand cleaner is prepd. by filling an emulsion of liq. paraffin, nonionic surfactant, lanolin and water together with an inert gas into an aerosol.

Prod. is used to clean hands where water cannot be used. No tackiness remains when hands are wiped, e.g. with tissues. Addn. of perfume is unnecessary because agents derived from petroleum and having disagreeable odours are not used. Skin is prevented from chapping by including lanolin.

Pref. the compsn. is 50 vol. % liq. paraffin, 20 vol. % nonionic surfactant, 10 vol. % lanolin, and 20 vol. % water. Pref. inert gas is Freon. 8.6.78 as 069674 (3pp126)

KURS ★ D21 08421C/05 ★ J5 4160-439
 Adhesive for bone and tooth enamel - contg. phosphoric acid cpd. or polymer produced from it

KURARAY KK 08.06.78-JA-070051

A96 E11 P32 (19.12.79) A61c-05 A61f-01 C08f-20 C09j-03/14

The adhesive contains a phosphoric acid cpd. of the formula $P(=O)(R^1)(R^2)OH$ (where R_1 and R_2 are each 1-25C organic residues having a mol. wt. of ≤ 500 , ≥ 1 of these contg. a polymerisable gp.) or a polymer in which the phosphoric acid cpd. is one component, in an amount of 0.1-10 wt. % calculated as phosphorus.

It gives strong and stable bonding and is harmless to the body. 8.6.78 as 070051 (8pp119)

NONC- ★ D21 08535C/05 ★ J5 4160-737
 Liquid deodorant for use e.g. in toilets - comprising polyacrylamide active component in aq. medium

NONCHI KK 05.06.78-JA-067485

A97 P34 (A14 D22) (19.12.79) A61k-07/32 A61l-09/*

The deodorant contains polyacrylamide as active component in an aq. medium (e.g. water, ethanol, acetone, diethyl ether or ethyl acetate.)

The deodorant is effective against odour based on SO_2 , H_2S mercaptans, alkyl, sulphides, NH_3 , NO_2 , etc., and its effect is maintained for a long period. If desired, glycerol ethylene glycol, Na CMC, methyl cellulose, hydroxypropyl cellulose, hydroxyethyl cellulose, surfactant, perfume, pH regulator, pesticide or fungicide may be added to the deodorant.

In an example, a 0.1 % aq. soln. of polyacrylamide was diluted with water to give 1,000 fold dilution, and the diluted soln. was readily useful as a deodorant. 5.6.78 as 067485 (3pp68)

NONC- ★ D21 08536C/05 ★ J5 4160-738
 Liquid deodorant for use e.g. in toilets - comprising sodium acrylate-acrylamide copolymer active ingredient in aq. medium

NONCHI KK 05.06.78-JA-067486

A97 P34 (A14 D22) (19.12.79) A61k-07/32 A61l-09/*

The deodorant contains sodium acrylate-acrylamide copolymer as active component in an aq. medium (e.g. water, ethanol, acetone, diethyl ether or ethyl acetate).

The deodorant is effective against odours based on SO_2 .

H₂S, mercaptans, alkyl sulphides, NH₃, NO₂, etc., and its effect is maintained for a long period. If desired, glycerol, ethylene glycol, Na CMC, methyl cellulose, hydroxypropyl cellulose, hydroxyethyl cellulose, surfactant, perfume, pH regulator, pesticide or fungicide may be added to the deodorant.

In an example, a 0.1 % aq. soln. of Na acrylate-acrylamide copolymer was diluted with water to give 1,000 fold dilution and the diluted soln. was readily useful as a deodorant. 5.6.78 as 067486 (3pp68)

DAII ★ D21 08542C/05 ★ J5 4160-751
Cosmetics contg. pantetheine fatty acid ester(s) - to increase the sebum secretion rate

DAIICHI KOGYO SEIYAKU (DAUC) 05.06.78-JA-066769
E16 (19.12.79) A61k-07/02

Novel subum-scretion-accelerating agents contain a pantetheine fatty acid ester of formula (I) as the principal component. In the formula R is a 10-20 alkyl gp.

(R.COOCH₂.C(CH₃)₂CH(OCOR)-CONHCH₂CH₂CONHCH₂CH₂S-)₂.

Agents are used in cosmetics, e.g. face-creams.

(I) is palmitoyl pentetheine. (I) are novel cpds. pref. prepd. by acylating pantetheine, esp. by room temp. reaction in pyridine soln. To prevent (I) crystallising out of cold cream, it is pref. blended into squalane at 5-20% by melting. 5.6.78 as 066769(3pp42)

LIOC ★ D21 08543C/05 ★ J5 4160-752
Liq. medicinal compsn. for preventing dental caries - contains polyacrylic acid, polymethacrylic acid or their alkali metal salts

LION DENTIFRICE KK 12.06.78-JA-070523
A96 B04 (19.12.79) A61k-07/16

The compsn. (I) contains > 0.005 wt. % of polyacrylic acid (II), polymethacrylic acid (III) and/or their alkali metal salts (IV). (I) is used in a gargle, oral-wash, oral-spray, etc. (I) has high activity for preventing the formation of dental caries.

Although mol. wts. of (II), (III) and (IV) are not limited usually mol. wt. of Na polyacrylate is 1-6 million. The chemical structures of (II), (III) and (IV) may be straight or branched. The content of the sum of (II), (III) and (IV) is usually 0.005-3 %. When (II), (III) and (IV) are mixed with a cpd. which release polyvalent ion, the activity for prevention of dental caries-formation is suppressed.

Therefore, in these cases, salts of pyrophosphoric acid, tripolyphosphoric acid, trimetaphosphoric acid, etc. are added in (I) as masking agents. 12.6.78 as 070523 (7pp)

WARN ★ D21 08950C/05 ★ US 4184-253
Denture preform - with posterior teeth in hard base and anterior in soft mass to allow final adjustment

WARNER-LAMBERT CO 12.12.77-US-859611
A96 P32 (22.01.80) A61c-13

Preform comprises two gps. of posterior false teeth moulded into a hard base segment, a soft deflectably formable liner layer defining an arch parallel to posterior and anterior teeth and with its posterior margins bonded to the hard base. The liner has peripheral flanges conforming to edentulous tissue and a cavity at the anterior margin filled with a formable mass.

Anterior false teeth are embedded in the mass to permit adjustment in final fitting, and the filling mass can be removed for casting in a permanent hard base about the anterior teeth. The hard base is pref. of acrylic plastic, the liner is of soft acrylic plastic and the mass is waxy material. 12.12.77 as 859611 (7pp1358)

DANI/ D21 00102A/01 = US 4184-843
Thickened aq. hair dyeing compsn. contg. disperse dye - emulsion of fatty acid ester and a paraffin

DANIELSON CV 31.08.76-SW-009628
E24 (E17) (22.01.80) *BE-858-238 A61k-07/13

Hair dyeing compsn. comprises a disperse dye in an aq. mixt. of an emulsifying agent, a paraffin component and a thickener selected from 10-30C fatty alcohols and fatty acid esters of isopropyl alcohol and glycerol. The amt. of paraffin component relative to thickener is proportioned so as to impart to the compsn. a viscosity of 100-35000cP, the

compsn. being adjusted to pH > 8.

Pref. disperse dye is azo or anthraquinone dye. Pref. the compsn. has pH 5-3. Pref. fatty alcohols are lauryl, cetyl and stearyl alcohols. The compsn. adheres to the hair during application and the structure of the hair is not weakened by the dyeing. 12.8.77 as 823913 (3pp924)

OREA D21 06389A/04 = US 4184-844

Stable solutions of specified indoaniline and indophenol dyes - in alcohol(s) or glycol ether(s), used in hair dyeing

L'OREAL SA 21.07.76-LU-075425

E24 (22.01.80) *BE-856-986 A61k-07/12 + D06p-01/32

The storage stability of a dye of formula (I) is improved by dissolving (I) in an anhydrous solvent selected from ethanol, isopropanol, t-butanol, monoethyl ether of ethylene glycol, monomethyl ether of ethylene glycol and/or mono-butyl ether of ethylene glycol. A soln. is formed which contains 0.0015 wt. % of (I). The dye is maintained in the presence of the solvent for its storage period.

In (I) A is OH or -NR₉R₁₀; R₅ is H, Cl or CH₃; R₆ is H, Cl or CH₃ and R₇ and R₈ are each H. R₉ and R₁₀ are each H, or (m)ethyl; and R₁₀ may further be -CH₂CH₂OH, -CH₂CONH₂ or -(CH₂)₂NHSO₂CH₃.

The storage stable dyes are admixed with an aq. based cosmetic carrier and used for dyeing hair. 18.7.77 as 816499 (14pp924)

SPAD- D21 76290A/43 = US 4184-879

Endodontic treatment paste used esp. for filling infected teeth - contains chlorophenol-camphor antiseptic, diiodo:thymol setting retardant and eugenol or zinc oxide setting agents

LAB SPAD 20.04.77-FR-012649

B05 E14 (22.01.80) *BE-866-160 + C09k-03

Endodontical treatment paste, esp. for the root canal filling of teeth, comprises parachlorophenol camphor (I) as a non-coagulating antiseptic agent; a mixt. of ZnO and eugenol for causing the paste to set; and diiodothymol for retarding the setting of the paste in order to reduce its ultimate hardness.

Pref. paste comprises, by wt., 4-8% (I), 24-22% eugenol, 48-58% ZnO and 12-18% diiodothymol. It may further include pulverised menthol crystals to act as an analgesic and vasoconstrictor and/or Ag powder to increase its radio-opacity. 28.3.78 as 891040 (5pp927)

HARS ★ D21 09071C/05 ★ US 4184-973

Hair grooming aid in form of shampoo - contg. fibrillatable PTFE resin particles which form network of invisible fibrils holding the hair in place

HARSHAW CHEM CO 12.09.77-US-832245 (25.06.73-US-373585)
A96 (A14) (22.01.80) A61k-07/06 C11d-01 C11d-07/30

Hair grooming aid consists of a shampoo and 0.001-5 wt. % of fibrillatable PTFE resin particles dispersible or dispersed in the shampoo, the primary particle size being < 1 μ in dia.

The Parent Patent claimed a grooming method comprising distributing fibrillatable PTFE particles in the hair and combing, rubbing or brushing at a temp. high enough to fibrillate the PTFE but not so high as to damage the hair. A network of fibres invisible to the naked eye is formed which holds the hair in place. 12.9.77 as 832245 Div. ex 4047537 (clg. 23.5.75-US-580143)(7pp927)

PACJ ★ D21 09073C/05 ★ US 4184-978

Stable water in oil emulsion system - useful for pharmaceutical and cosmetic compsns.

PATTERSON C J CO 16.12.77-US-861362 (04.05.77-US-793534)
B07 (22.01.80) B01j-13

Stable water-in-oil emulsion comprises a continuous external liq. oleaginous phase; a liq. non-homogenised internal aq. phase comprising small aq. globules dispersed in the external phase and initially about 1 μ in size at the time of dispersion and present at 70-80% based on the wt. of the two phases; and an emulsifier compsn. to maintain the water dispersed in the oleaginous phase.

Emulsifier compsn. comprises (a) a di- or tri-valent salt of the esterification prod. of a 10-22C fatty acid with a 2-4C hydroxycarboxylic acid and (b) a co-emulsifier that is a deriv. of a fatty acid or fatty alcohol that is dif-

ferent from the fatty acid radical of emulsifier (a). The emulsifier compsn. has a HLB value of 4.6-6.6 and ensures that the internal aq. phase remains dispersed for ≥ 6 months at 25°C.

Emulsions are useful in pharmaceutical and cosmetic preps. such as night creams, barrier creams and lotions, moisturising creams and lotions, sun screen creams and lotions etc. to provide a thin oleaginous layer on the user's skin and are less greasy and cooler on application than prior creams and lotions. The emulsions are easily prepd. and can undergo ≥ 1 freeze-thaw cycle without breaking up, esp. when a polyol is present. 16.12.77 as 861362 (7pp1248)

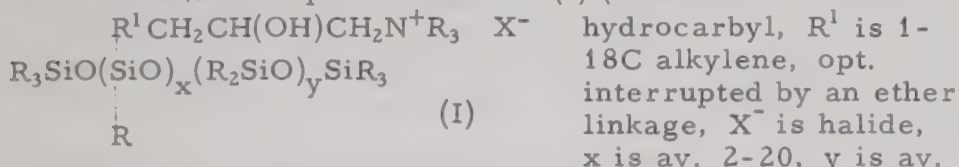
JOHJ ★ D21 09129C/05 ★US 4185-086
Perfumed talc compsns. contg. polyethylene glycol - giving improved retention of fragrance and reduced dusting
JOHNSON & JOHNSON 04.05.78-US-902638
A96 (22.01.80) A61k-07/03 A61k-47

Compsn. contains 0.01-1 wt. % polyethylene glycol of mol. wt. 100-1500 (200-400) and the balance talc. Pref the polyethylene glycol forms 0.2-0.3 wt. % of the compsn. and the perfume content is 0.1-0.3 wt. %. The perfume and polyethylene glycol are first mixed, then blended with the talc.

The stability of the fragrance and the feel of the prod. are improved, and the tendency for airborne particles to be released is reduced. 4.5.78 as 902638 (3pp955)

UNIC ★ D21 09130C/05 ★US 4185-087
Hair conditioning compsns. - contg. quat. ammonium polysiloxane cpds, water and opt. surfactant
UNION CARBIDE CORP 28.12.77-US-865128
A96 (A26) (22.01.80) A61k-07/06

Hair is conditioned by application of a compsn. contg. (a) 0.1-10 wt. % of a cpd. of formula (I) (where R is 1-18C



20-200); (b) 75-99.9 wt. % water; and (c) 0.30 wt. % of 1 amphoteric, cationic, anionic, non ionic, polar nonionic or zwitterionic surfactants.

Compsns leave hair lustrous and pleasant to the touch, prevent tangling, and improve combability and reduce static. 28.12.77 as 865128 (8pp955)

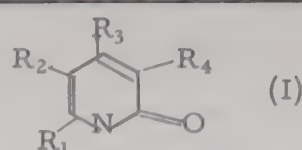
ALSO- D21 50097A/28 #US 4185-099
Agents for treating scalp and preventing hair loss - contg. a natural surfactant e.g. chenodeoxycholic acid for dissolving cholesterol
ALSO LABORATORI SAS 04.01.77-IT-019025 (10.01.78-US-868563)
B01 (22.01.80) *DT2758-484 +A61k-31/56

A cosmetic compsn. for scalp treatment comprises (a) a dandruff treating agent consisting of chenodeoxycholic acid or ursodeoxycholic acid or an acceptable salt or deriv. of one of these, (b) a carrier, and (c) a cell proliferation stimulating substance.

Pref. the compsn. contains 0.6-1 wt. % of (a), and has a ptt. of 6. Pref. (c) is retinoic acid which is esp. present in an amount of 0.10-0.25 wt. %, the compsn. partic. also contg. nicotinic acid to increase penetrability through the skin, and alcohol. 10.1.78 as 868563 (3pp990)

FARH D21 07516V/05 =US 4185-106
Anti-dandruff agents - contg 1-hydroxy-2-pyridone derivs
HOECHST AG 11.07.72-DT-234009
B03 E13 (22.01.80) *DT2234-009 A61k-31/44

Dandruff treatment comprising applying a novel cosmetic compsn. to the hair and scalp of humans. Compsn. comprises a carrier and a 1-hydroxy-2-pyridone cpd. of



formula (I) or its salt. R_1 is H, 1-17C alkyl, 5-8C cyclo alkyl, 7-9C bicycloalkyl, 5-8C cyclo-alkyl-1-4C alkyl. (with ring opt. substd. by 1-4C alkyl gp(s).), phenyl, naphthyl, phenyl (1-4C) alkyl, phenyl (2-4C) alkenyl, phenyl-oxy-(1-4C) alkyl, phenyl-thio-(1-4C) alkyl, benzhydryl, phenyl sulphonyl-(1-4C) alkyl, furyl, furyl-(2-4C) alkenyl. Phenyl and naphthyl rings are opt. substd. by 1-4C alkyl or alkoxy, NO_2 , CN or halogen.

R_2 is H, 1-4C alkyl, 2-4C alkenyl, 2-4C alkynyl, halogen or benzyl; R_3 is H, 1-4C alkyl or benzyl; and R_4 is H, 1-4C alkyl, 2-4C alkenyl, methoxymethyl, halogen or benzyl.

The compsn. is especially incorporated in shampoos. 15.8.75 as 605210 (clg. 9.7.73-US-377440)(10pp977)

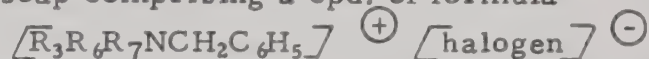
ABBO ★ D21 09140C/05 ★US 4185-120
Topical treatment of fungal and yeast infections on animal skin - by application of p-tolyl-di-iodo-methyl sulphone
ABBOTT LABORATORIES 02.10.78-US-947328
B05 C03 (22.01.80) A61k-31/10

Fungal and yeast infections on the skin of an animal are treated by topical appln. of p-tolyldiiodomethyl sulphone (I) in a carrier. Pref. (I) is used in preps. with an ointment base, talcum powder, EtOH, CPrOH etc., typically with 0.5-5% (I) being present, esp. 0.5-2%.

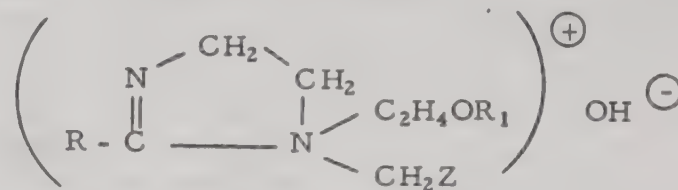
(I) is effective against such skin infections as tinea pedis and vaginitis, and they have much higher activity than most antifungals and also have the antiyeast activity. 2.10.78 as 947328 (3pp1248)

DENT- ★ D21 09172C/05 ★WP 8000-057
Cleaning agent for dentine surfaces - comprising an invert soap, ampholytic surfactant and sequestering agent
DENTAL THERAPEUTICS (WAHL/) 15.06.78-SW-006914
E19 (24.01.80) A61k-07/16
D/S: N(BR, DK, DT, GB, JA, US).

A cleaning agent comprises 10-90 wt.pts. (A) an invert soap comprising a cpd. of formula



(where R_3 and R_7 are each 1-4C alkyl; and R_6 is 8-16C alkyl); 90-10 wt. pts. (B) an ampholytic surfactant comprising (1) a cpd. of formula



(R is an 11-19C fatty acid radical;

R_1 is $-CH_2COOM$ or M;

Z is COOM, CH_2COOM or $CH(OH)CH_2SO_3M$; and

M is H, an alkali metal or an organic base residue);

or (2) a cpd. of formula



(where R_2 is alkyl, 8-18C alkylamino-ethyl or -propyl, or 12-18C acylamino-ethyl or -propyl; and $R_4 = R_5 = Me$ or $R_4 = H$ and R_5 is an electron pair) and a minor amt. of (c) a sequestering agent.

The agent is useful for cleaning dentine surfaces, partic. when mending teeth. It can remove most of the smear layer produced during grinding without opening too many tubule apertures or removing peritubular dentine. 14.6.79. as SW0135 (17pp558).

(E) ISR: DT2415981; DS1014289; OE-335068; US3849548; US4051234.

See Also

D13 J8 0000370

D23 GB 1560091

D22: BANDAGES; DRESSINGS

HEIN/ ★ D22 07597C/05 ★DL-138-275
Bone tissue promoting device - has insulating housing fitted with cover holding battery and control circuit for needle electrode received in bore of housing

HEINECKE H J 07.08.78-DL-207154

A96 P33 (24.10.79) A61h-39

Device for influencing human tissue structural changes has a housing provided with a cover fitted internally with a flexible insert of a material having a high coefft. of friction to clamp between the cover and the base of the housing a battery and a control circuit. Housing which is made from an insulating material is also provided with an aperture for attachment of a polymer (pref. epoxy resin) covered needle electrode whose free end is made of corrosion resistant, electrically conductive material. Base forms a counter electrode or is provided with means forming a counter electrode.

Used for promoting growth or decomposition of bone tissues, part. bone formation after fracture. Device is practically free of any service requirements and can be left at required body location for long periods. 7.8.78 as 207154 (7pp536)

ULTD D22 37119Q/00 =DS 1642-154
Ultraviolet water purifying unit

ULTRA DYNAMICS CORP 29.07.66-US-572644

A88 + P34 (24.01.80) *GB1167-578 + A611-03

Appts. for purifying liqs., using UV rays, comprises a tube with an endcapping and a flange screwed on at the other end, as well as an UV-transparent envelope extending along the entire length of the tube.

A mount is screwed into the flange. The closed end of the envelope has a rubber capping. There are pressure-resistant seals for the open end of the envelope comprising an O-ring, sealing disc and several wiping rings of PTFE, or of inorganic, low-friction UV-resistant material. 27.7.67 as 642154 (6pp267)

BARH D22 16041T/10 #DS 2127-854
Resterilizing contact lens solns - contg edta

BARNES HIND PHARM INC 19.06.68-US-738131 (04.06.71-DT-127854)

A89 B05 + P34 (A14) (24.01.80) *US3639-576 + A611-13

Aq. soln. for sterilising contact lenses contains (i) an antimicrobial quat. ammonium salt; (ii) EDTA or its tolerable salts; (iii) PVA as partly hydrolysed PVAc; and (iv) a physiologically tolerable salt. In the improvement, the soln. contains (a) 0.002-0.02 wt.% of (i); (b) 0.005-0.04 wt.% of (ii); and (c) 0.5-5 wt.% of (iii), where the PVA contains 0.1-20 wt.% of acetate gps. The soln. has a pH value of 5-6.7. Pref. (i) is benzalkonium chloride. Component (iv) is e.g. NaCl.

Soln. does not irritate the eyes and has fast sterilising action. The amt. of EDTA is lower than conventionally. 4.6.71 as 127854 (4pp997)

VERE D22 00084A/01 =DS 2638-654
Absorbent cellulose-sodium CMC fibres - treated with formaldehyde giving greater absorption of liqs.

VER PAPIERW SCHICKEDANZ 27.08.76-DT-638654

A96 P32 P34 (A11) (24.01.80) *BE-858-128 A611-15 D01f-02/06

Highly absorbent fibrous material for use in hygienic prods. includes liq.-absorbent fibres based on partially cross-linked esp. formalised, cellulose, contg. 5-20 wt.% Na C.M.C. Pref. the fibres have a titre of 1.5-10.0 dtex and a length of 20-120 mm. They are pref. treated with polyethylene glycol of mol. wt. 100-10000.

The material is useful in tampons, sanitary towels, diapers, etc. It exhibits higher absorbency than materials contg. non-crosslinked fibres. 27.8.76 as 638654 (4pp927)

LICN D22 10317A/06 =DS 2644-623
Filter material for removing alkaline gases from the air - contg. principally sodium bisulphate hemihydrate plus support

LICENTIA PATENT GMBH (BROV) 02.10.76-DT-644623

E18 J01 P34 (24.01.80) *BE-859-317 B01d-39/20

Particulate filter material for alkaline gases or vapours,

esp. for chemisorptive removal from air of alkaline odorous cpds. such as amines of type NR_3 , NHR_2 and NH_2R , comprises ≥ 1 moisture-holding and chemisorptive acidic component (I) and an inert carrier. The moisture-holding capacity of (I) is reversible towards an equilibrium value, and ≥ 50 wt.% of (I) is a reaction prod. prepd. from H_2SO_4 , H_2O and Na_2SO_4 in the melt and contg. $\text{NaHSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$ as main component.

An alternative filter material in particle or plate form comprises a moisture-holding and chemisorptive acidic component prepd. by reaction Na_2SO_4 , H_2SO_4 , H_2O and lime as foaming agent to form a self-supporting structure, esp. a plate thickness ≤ 10 cm.

The material is useful for fume filters in kitchens, sewage plants, chimneys, etc. 2.10.76 as 644623 (3pp927)

SOLV ★ D22 07709C/05 ★DT 2830-503
Wood preservatives contg. fungicide and insecticide - in organic solvent contg. acid additive to improve storage stability

DEUT SOLVAY-WKE GMB 12.07.78-DT-830503

C01 E12 F09 P63 (24.01.80) B27k-03/50

Preservatives for wood and wood prods. contain (a) ≥ 1 fungicidal tetravalent organotin cpds.; (b) ≥ 1 insecticide selected from carbamates and/or phosphate or thiophosphate esters; (c) ≥ 1 organic solvents; (d) opt. additives selected from dyes, pigments, water-repellents, odour modifiers and corrosion inhibitors; and (e) ≥ 1 acid, pref. intermediate-strength inorganic acids and/or their acid esters.

Pref. compsns. contain 0.3-10 (esp. 0.5-5) wt.% of (a), 0.1-7 (esp. 0.5-5) wt.% of (b), 0.05-4 (esp. 0.1-2) wt.% of (e) and > 65 (esp. > 75) wt.% of (c), with an (a):(b) wt. ratio of 9:1 to 1:9 (esp. 3:1 to 1:3).

Component (e) improves the storage stability of the compsns. 12.7.78 as 830503. (31pp367)

ICIL D22 22234Y/13 =GB 1559-843
Sterilising bag for protecting contents during emptying - comprising paper, thermoplastic and combined laminate sheets with one part unsealed

IMPERIAL CHEM INDS LTD 23.09.75-GB-038970

A92 P34 + Q32 Q34 (30.01.80) *DT2641-980 + B65d-27/36 B65d-30/08

Sterilising bag comprises, in open form, two flat and flexible sheets of the same size. One is made of paper and is gas- and steam-permeable and acts as a bacteria filter and the other is made of gas- and steam-impermeable thermoplastics material (I). The bag also has a 3rd sheet having a smaller extension in one direction than the other 2 sheets and is made of laminate composed of a thermoplastic layer (II) united to a paper layer.

The 1st. 2 sheets are bonded to the 3rd sheet by a heat seal along lines describing a polygon with one side missing so that the thermoplastics material layer of the laminate is united to the thermoplastics material sheet. The 3rd sheet terminates inside the sealing line polygon for a part of its circumference remote from the unsealed side of the polygon, and is not sealed to the other 2 sheets along this part of its circumference.

Pref. (I) is polypropylene or a nylon- or polyester-polypropylene laminate. (II) is pref. polypropylene. 13.8.76. (5pp393)

SAWY/ D22 88491Y/50 =GB 1559-946
Modifying thrombogenicity of collagen prostheses - by altering surface charge with e.g. albumin or succinic anhydride

SAWYER P N 10.05.76-US-684664

B04 P32 (30.01.80) *DT2720-544 + C07g-07

Thrombogenicity of a graft prosthesis is controlled by (1) making prostheses from (a) collagen or (b) collagen prepd. from ficin digested chemically modified artery or vein material and (2) influencing surface charge of intimal surfaces of prosthesis by reaction with a soln. of albumin, glyoxal, formic acid, ethoxyformic anhydride, 1-ethyl-3-(3-dimethylaminopropyl) carbodiimide or glycerol.

Pref. the surface charge is stabilised by a tanning agent, pref. glutaraldehyde, dialdehyde starch, or formal-

in. Prosthesis is esp. a vascular prosthesis, partic. a cardiac valve. 5.5.77 as 018788. (11pp963)

MERE D22 34958A/20 =GB 1560-017
Compsn. contg. polyacrylate or polymethacrylate and antibiotic - with amino acid added to control antibiotic release, esp. useful as cements in bone surgery
MERCK PATENT GMBH 18.06.77-DT-727535 (11.11.76-DT-651441)
A96 B05 G03 + P32 P34 (30.01.80) *BE-860-708 A61k-47 C07g-11

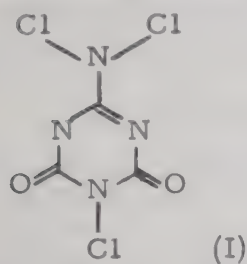
Antibiotic-contg. compsn. comprises synthetic resin particles based on poly(meth)acrylates and contg. ≥ 1 antibiotic, and ≥ 1 amino acid. Pref. amino acid is glycine, alanine, threonine, valine, serine and/or (hydroxy)proline. Pref. content of amino acid is 0.3-5wt.% (based on polymers).

Specifically the amino acid is glycine used in an amt. of 1wt.% (based on polymers). Pref. antibiotic is gentamycin. Pref. the particles have a dia. of 1-20(7-10)mm. Pref. the individual particles are connected at least partially with the aid of filaments or wires.

The compsn. is useful as a surgical material, esp. endoprosthesis. The antibiotic is liberated in an optimum manner. 8.11.77 as 046414. (5pp924)

FMCC D22 38448A/22 =GB 1560-149
Tetra:chloro-ammelide used for bleaching and disinfecting - prepd. by chlorination of ammelide in aq. medium
FMC CORP 22.08.77-US-826440 (26.11.76-US-745146)
E13 P34 (30.01.80) *BE-861-116 C07d-251/46

Tetrachloroammelide of formula (I) is novel. Its prepn. is novel and comprises chlorinating ammelide in aq. medium at 0-30°C with Cl₂. The medium contains NaOH to promote dissolution of the ammelide, in sufficient amt. to keep pH at 2-4.5 on completion of chlorination, thus causing the prod. to ppte. from soln. The molar ratio Cl₂:ammelide is 4:1. The reaction medium pref. contains 2-30 (esp. 5-10)wt.% of ammelide, and is pref. maintained at 10-20°C. The reaction pref. takes < 30 mins.



(I) has available Cl₂ availability of 104.5% and is used for bleaching, sterilising and disinfecting. 25.11.77 as 049072. (7pp977)

FRAN/ D22 77504Y/44 =GB 1560-151
Disposable external sanitary towel shaped for anatomical fit - which improves the comfort and security of the wearer
FRANCO P 14.06.76-FR-017963
P32 + P34 (30.01.80) *BE-853-933 A61f-13/16

A disposable sanitary napkin has an absorbent pad which is thicker and less dense at its edges than at the central portion. The pad is retained between outer impervious layer and inner pervious layers.

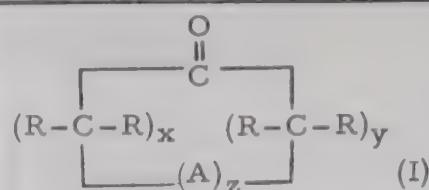
Pref. the absorbent pad is made of compacted sheets, flocks or fibres of cellulosic cotton wool or viscose. An adhesive strip is pref. provided on the external surface of the outer layer. A second absorbent pad is pref. positioned between the first pad and the inner layer.

The napkins are more comfortable to wear and are highly absorbent. 18.4.77 as 016000. (6pp1376)

UNIC D22 48191A/27 =GB 1560-179
Material for orthopaedic casts prodn. - by impregnating substrate with lactone monomer, catalyst and opt. vinyl polymer, then polymerising
UNION CARBIDE CORP 28.12.76-US-755001
A96 P34 + P32 (A18 A23) (30.01.80) *DT2758-216 A61I-15/07 C08g-63/08 C08I-67/04

An orthopaedic cast-forming material is prepd. by impregnating a flexible porous or permeable substrate with a mixt. which comprises a major portion of a cyclic ester monomer, 0.001-10wt.% of aluminium sec. butoxide, and 0-45wt.% of a vinylic polymer of mol. wt. 5,000-600,000; and polymerising the monomer in the absence of moisture.

The cyclic ester monomer has formula (I), in which each R is H, a halogen, 1-12C



alkyl or alkoxy, A is an oxy gp.; x is 1-4; y is 1-4; z is 0 or 1; such that x+y+z is 4-7, and the number of R variables which are substituents other than H is 0-3.

The material is prepd. as a thermoplastic material in the form of a bandage, web, film, tape or sheet, to be used in the formation of casts. 28.12.77 as 054037. (8pp)

MITR ★ D22 08075C/05 ★ J5 4158-096
Menstrual tampon with improved absorption properties - comprises nonwoven cellulose clothes combined with high polymer powder
MITSUBISHI RAYON KK (UNIC-) 02.06.78-JA-066570
A96 F07 P21 P32 (13.12.79) A41b-13/02 A61f-13/18

The menstrual napkin comprises sheet comprising a cellulose non-woven cloth having a high polymer powder impregnated therein. Several such sheets are laminated, pressed and packed into a package to form the napkin. The high polymer is CMC hydroxyethyl cellulose, polyamide acrylate or polyethylene oxide.

The napkin has improved blood and water absorbing property. In an example the non-woven cloth consists of cotton cellulose fibres and CMC powder is sandwiched between the cloths. Then the cloths are pressed at high temp. The sheet is packed by a coating layer. The content of the powder is 11g/m². 2.6.78 as 066570 (8pp64)

DASU-★ D22 08537C/05 ★ J5 4160-739
Gel structure for air cleaning - having greater concn. of air cleaning component in inner section than in outer section
DASUKIN FRANCHISE K 08.06.78-JA-068342
A97 E19 P34 (19.12.79) A61I-09/*

In a gel structure for air cleaning, consisting of aq. gelling agent (e.g. agar, Na CMC, Na alginate, gelatin, dextrin, methyl cellulose or PVA) and aq. medium; included in the aq. gelling agent, the aq. medium including a volatile air-cleaning component (e.g. eugenol, linalool, geraniol, menthol, linalool acetate, benzyl acetate, citronellal, pinene, limonene or other essential oil), the gel structure is of stratified construction consisting of an inner part, based on surface to be contacted with air, and an outer part, the concn. of air-cleaning component included in the inner part being greater than that of the outer part, and liquid releasability of gelling agent, included in the inner part, being greater than that of the outer part.

Constant release of the air cleaning component from the gel structure may be maintained for a long period. 8.6.78 as 068342 (7pp68)

MITR ★ D22 08555C/05 ★ J5 4160-821
Zinc oxide-filled disinfectant acrylic copolymer fibre - where copolymer contains acrylonitrile units, used for making sanitary mats and carpets for hospital, etc.
MITSUBISHI RAYON KK 12.06.78-JA-070547
A14 E32 F01 (A60) (19.12.79) D01f-06/18

ZnO₂-filled disinfectant acrylic fibre, which as single-fibre size ranging from 1.5 - 20 denier contains (a) 1-30 wt.% of zinc oxide, (b) 0.01-5 wt.% of organic disinfectant sparingly soluble in water, and (c) 99-70 wt.% of acrylic (co)polymer containing $\leq$ wt.% of acrylonitrile units. The disinfectant is e.g. 2-(4-thiazolyl)-benzimidazole.

The acrylic fibre is used for making sanitary matting, carpets, etc., to be used in hospitals, etc. ZnO₂ itself exhibits disinfectant effect to some extent, and the disinfectant effect is increased synergistically by combination with the organic, hydrophobic disinfectant. The disinfectant effect is laundry-proof. 12.6.78 as 070547 (4pp173)

NIOC ★ D22 08571C/05 ★ J5 4160-900
Germicidal cellulosic fibre mfr. - by impregnating fibre with soln. of copper oxide or hydroxide in alkali soln. and rinsing of alkali adhered to fibre
NIPPON OIL KK 02.06.78-JA-065660
E32 F06 (19.12.79) D06m-11/12

Cu (hydr)oxide is dissolved in alkali soln. selected from 0.05-4 N NaOH and KOH and a fibre contg. cellulose is impregnated with the soln. to absorb the Cu (hydr)oxide in the alkali soln. and alkali adhered with the fibre is washed with water to remove to give a germicidal fibre. The

germicidal fibre is adsorbed with Cu cpd. in an amt. of 9-120 mg (reduced by CuO) per 1 g of cellulose and the Cu cpd. is not removed without washing with strong acid, Na₂S, KCNS and NaS₂O₃.

In an exaple; 16? g NaOH are dissolved in 490 CC water and 350 mg of CuO and added 500 cc of water to give 4 N NaOH soln. Then 10 g of defatted cotton are immersed in the soln. and allowed to stand for one night. Cu content in the soln. is reduced from 350 ppm. to 38 ppm by reduction of CuO. The defatted cotton is taken out from the soln. and washed with water several times. The pH value of washing indicates 8.4. The defatted cotton is dried at 50° C for 24 hrs. and the cotton contg. 31 mg/g of Cu (by reduction of CuO). 2.6.78 as 065660 (9pp84)

QUAT- ★ D22 C/05 ★ PT--69-652
Cold sterilisation of unstable steroid powders in sealed packages - using mixts. of ethylene oxide and carbon dioxide
QUATRUM EMPRESA NAC 22.05.79-PT-069652
B07 Q31 (15.01.80) B65b C01b C07c C07j

SENE= ★ D22 08917C/05 ★ SU-663-581
Protecting building timber against rot and fire - by treatment with di:ammonium hydrogen phosphate, sodium fluoride and urea for low water penetration and corrosion

SENEZH WOOD PRESERV 13.12.77-SU-552784
C03 E16 F09 P63 (E34 E35) (28.05.79) B27k-03/52
Compsn. for protection of building timber against rot and inflammation, based on (NH₄)₂HPO₄ and NaF, is improved by addition of urea, whereby the corrosion tendency is diminished are the hygroscopic penetration of the timber is suppressed. The comps. contains (in wt. %) NaF 10-30, urea 30-60, and (NH₄)₂HPO₄ 30-60.

The corrosion tendency and the water penetration are approximately halved by the use of the above comps. compared with the known comps.

Maksimenko, N.A., Gorshin, S.N. Bul. 19/25.5.79.
13.12.77. as 552784 (2pp70)

FRAN/ D22 77504Y/44 = US 4184-498
Disposable external sanitary towel shaped for anatomical fit - which improves the comfort and security of the wearer

FRANCO P 14.06.76-FR-017963
P32 + P34 (22.01.80) *BE-853-933 A61f-13/16

Sanitary napkin comprises an outer impermeable film, an inner permeable covering and a main absorbent pad. It is formed by compacting material to an oblong shape with two side swellings on the inner covering side, joining at front and rear and connected by a thinner central section of greater compaction density.

The pad has an open U cross-section providing a shaped fit and allowing fluid absorbed in the central section to pass into the swelling. The pad may be formed by compacting sheet of cotton or rayon, or by compacting fibres or flocked material, and there may be a secondary absorbent pad between main pad and inner covering. 8.4.77 as 785908 (6pp1358)

COLG ★ D22 09040C/05 ★ US 4184-902
Absorbent article e.g. diaper mfr. - involves perforated thermoplastic film between sheet and pad to leave impervious margin

COLGATE PALMOLIVE CO 22.12.77-US-863482 (24.02.75-US-552463)

A96 P32 P73 (22.01.80) A61f-13/18 B32b-07/14
An article, is made by perforating a thermoplastics, film, placing this between a fluid pervious sheet and an absorbent pad, and heating sheet and film spaced from the pad edges to enlarge perforations while leaving a fluid impervious border around the pad.

The heating pref. fuses the film to sheet and pad and pressure may also be applied. The heating may be by a heated roll or by blowing with hot air. The sheet and film may be placed together and perforated simultaneously. 22.12.77 as 863482 C.i.p. 3994299 (+16.6.76, 23.5.77-US-697076, 799638) (7pp1358)

VLEU/ ★ D22 09072C/05 ★ US 4184-974
Liquid biocidal compsn. for topical use - contg. silver ion, sodium polypectate and lubricants and detergents

VAN LEUVEN J W 11.03.77-US-776776 (16.05.74-US-470629)
A96 B05 E32 (E19) (22.01.80) C11d-01/22 C11d-03/48

Compsn. comprises 2.5-6% docetylbenzene-sulphonic acid or its water-soluble salts; 2.7-6.5% lauryl diethanol -amide; 1.1-3% triethanolamine; 1.2-2.5% propylene glycol; 4-10% glycerol; 100-400 ppm. Na polypectate; 13-250 ppm. Ag⁺ ion; NH₄OH to pH 7.2-7.8; and sterile distd. water (free from alkaline earth cations, halide ions and strong acid anions).

The comps. is useful for topical use as a biocide, esp. as a cleanser, vaginal lubricant, for preserving human corpses, for treating condyloma and Herpes virus infections, and as a highly effective antibacterial soln. for pres-urgical scrubs etc., esp. when good activity against staphylococcus aureus is desirable, and for use during examinations and delivery in obstetrics. 11.3.77 as 776776 (clg. 7.6.76-US-693622) (9pp1248)

FREU D22 08127B/05 #US 4185-011
Collagen fibres prodn., esp. for medical purposes - by alkaline and acid treatment of skins

FREUDENBERG, CARL FA 07.07.77-DT-730623 (16.10.78-US-951944)

A11 F01 (A96) (22.01.80) *DS2730-623 + C07g-07

Prepn. of collagen fibres suited for medical use comprise subjecting animal skin, hide or tendons to digestion with a strong alkali until the material has an animde N content of 0.2-0.4 mole/grain, swelling the mass by thorough intermixing with acid, mechanically sepg. collagen fibres from the mass, de-swelling them with salts or organic solvents, and dehydrating to approx. 20-40 wt. % moisture, on the dry wt. of the fibres.

Prior to dehydration there may be supplied to the collagen mass an approx. 5% soln. of oleic acid is acetone or of glycerine in ethanol, where the oleic acid or glycerine act as plasticiser for the collagen. The fibres have the properties of pure native collagen. 16.10.78 as 951944 (4pp997)

DIEM- ★ D22 09119C/05 ★ US 4185-072
Sealed orthopaedic acrylic bone cement mixer - with vacuum removal of fumes and manually rotated mixing paddle

DIEMOLDING CORP 17.02.77-US-769552
A96 (A14) (22.01.80) B01f-07/16 B01l-01

A mixer comprises a bowl which fits within a housing having a vacuum line leading to the cavity between the bowl and housing. A lid seals the top of the housing and permits the vacuum line to draw fumes from the bowl via apertures which surround the mouth of the bowl.

Paddles within the bowl are rotated by a vertical shaft which passes through the lid and terminates in a manually rotatable handle. Alternatively the shaft is anchored to the lid so that rotation of the lid effects rotation of the mixing paddles.

The apparatus mixes an orthopedic cement especially an acrylic material which may emit fumes during its preparation. The fumes are withdrawn by the vacuum line. 17.2.77 as 769552 (7pp295)

FARH D22 75854Y/43 = US 4185-098
Disinfectant compsn. contg. aminopropyl-phosphonate - with chlorinated or aromatic hydrocarbon and a diamine, amido-alkylamine, imidazoline or tetrahydro pyrimidine

HOECHST AG 15.04.76-DT-616713
B05 C03 E19 + P34 (22.01.80) *BE-853-665 A01n-09/02

Disinfectant compsn. comprises a mixt. of dialkylammon-ium phosphite zwitterion of formula (I) and alkylamine subst. amide of formula C₁₁H₂₃CO-NH(CH₂)₃-NMe₂ (II).

$$\begin{array}{c} \text{O} \\ | \\ \text{H}-\text{P}-\text{O}-\text{CH}_2-\text{CMe}_2-\text{CH}_2-\text{NH}_2\text{R} \\ | \\ \text{O}^- \end{array} \quad \oplus \quad \begin{array}{c} \text{O} \\ | \\ \text{H}-\text{P}-\text{O}-\text{CH}_2-\text{CMe}_2-\text{CH}_2-\text{NH}_2\text{R} \\ | \\ \text{O}^- \end{array} \quad \text{(I)}$$

Molar ratio of (I):(II) is 0.2-0.9:1 (pref. 0.3-0.8:1). In (I), R is alkyl derived from coconut fatty acid.

The comps. pref. contains chlorinated hydrocarbon and non-chlorinated aromatic hydrocarbon in addn. The wt. ratio of hydrocarbon : (I) is pref. 0.43-19:1 (esp. < 9:1).

Compsn. is effective against pathogenic bacteria, viruses, fungi, helminths and the oocysts of protozoa esp. coccidia. It is used for disinfection of stables, out-buildings and kennels. 13.4.77 as 787205 (5pp977)

See Also

D21 J5 4157833

D21 J5 4147834

D21 J5 4157835

D21 J5 4160737

D21 J5 4160738

D23: OILS; FATS; WAXES

KURS-★ D23 07765C/05 ★DT 2831-218
Continuous candle mfr. - using telescopic wick tube in upper plunger for straight fixation of wick end

SPEZ MASCH KURSCHNE 15.07.78-DT-831218

(24.01.80) C11c-05

Continuous process for producing candles in press moulds with an upper plunger and a lower plunger uses two telescopic tubes in the former for the insertion of the wick into the granular mould filling. The inner wick tube is set back 10-30mm. from the bottom end of the outer tube until the conical bottom mandrel in the mould has been reached. After the inner tube has been moved to the same level as the outer tube, both tubes can be withdrawn, leaving the wick behind. The final operations follow the conventional procedure.

Process prevents the upward loop of the wick end which, in the case of the conventional simple wick tubes, leads to two flames near the end of each candle's life. 15.7.78 as 831218. (11pp39)

UNIL D23 16456Y/10 =GB 1559-794
Recovering fatty acid from soapy soln. - by neutralising under controlled turbulent flow conditions

UNILEVER LTD 04.09.75-GB-036461

E17 (30.01.80) *BE-845-864 C11b-13/02

Acid oil comprising free fatty acids is continuously recovered by reacting soap soln. (I) with acid. Process comprises adding acid to a stream of (I) to liberate acid oil, just before or as (I) enters a reaction zone in which turbulent flow conditions are maintained. Acid addn. rate is sufficient to maintain a steady pH in the reaction mixt. Ratio of the total dead time to the mean residence time is <1 (pref. <0.2). Acid oil is recovered from the reaction mixt.

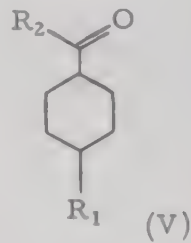
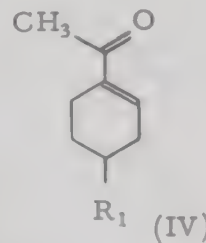
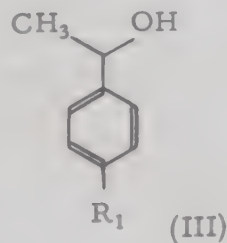
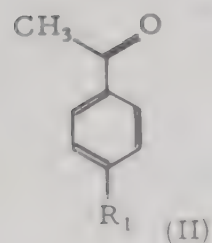
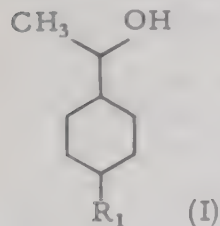
Pref. the pH of the reaction mixt. is measured at the outlet of the reaction zone. Specifically a soap soln. is neutralised having a total fatty matter content of 1-25%. Continuous soapstock splitting is effected. 6.9.76. (9pp)

GIVA D23 57185A/32 =GB 1560-062
Alpha-hydroxyethyl-4-tert-alkyl-cyclohexane perfume components - having sandalwood note and prepd. from alkylbenzene- or alkyl-cyclohexane derivs.

GIVAUDAN L & CIE SA 01.02.77-US-764668

E15 (30.01.80) *DT2804-075 A61k-07/46 C07c-31/13

Substd. cyclohexanes of formula (I) (where R₁ is tert. 6-7C alkyl (where the tert. C atom is bonded to the cyclohexane ring), are prepd. by hydrogenating a cpd. (II), (III) or (IV) or hydrogenating a cpd. (V) (where R is CH₃), or by reacting (V) where R₂ is H with an organometallic deriv. which supplies the methyl radical.



(I) are used in perfume compsns. exhibiting a sandalwood note. Specific (I) is 1-(α-hydroxyethyl)-4-(2-methylpent-2-yl)cyclohexane. 31.1.78 as 003833. (11pp964)

SHEL D23 63357Y/36 =GB 1560-091
Tertiary alcohols - prepd. by hydrolysing the Grignard adduct of the corresponding ketone, are useful in perfuming soaps, cosmetics etc. (NL 30.8.77)

SHELL INT RES MIJ BV 27.02.76-GB-007819

E17 (D21 E15) (30.01.80) *DT2708-048 A61k-07/46 C07c-33/02

Novel tert. alcohols are of formula R₁R₂CH-YC(R₃)(OH)R₄ (I). R₁ is hexenyl substd. by alkyl(s) or ≤ 8C cycloalk(en)-yl gp. itself opt. substd. by alkyl(s). R₂ is H or alkyl or, with R₁ completes a ≤ 10C bicyclo gp. opt. substd. by 1-2 alkyl gps. R₃ and R₄ are each alkyl and Y is ≤ 4C divalent aliphatic gp.

Specific (I) is 5-(2,2-dimethylbicyclo[2,2,1]hept-3-yl)-2-methylpent-3-en-2-ol. (I) are aroma chemicals for soaps, detergents, aerosols, deodorants and cosmetics. 24.2.77. (4pp974)

MART/★ D23 C/05 ★J5 4157-860

Production of karite-wood seed butter

MARTEAUX R 31.05.78-FR-016966

(13.12.79)

7.3.79 as 025706

PEGA-★ D23 08356C/05 ★J5 4160-068

Candle giving coloured flame - comprising main burning agent consisting of ethyl carbamate and synthetic resin, burning wick and colouring wick

PEGASUS CANDLE KK 07.06.78-JA-069234

A95 E37 (18.12.79) C11c-05

The main flammable material consists of a mixture of ethyl carbamate and a synthetic resin (e.g. vinyl acetate-maleic anhydride copolymer, or vinyl acetate - acrylate copolymer).

The burning wick is composed of a combined or stranded yarn on which a pro-oxidant catalyst e.g. Pt, Pd or V is absorbed, and the colouring wick, arranged close to the burning wick, is composed of a flammable yarn-like material (e.g. of cotton), a colour-burning layer of a colour-burning metal cpd. (e.g. hydrochloride, nitrate, hydroxide, oxide, or acetate of Co, Cr, Cu, K, Na, Li, Mn, Sb, Ca, Ba, Sr, Cs or Rb) a pro-oxidant catalyst, and a binder of synthetic resin applied on the wick, and a flammable synthetic resin coating (e.g. of polyethylene).

A clear coloured flame (e.g. red, blue, yellow, violet or white) is obtained using the candle. 7.6.78 as 069234 (5pp30)

FUKO D23 33177W/20 =J8 0000-440
Hardened oils with high plasticity over wide temp. range - prepd. from alkali metal catalyst and pure or mixed oils

FUJI OIL KK 26.03.73-JA-034342

(08.01.80) *J49121-808 +A23d-05 C11c-03/10

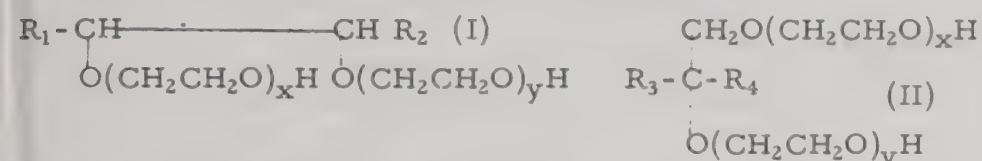
Hardened oils are produced in the presence of an alkali metal catalyst (e.g. Na methoxide) from pure or mixed oils.

In an example, palm oil 50 and rape oil 50 parts were dehydrated in a reaction vessel at 110°C for 10 min under reduced pressure (2-3 mm Hg) The oil mixt. was cooled to 60°C and then pressure was returned to normal with N gas. Na methoxide 0.5 part was added to the oil mixt. which was esterified at 60°C for 40 min and at 20°C for 20 hr. Water was added to inactivate the catalyst. The reaction prod. was worked up to obtain hardened oil. The solid fat indexes of the prod. were 20.0, 17.5, 14.5, 11.5, 4.5, and 0 at 5°C, 10°C, 20°C, 30°C, 40°C and 45°C. resp. 26.3.73 as 034342 C11c-3/10, A23d-5/00 (8.1.80) FUJI OIL KK (8pp)(J49121808)

DREI/ ★ D23 C/05 ★ PT --69-614
Frying oil recovery - by passing oil slowly through fixed absorbent bed formed of coal or bauxite, bentonite or Fuller's earth
DOS REIS M J A 16.05.79-PT-069614
(15.01.80) C11b

HENK D23 10055B/06 = US 4184-985
Clear, stable solns. of oil-soluble perfume oils - contg. as solubiliser an ethoxylated addition prod. of glycol and epoxyalkane
HENKEL KG AUF AKTIEN 11.07.77-DT-731218
A96 E17 (A25) (22.01.80) *DT2731-218 + C11b-09

Clear, stable, aq. or aq.-alcoholic soln. of a fat-soluble ethereal perfume oil, comprises (1) 0.5-5 wt. % (based on total wt. of soln.) of a hydroxyalkyl ether-ethoxylate intermediary of formula (I) or (II), (2) 0.1-1 wt. % of a fat-soluble ethenol perfume oil, (3) 0-10 et. % of a water-miscible alcohol, and (4) the balance of conventional substances used in the solns. including water, where the amt. of water or water and alcohol is 70-90 wt. %.



In the formulae R_1 and R_2 are each 1-24C alkyl, and R_3 and R_4 are each 2-22C alkyl or H; x and y are each an integer of 1-16; provided that the total of C atoms of R_1 -4

is 2-26, and $x + y = 2-18$. The amt. of component (1) is ≥ 4 times the amt. of perfume oil. 11.7.78 as 923575 (6pp924)

SYLU ★ D23 09097C/05 ★ US 4185-026
De-oiling spent crystalline clays - by treatment with aq. alkali at elevated temps.
SYLVACHEM PTY LTD 20.09.77-US-834965 (25.02.76-US-661257)
(22.01.80) C11b-13/04

Elevated temp. process for deoiling spent crystalline clay (I) from the refining of glyceride oils is as follows: (a) spent (I) is dispersed in aq. alkali at elevated temps. so that most of the oily phase from (I) is removed as glyceride esters; (b) primary treated (I) is sepd. from the dispersion; (c) sped. (I) is dispersed in fresh alkali at elevated temps. so that most of the glyceride esters in the dispersion are saponified; (d) sec. treated (I) is sepd. from the dispersion; and (e) the remaining aq. phase is acidified to afford free fatty acids which are recovered.

Rapid processing of spent (I) is achieved, giving a high degree of fatty acid removal. Soap formation and resulting emulsion formation are suppressed, while the amt. of alkali used is small. 20.9.77 as 834965 C. i. p. 4049685 (c. f. 705 51 Y/39)(7pp478)

D24: SOAP; SOAP DETERGENTS

HENK D24 30227A/17 = GB 1560-015
Mosaic-patterned coloured soap cakes - prepd. by compression of evacuated granules
HENKEL KG AUF AKTIEN 21.10.76-DT-647447
(30.01.80) *BE-859-932 C11d-13/14 + C11d-17

Cleaning agent in piece form, comprises coloured soap portions adjoined to one another with sharply defined boundaries to give a mosaic-like appearance, at least some of the portions being of circular outline at the surface. Pref. the portions have a size of 1-20(3-15)mm.

Pref. each portion contains 70-85wt. % of fatty acids and 1-10wt. % of 12-20C branched aliphatic alcohol. Specific alcohol is isotridecyl or hexadecyl alcohol or 2-octyl dodecanol. Multicoloured soap tablets having a striped, marbled or speckled appearance may be produced. 12.10.77 as 042506. (4pp924)

HENK D24 30227A/17 = GB 1560-016
Mosaic-patterned coloured soap cakes - prepd. by compression of evacuated granules
HENKEL KG AUF AKTIEN 21.10.76-DT-647447
(30.01.80) *BE-859-932 C11d-13/14 C11d-17

Prod'n. of a cleaning agent in piece form comprises introducing a mixt. of coloured soap portions into a press consisting of a mould, two plungers and an evacuation device, producing a vacuum of <100 torr in the press and compressing the portions at a pressure of 60-450(120-150) bar.

Pref. the compression is performed at a pressing speed of 0.1-5(1.2)m/min. Pref. the portions comprise approx. 4% 2-octyl dodecanol. Pref. the portions are introduced into the press at 15-45°C. Pref. the portions comprise 70-85(76-80)% fatty acids.

Multicoloured soap tablets having striped, marble or speckled appearance may be produced. 12.10.77 as 39884/78, Div. ex 1560015. (4pp924)

D25: OTHER DETERGENTS

THIE/ ★ D25 07567C/05 ★ DL-138-191
Sodium carbonate per-hydrate prodn. - using hydrogen peroxide soln. stabilised with acid, magnesium salt and silicate
THIELE W 31.08.78-DL-207572
A81 E34 (17.10.79) C01b-15/05 C01d-07

Prod'n. of stabilised Na_2CO_3 perhydrate (I) comprises spraying stabilised aq. H_2O_2 soln. (pref. 50-80 wt. %) onto moving particulate Na_2CO_3 . Improvement is that the H_2O_2 is stabilised by treatment with (a) ≤ 0.4 mole/l. soluble Mg salt (e.g. the sulphate); (b) excess of acid (e.g. H_2SO_4); (c) aq. silicate soln. (added with stirring, e.g. water glass) to a total concn. of ≤ 1 mole/l (as SiO_2), and (d) opt. other water-soluble stabilisers. The acid is sufficient to give the peroxide soln. a $\text{pH} \leq 2$.

Other opt. stabilisers are aminopolycarboxylic acids (e.g. EDTA) or their salts, used at 0.01-0.1 wt. % on final prod. Pref. the silicate is used at ≥ 0.2 mole/l with Si:Mg atom ratio 1-5:1. Opt. the peroxide soln. also contains a granulating aid e.g. CMC,

(I) is a bleaching component for washing and bleaching compsns., i.e. a replacement for Na perborate. It can be

incorporated into solid or liq. compsns. and the stabilisers effectively reduce the tendency to decompose in soln. and provide hydrosol of excellent stability which is easy to spray. 31.8.78 as 207572 (17pp1251)

HUBE D25 19559A/10 = GB 1560-056
Zeolite A prodn. of higher ion exchange capacity - by digesting calcined kaolin with alkali metal under high shear, useful in detergents and water purificn.

HUBER J M CORP 28.09.76-US-727822
E33 J01 (D15) (30.01.80) *US4075-280 C01b-33/28
Zeolite A of formula $1.0 \pm M_2\text{O} : \text{Al}_2\text{O}_3 : 1.85 \pm 0.5 \text{SiO}_2 : \text{XH}_2\text{O}$ (I) (where M is alkali metal and X is O^- or integer up to 5) is produced by process in which a kaolin clay is calcined at 600-900°C to convert to the metakaolin phase; a slurry of the calcined clay is formed in aq. medium and 15-40wt. % of the total amt. of alkali to be used is added to the slurry, the amt. being a 3 molar excess.

The mixt. is heated at 40-65°C in a first digestion stage under conditions of high shear; while maintaining the conditions of high shear the temp. of the mixt. is gradually increased to 80-100°C and the remainder of the alkali

metal hydroxide is added gradually. The zeolite A is crystallised and recovered from the mother liquor contg. alkali metal aluminate ions.

The zeolite A has improved ion exchange properties. 6.9.77 as 037212. (8pp964)

UNIL D25 27114Y/16 =GB 1560-073
Washing powders contg. nonionic surfactant and water-soluble soap - and sodium tripolyphosphate in reduced amount esp. 10 to 20 percent.

UNILEVER LTD 17.10.75-GB-042833

A97 (30.01.80) *BE-847-164 C11d-01/68 C11d-03/06 C11d-10/04

Heavy duty fabric washing powder comprises a non-soap detergent, a water soluble soap and Na tripolyphosphate in an amt. equiv. to $\geq 6\%$ phosphorus as a detergency builder. The non-soap detergent consists of alkoxyated alcohol nonionic surfactant present in amt. of 5-50wt.%, the compsn. comprising 10-30wt.% soap, 10-24wt.% tripolyphosphate and balance conventional fabric washing components.

Pref. the soap is a mixt. of 45-60wt.% tallow soap, 20-30wt.% coconut oil soap and 15-25wt.% hardened rapeseed oil. Pref. the surfactant comprises a mixt. of long and short chain ethoxylates in which the average degree of ethoxylatin is 6-9 moles of ethylene oxide.

Good detergency is provided without the use of excess amts. of phosphate. 15.10.76. (8pp964)

UNIL D25 27114Y/16 =GB 1560-074
Washing powders contg. nonionic surfactant and water-soluble soap - and sodium tripolyphosphate in reduced amount esp. 10 to 20 percent.

UNILEVER LTD 17.10.75-GB-042833 (15.10.76-GB-042916)

A97 (30.01.80) *BE-847-164 C11d-03/06 C11d-10/04

Heavy duty fabric washing powder comprises a surfactant system consisting of a synthetic organic anionic surfactant and a water soluble soap, and a detergency builder system comprising soap and a tripolyphosphate. The powder contains 5-50wt.% surfactant; 15-30wt.% water soluble soap and 10-20wt.% tripolyphosphate, the balance being conventional fabric washing materials.

Pref. the soap is a mixt. of tallow class fat and coconut oil soap in a wt. ratio of 9:1-3:1 and the ratio of soap to tripolyphosphate is $< 1:1$. Pref. the surfactant comprises the Na salt of prim. 16-18C alcohol sulphate.

Good detergency is provided with reduced amts. of phosphate. 15.10.76. Div. ex 1560073. (-pp964)

PROC D25 34482Y/20 =GB 1560-076
Spray dried granules contg. sodium tripolyphosphate and wax - used in nonionic detergent washing powder

PROCTER & GAMBLE CO (GRAH-) 14.11.75-GB-047050

E34 (30.01.80) *BE-848-274 C11d-03/06

Granular heat dried detergent compsn. contg. Na tripolyphosphate and $< 5\text{wt.}\%$ organic surfactant is mfd. by (a) prepg. a slurry compsn. contg. Na tripolyphosphate, water, and 0.1-4wt.% of a dispersed water-insoluble wax of m.pt. 35-125°C and saponification degree < 100 ; and (b) spray drying the slurry. Pref. the slurry contains 10-75-(35-55)wt.% Na tripolyphosphate. Pref. the surfactant used is Na (10-14C)alkyl-benzene sulphonate. Pref. other non-heat sensitive components of the detergent compsn. are present in the slurry.

The compsn. is used for removing stains from heavy duty fabrics. Degree of reversion of the tripolyphosphate is reduced by the addn. of the wax. 12.11.76. (5pp964)

PROC D25 49046Y/28 =GB 1560-083
Detergents for removing oil stains on fabrics - contg. nonionic surfactant and glyceryl monoether

PROCTER & GAMBLE CO 24.12.75-US-644214

A97 E17 (A25) (30.01.80) *DT2657-517 C11d-01/82

Novel detergent compsns. comprise a binary surfactant system consisting of 80-20wt.% (I) and 20-80wt.% nonionic surfactant (II). (I) is a monoglyceryl ether $\text{R}\cdot\text{O}\cdot\text{CH}_2\cdot\text{CH}\cdot\text{OH}\cdot\text{CH}_2\cdot\text{OH}$, where R is 8-16C linear alk(en)yl. (II) is a condensation prod. of a 9-15C alcohol with ethylene oxide and opt. propylene oxide. (II) has HLB 10.

Pref. R is 8-12C alkyl. Pref. (II) is a condensation prod. of ethylene oxide with a straight chain alcohol. Pref.

the ratio (I):(II) is 1:4-1, esp. 3:3-7.

Compsns. are esp. suitable for removing greasy stains e.g. used motor oil, from fabrics, esp. synthetic fabric 22.12.76 as 053519. (8pp974)

LIOY ★ D25 08285C/05 ★ J5 4159-4
Heavy duty cleaning compsn. for clothes - comprising water-soluble alkali phosphate(s) mainly of pyrophosphate, and anionic surfactants

LION FAT & OIL KK 06.06.78-JA-068093

A97 E19 (E34) (17.12.79) C11d-03/06

Cleaning compsn. contains 5-15 wt.% of a mixt. (I) of water-soluble alkali phosphates consisting of pyrophosphate as a main component, 0.3-2.0% tripolyphosphate and 2.0-4.0% orthophosphate and 10-30 wt.% anionic surfactant (II). Compsn. contains a comparatively small amt. of phosphate. It is suitable for the cleaning of clothes. It has high cleaning power though the washing water has somewhat high hardness (e.g. 5-8° DH).

(I) may contain not exceeding several wt.% of trimetaphosphate, tetrapolyphosphate, pentapolyphosphate, etc (II) is ≥ 1 of (a) alkylbenzenesulphonate having 8-15C alkyl, (b) 8-18C alkylsulphate, (c) sulphate ester of polyoxyethylenealkylether of 1-5 mols.-ethyleneoxide-adduct of 8-18C alcohol, (d) alpha-olefin-sulphonate of 12-22C, (e) alkanesulphonate of 12-22C and (f) salts of higher fatty acids. Nonionic and anphoteric surfactants and (in)organic builders may also be added. 6.6.78 as 068093 (4pp170)

LIOY ★ D25 08288C/05 ★ J5 4159-41
Granular cleaning compsn. prepn. - by multistage spray-drying using slurries of differing aluminosilicate concn. in differing stages

LION FAT & OIL KK 07.06.78-JA-068535

(17.12.79) C11d-11/02

In prepn. of granular cleaning compsn. consisting of 15-40 wt.% of surfactant and 7-30 wt.% aluminosilicate (dry bases) by spray-drying of a slurry contg. these components using multistage spray-dryer providing spray-nozzles at equal spaces in each horizontal stages, the slurry is divided in two portion of different compsns. and a slurry contg. $\geq 80\text{ wt.}\%$ aluminosilicate on its total amt. is sprayed from the nozzles of the stages other than the lowest stage and another slurry contg. $< 20\text{ wt.}\%$ of aluminosilicate is sprayed from the nozzles of the lowest stage into a same drying space.

Granular cleaner contg. decreased amt. of phosphatic builders can be prepd. without impairing its powdery physical properties (such as flowability resistance to caking into hardened mass by pressing or by water absorption). Drying efficiency is increased, and conglomeration of cleaner is lessened. 7.6.78 as 068535 (5pp170)

SUNP- ★ D25 08289C/05 ★ J5 4159-41
Acidic fine granular cleaner, for waste water pipes, etc. comprising amino:sulphuric acid and/or sodium hydrogen sulphate encapsulated in soluble high polymer film

SUN POLE KK 07.06.78-JA-069180

A97 (17.12.79) C11d-07 C11d-17

An acidic fine granular cleaner contains amidosulphuric acid and/or sodium hydrogen sulphate as the active components which are encapsulated as small grains with a film of water- and organic solvent-soluble high polymer. The cleaner may also include inorganic carbonate as a foaming agent, also capsulised as small grains with a film of water- and organic solvent-soluble high polymer.

The cleaner resists hardening into a mass during storage, and its high fluidity is retained until its using time. Foaming is retarded and long lasting. The cleaner can be used for waste water pipes and traps.

Organic solvents are ethylalcohol, isopropylalcohol, (m)ethylacetate, acetone, MEK, etc. The high polymer is methylvinylether, maleic anhydride copolymer, hydroxypropylcellulose, etc.

In an example, encapsulated granules of amidosulphuric acid are obtd. by addn. of solvent soln. of the high polymer to amidosulphuric acid powder under stirring in a mixer and with evapn. of the solvent. The high polymer employed in an amt. of 0.1-2.5 wt.% on amidosulphuric acid, and the solvent is used in amt. of 5-20 pts. wt. per pt. wt. of high polymer. 7.6.78 as 069180 (5pp)

LIOY ★ D25 08410C/05 ★ J5 4160-404
 Aluminosilicate particles-contg. detergent slurry prodn. - for spray drying to granules which do not leave residues on washed clothing
 LION FAT & OIL KK 08.06.78-JA-069043
 E34 (19.12.79) C11d-11/02

Detergent slurries contain 10-30 wt. % surfactant; 5-20 wt. % aluminosilicate of ave. particle size 0.1-5 μ m; 10-40 wt. % detergent builder and 35-50 wt. % water. They are prepd. by pregp. a preliminary mixt. of aluminosilicate dispersed uniformly in an aq. soln. contg. 10^{-5} - 10^{-1} mol/g water-soluble inorganic builder, mixing this mixt. uniformly with the surfactant, remaining builder and water using a homogeniser.

The builder is ≥ 1 of alkali metal pyrophosphate, alkali metal hexametaphosphate, Na_2CO_3 and Na_2SO_4 . The slurries can be spray dried to give a granular laundry detergent. The aluminosilicate particles do not coagulate and do not remain on clothing after washing. 8.6.78 as 069043 (5pp)

AJIN ★ D25 08411C/05 ★ J5 4160-405
 Shampoo compsn. synergistically improved in detergency and lathering - contains N-acyl glutamate and glycerine fatty acid ester condensate with N-acetyl acidic aminoacid
 AJINOMOTO KK 09.06.78-JA-069458
 E16 (19.12.79) C11d-01/10

A detergent compsn. contains N-acyl glutamate, glycerine fatty acid-(N-acetyl acidic amino-acid)ester, or salts thereof. The detergent compsn. pref. also contains glycerine fatty acid-(pyroglutamic acid) ester and/or glycerine fatty acid-(N-acetyl neutral amine-acid) ester. The compsn. have a mild effect on the skin and hair, providing higher safety in combination with superior foam-generating effect and detergency, even in the presence of oil scale. The pref. additives increase of the skin protecting effect, emulsifying effect, and antistatic effect. Smoothness in running a comb through the hair is also improved.

In the N-acyl glutamate; the pref. acyl residue is 2-ethylhexanoyl, lauroyl, palmitoyl, stearyl, oleoyl, etc. or hydrogenated beef tallow fatty acid acyl or coconut oil fatty acid acyl, etc. Pref. salt component is Li, Na, K, NH_4 , alkyloamine, or basic aminoacid. The glycerine fatty acid-(N-acetyl acidic aminoacid) ester is obtd. by the condensn. of glycerine monofatty acid ester with N-acetyl acidic aminoacid, where the fatty acid residue is 6-22C (un)saturated fatty acid, such as lauric, palmitic, steric, oleic acid, or coconut fatty acid, hydrogenated beef tallow fatty acid. Preferred acidic aminoacid residue is aspartic acid, or glutamic acid. 9.6.78 as 069458 (4pp126)

PROC ★ D25 09070C/05 ★ US 4184-970
 Antistatic, fabric softening detergent additive - contg. water soluble salt, quat. ammonium cpd., dispersion inhibitor and water
 PROCTER & GAMBLE CO 16.11.78-US-961447
 E19 F06 (22.01.80) D06m-13/34

The particulate additive is free of organic agglomerating agents, and consists of an agglomerate of (by wt.) 5-75% of an H_2O -soluble neutral or alkaline salt (I); (b) 5-75% of an intimate mixt. of (i) 99.9-20% of a quat. ammonium cpd. $\text{R}_1\text{R}_2\text{R}_3\text{R}_4\text{N}^+ \text{Y}^-$ (II), and (ii) 0.1-80% of a dispersion inhibitor (III); and (c) 5-75% H_2O . In the formula 1 or 2 of $\text{R}_1\text{-R}_4 = 16\text{-}22\text{C}$ aliphatic, or Ph or PhCH_2 both subst. by 10-16C alkyl; remaining $\text{R}_1\text{-R}_4 = 1\text{-}4\text{C}$ alkyl, 2-4C hydrox

-yalkyl, and cyclic structures which include the N; Y = OH halide, sulphate, Me- or Et-sulphate, or phosphate.

(III) has H_2O solubility > 50 ppm at 25° ; softening pt. $75\text{-}250^\circ\text{F}$; and may be a paraffinic wax, a cyclic or acyclic mono- or polyhydric alcohol (or esters), opt. subst. aliphatic carboxylic acids (and esters), 3-4C alkylene oxide condensates of the above cpds., and mixts. The prepd. additive has particle size 10-500 μ , H_2O solubility 50 ppm at 25° , and softening pt. $75\text{-}250^\circ\text{F}$.

The inexpensive additive may be included in convention -al detergent compsns. (which remain homogeneous); it has good caking and flowability characteristics, although it includes only min. amts. of antistatic agent it is effective in softening fabrics. 16.11.78 as 961447 (13pp478)

HENK D25 28683X/16 = US 4184-975
 Pourable agglomerate contg. aluminosilicate calcium binders - and water sol. salts, for washing agents

HENKEL KG AUF AKTIEN 03.10.74-OE-007967
 E37 (22.01.80) *DT2543-976 C11d-03/06 C11d-11 + C01b-38/28
 Prod. of a pourable agglomerated aluminosilicate binder compsn. comprises intimately mixing 50-75 pts. wt. of ≥ 1 moist, finely divided synthetic water-insoluble aluminosilicate cpd. having a water content of 30-60 wt. %, a Ca binding power of 100-200 mg CaO/gm of anhydrous active substance, a particle size of 0.1-30 μ and of formula $(\text{M}_2\text{O})_x \cdot \text{Me}_2\text{O}_3(\text{SiO}_2)_y$ (where M is Na or K cation, $x = 0.7\text{-}1.1$, Me is Al or B, and $y = 1.3\text{-}3.3$) with 25-50 pts. wt. of ≥ 2 anhydrous, finely powdered alkali metal salts capable of binding water as water of crystallisation or hydration, selected from tripolyphosphates, pyrophosphates, sulphates, carbonates and metasilicates. Each of the salts is present in an amt. of 10 wt. % based on anhydrous cpd. The compsn. has improved storage stability and transportability. The process avoids the expensive drying used in prior art. 14.12.77 as 860611 (clg. 1.10.75-US-618343)(6pp924)

LIOY D25 92844X/50 = US 4185-034
 Olefin sulphonate bleaching with hydrogen peroxide - using aq. soln. activated by phosphate and or silicate

LION FAT & OIL KK 23.05.75-JA-062390
 E17 (E36) (22.01.80) *DT2622-057 C07c-143/02
 Water-soluble olefin sulphonates obtd. by sulphonating 12-22C olefins, neutralizing and hydrolyzing are bleached by (i) adding 2-7 wt. % Na and/or K pyro-, tripoly- and/or mono-phosphate in soln. at $30\text{-}130^\circ\text{C}$ and pH 7-12; (ii) adding 0.1-10 wt. % (w. r. t. olefin sulphonate) of H_2O_2 and (iii) keeping at $30\text{-}130^\circ\text{C}$ until the olefin sulphonate is bleached.

Pref. the H_2O_2 is at 0.5-5 wt. %. Pref. the olefin sulphonate is an Na salt of a 16-18C α -olefin sulphonate. Pref. (ii) and (iii) are at $50\text{-}100^\circ\text{C}$. Pref. the substance added in (i) is Na tripolyphosphate. 8.5.78 as 903396 (clg. 4.5.76-US-686382)(5pp974)

See Also

D21 DT 2928190



*ABBO 02.10.78 ABBOTT LABORATORIES B05 C03 D21 *US 4185-120
Topical treatment of fungal and yeast infections on animal skin - 09140C/05

*ADZH= 05.03.77 ADZHAR CANNING IND D13 *SU -663-369
Citrous fruit juice heat treatment unit - 08861C/05

AJIN 02.05.77 AJINOMOTO KK D16 E16 =US 4184-918
4-Formyl-2-amino-butyric acid prepn. by bacterial fermentation - 84392A/47

*AJIN 01.06.78 AJINOMOTO KK B03 C02 D16 *J5 4157-896
Antibiotic 4-N-D-alanyl-2,4-di:amino-2,4 di:de:oxy:arabinose prepn. - 08063C/05

*AJIN 09.06.78 AJINOMOTO KK D25 E16 *J5 4160-405
Shampoo compsn. synergistically improved in detergency and lathering - 08411C/05

ALFA 26.08.77 ALFA-LAVAL STAL D15 J02 =DL -138-306
Liquid aerating stirrer e.g. for manure or sewage - 18516B/10

*ALME- 06.06.78 ALMER SANGYO KK D15 J03 *J5 4160-057
Electrolytic treatment of waste water - 08354C/05

ALPH- 30.06.78 ALPHA PATENT LTD A96 B04 D16 =GB 2025-977
Plasminogen activator urokinase purificn. - 05675C/04

ALSO- 10.01.78 ALSO LABORATORISAS B01 D21 #US 4185-099
Agents for treating scalp and preventing hair loss - 50097A/28

AMCY 25.01.74 AMERICAN CYANAMID CO B03 C02 D13 =IT 1035-548
Cycloalkano/B/thienyl-urea derivs. - 52741W/32

AMCY 08.07.74 AMERICAN CYANAMID CO A91 D15 =IT 1035-869
Clearing natural water contg. suspended colloidal particles - 06771X/04

AMCY 20.06.77 AMERICAN CYANAMID CO B04 C03 D16 =DL -138-222
Antibiotic BL 580 ZETA useful as anticoccidiosis agent - 00004B/01

*AMSU= 27.05.77 A MEDICINE SUPPLY D13 *SU -663-364
Storage-stable milk-based infant food paste mfr. - 08856C/05

*ANDE/ 11.07.75 ANDERSON J C04 D15 E17 H09 *US 4184-892
Washing walls of organic digester - 09034C/05

ANPR- 12.07.78 ANPROSOL INC D22 E34 (E33) =DT 2927-016
Chlorine based sterilising soln. contg. phosphate buffer - 05974C/04

ANVR 13.04.78 AGENCE NAT VALORISA B04 D16 J04 =FR 2422-956
Identification of nucleic acid fragments - 77171B/43

APAW- 22.12.75 APAW SA D13 =GB 1559-990
Machine for making soft ice cream - 29203Y/17

*ARVA/ 30.09.75 ARVANITAKIS K S D15 *US 4184-955
Solids settler for contaminated liquids - 09066C/05

ASAG 12.04.78 ASAHI GLASS KK A97 D15 K05 M25 =FR 2422-425
Macromolecular adsorbent for heavy metal ion recovery - 77797B/43

*ASAH 02.06.78 ASAHI CHEMICAL IND KK C03 D12 *J5 4160-684
Storing living shellfish in sea water - 08511C/05

*ASAH 05.06.78 ASAHI CHEMICAL IND KK C03 D13 *J5 4160-686
Feedstuff compsn. for fish - 08512C/05

*ASAH 09.06.78 ASAHI CHEMICAL IND KK A97 D11 *J5 4160-781
Fillings for bread, biscuits or cakes - 08548C/05

ASAH- 23.03.78 ASAHI ENG KK D15 F09 J04 =J5 4125-882
Aq. salt soln. disposal - 72092B/40

ASAH- 23.03.78 ASAHI ENG KK D15 F09 J04 =J8 0000-645
Aq. salt soln. disposal - 72092B/40

*ASCH= 23.12.77 AS USSR CHEM PHYSICS D16 *SU -662-584
Frozen microbial biomass disintegrating extruder - 08735C/05

*ASMI= 23.12.77 AS USSR MICROORG D16 *SU -662-584
Frozen microbial biomass disintegrating extruder - 08735C/05

ASPR 31.05.78 NICHOLAS PTY LTD A96 B04 D21 (A11) =DK 7902-197
Inhibition of dental caries with cationic polysaccharide - 71825B/40

ASPR 31.05.78 NICHOLAS PTY LTD A96 B04 D21 (A11) =J5 4157-842
Inhibition of dental caries with cationic polysaccharide - 71825B/40

ASTR 29.04.75 ASTRA EWOS AB C03 D13 #IT 1035-559
Granular, animal feedstuff - W/26

AUTO- 15.06.73 AUTOTROL CORP D15 =SU -663-297
Effluent purification by biological rotary contactor - 00001W/01

BADG 03.07.78 BADGER CO INC A35 D23 =DT 2926-344
Removal of polymer fines from tallow - 54405B/29

BADI 30.05.74 BASF AG D18 E12 =IT 1035-823
Complex zirconium-aluminum salts for tanning leather - 00321X/01

BADI 14.05.77 BASF AG A60 C03 D22 E14 =OE 7803-428
2-Tri:chloro:methyl-4-nitro:benzene:sulphenic acid derivs. - 82112A/46

BADI 19.04.78 BASF AG D18 E21 F06 =J5 4158-434
Reactive mono:azo dyes of aromatic series - 79257B/44

BADI 08.06.78 BASF AG D18 =J5 4160-701
De-liming limed hides - 73687B/41

BAHR/ 07.03.75 BAHR A D15 =CA 1069-378
Filter process for dehydrating sewage sludges - 57879X/31

*BALC 05.07.78 BALCO FILTERTECHNIK GMBH D17 M14 *DT 2829-529
Sieves, esp. for used in continuous sugar centrifuges - 07659C/05

BALC 05.07.78 BALCO FILTERTECHNIK GMBH D17 M14 =GB 2026-034
Sieves, esp. for used in continuous sugar centrifuges - 07659C/05

BANE- 22.02.72 BANEXI BANQUE EXPAN D16 H04 =SU -663-296
Biodegradable petroleum product emulsions - 48402U/34

BARH 04.06.71 BARNES HIND PHARM INC A89 B05 D22 (A14) #DS 2127-854
Resterilizing contact lens solns - 16041T/10

BARN- 11.12.75 BARNANGEN AB B05 D13 E17 =GB 1559-989
Sorbitol and xylitol compsn. for sweetening edible prods. - 29152Y/17

*BATU= 05.03.77 BATUM FOOD IND RES INST D13 *SU -663-369
Citrous fruit juice heat treatment unit - 08861C/05

*BEAF 11.11.77 BEATRICE FOODS CO D13 *US 4185-126
Reconstituting cheese trimmings into horns - 09143C/05

*BEAF 06.03.78 BEATRICE FOODS CO D12 *US 4184-229
Appts. for removing kidneys, tail and fat from poultry backs - 08947C/05

BEHW 22.11.75 BEHRINGWERKE AG A96 B04 D16 (A14) =OE 7608-631
Vinylene-glycol copolymers as biological supports - 36264Y/21

*BEHW 06.07.78 BEHRINGWERKE AG B04 D16 *DT 2829-741
Hepatitis A virus recovery from monkey stools - 07676C/05

BERG 31.07.74 BERGWERKSVERBAND GMBH D15 =IT 1035-672
Waste water purifn by adsorption of activated carbon - 78746W/48

BERG 06.08.74 BERGWERKSVERBAND GMBH D15 =IT 1035-783
Removing organic pollutant from effluent - 72560W/44

BERP 28.10.77 BEROL KEMI AB D15 E11 =FR 2422-599
Removing oil fat, wax, etc. from a surface - 35799B/19

BERT- 18.06.76 HCH BERTRAMS AG D15 =OE 7703-955
Removal of hydrocarbons etc. from industrial waste water - 70800Y/40

BILS 10.04.78 BILLERUD UDDEHOLM D18 F09 =FR 2422-764
Prodn. of cellulose fibres from wood, and paper made from them - 77635B/43

BIOT- 11.02.78 BIOTECH FORSCHUNG D16 E13 H01 =FR 2422-715
Oil extn. by flooding with water - 61639B/34

*BLEN/ 08.07.78 BLENKE H A13 D16 J04 *DT 2830-126
Chemical and biochemical reactor - 07687C/05

BOEF 25.03.76 BOEHRINGER MANNHEIM GMBH B01 D16 =US 4184-921
Enzymatic determination of cholesterol - 74223Y/42

BOEF 30.12.76 BOEHRINGER MANNHEIM GMBH D13 J07 =GB 1559-920
Freeze drying granules of foods, drinks and pharmaceuticals - 47728A/27

BOEF 18.03.77 BOEHRINGER MANNHEIM GMBH D16 E19 J04 =OE 7708-697
Measuring or eliminating formate(s) or their precursors - 63401A/36

BOEF 02.05.78 BOEHRINGER MANNHEIM GMBH A89 B04 D16 =J5 4158-297
Substrate for serum alpha-amylase determination - 82716B/46

BOEF 03.07.78 BOEHRINGER MANNHEIM GMBH D15 =NL 7905-002
Increasing biological breakdown of toxic waste water - 03746C/03

BOEF 18.07.78 BOEHRINGER MANNHEIM GMBH B04 D16 E17 =DS 2831-580
Glycerol determination using glycerol dehydrogenase - 05764C/04

*BOEF 08.08.78 BOEHRINGER MANNHEIM GMBH B04 D16 J04 *DS 2834-705
Enzymatic analysis using NADH or NADPH - 07640C/05

BOEH 03.06.78 BOEHRINGER C H SOHN B04 C03 D16 =J5 4160-746
Antiviral compsn. contg. eucaryotic transfer-RNA - 87609B/49

*BOHL 28.07.78 VER EDELSTAHLWERKE AG D22 *OE 7805-513
Steam operated sterilising appts. for washing, bandages, instruments - C/05

BOHN/ 15.04.78 BOHNKE B D15 =FR 2422-597
Waste water activated sludge plant with sec. activation tank - 59870B/33

*BORM/ 17.03.77 BORMANNE J B03 D16 *DL -137-945
Streptomycin prodn. by fermentation - 07492C/05

BORM/ 21.04.78 BORMET H D15 =OE 7807-254
Clarification plant run/off gutter cleaning - 79269B/44

BOTS/ 21.10.76 BOTSCH B D15 =US 4184-957
Trash screens and rake for water intake - 32314A/18

*BREA= 30.01.78 BREAD BAKING IND D11 *SU -663-359
Bread prodn. from surfactant-contg. fermenting dough - 08851C/05

BRIM 29.06.76 BRISTOL MYERS CO A96 D21 (A14 A25) =GB 1559-935
Hair fixation using fluorinated terpolymer - 86492Y/48

BROV 06.03.78 BROWN BOVERI & CIE D15 J01 =FR 2422-428
Filtering flocculated drinking or waste water, or non-aq. suspensions - 68578B/38

BRPE 02.02.63 BRITISH PETROLEUM LTD B04 C03 D16 H04 (D13) =IT 1035-501
Culture of micro-organisms on hydrocarbons - 37140F/00

*BRPE 10.04.78 BP SOC FR PETROLES C03 D13 E11 M14 (C01) *FR 2422-731
Phospho amino lipid used as anticorrosion agent - 07879C/05

BUCL 25.10.77 BUCKMAN LABS INC A97 D15 E11 M14 =J5 4160-317
Compsn. used to prevent corrosion and incrustation in aq. systems - 44129A/25

BUCL 15.12.77 BUCHERGUYER MASCH D14 (D16) =OE 7808-986
Fruit juice extraction plant - 47394B/26

*BULL/ 09.09.78 BULLOCK G P D14 J01 *BE -878-481
Removable in/line filter for piped liq. partic. milk - 07381C/05

BULT/ 13.04.78 BULTHEEL J D11 =FR 2422-336
Preparing layered paste for french pastry etc. - 54544B/30

*BUNA 31.07.78 CHEM WERK BUNA VEB A35 D15 *DL -138-057
Treating aq. effluents contg. polymer dispersions - 07524C/05

CADB 31.01.78 CADBURY SCHWEPPES LTD D13 =FR 2422-344
Food prod. consisting of opt. filled, pref. tubular net - 60155B/33

CALG 05.06.78 CALGON CORP D15 M14 =J5 4159-350
Corrosion inhibiting compsn. for water treatment appts. - 89851B/50

- *CALP- 16.05.78 CALPIS SHOKUHIN KOG B04 D16 (B01) *J5 4157-894
3-Alpha-hydroxy-steroid dehydrogenase - 08062C/05
- *CAMP- 25.08.78 CAMPBELL SOUP CO D15 *US 4184-789
Waste water treatment system with annular ridges - 09004C/05
- CANP 19.07.78 CANADA PACKERS LTD D23 (D13) = GB 2026-018
Continuous bleaching of oils and fats esp. edible material - 84203B/47
- *CAUC= 06.10.77 CAUCASUS ANTI-PLAGU D16 *SU -662-583
Prod'n. of corn extract for use as microbial nutrient - 08734C/05
- CESK 12.11.76 CESKOSLOVENSKA AKAD A97 B04 D16 J04 = FR 2422-679
Carrier consisting of porous inorganic material and reactive polymer - 55343A/31
- CGRR 16.09.77 CGR MEV INC D15 K08 = US 4184-956
Irradiation of waste water with electrons from linear accelerator - 45991B/25
- *CHAU- 11.01.78 CHAUX DE PROVENCE D16 E17 *FR 2422-716
Tartaric acid recovery from wine distillation residual liquors - 07878C/05
- CHUO- 28.08.75 CHUO SANKEN KK C02 D13 = J8 0000-028
Silkworm feed to accelerate growth and control disease - 27947Y/16
- CHUS 29.05.78 CHUGAI PHARMACEUTICAL KK B04 D16 = J5 4157-815
Antitumour compsns. contg. bacterial cells - 89657B/50
- CHUS 29.06.78 CHUGAI SEIYAKU KK B04 D16 = GB 2025-768
Product with anticancer activity - 03824C/03
- CIBA 12.06.74 CIBA GEIGY AG D25 E23 = IT 1035-991
Stilbenyl triazole cpds. contg. sulpho gps. - 27038A/15
- CIBA 23.12.75 CIBA GEIGY AG A87 D15 F06 (A91) = CA 1069-522
Polymeric quat. ammonium salts derived from bis halomethyl diphenyl - 45241Y/26
- CIBA 26.05.77 CIBA GEIGY CORP B04 C03 D13 (D16) = US 4185-091
Avilamycin antibiotic as animal feed additive - 86132A/48
- CIBA 07.06.78 CIBA GEIGY AG A97 D25 (A26) = J5 4159-419
Washing powder contg. silicone oil foam regulator - 91326B/51
- CIBA 15.06.78 CIBA GEIGY AG C02 D15 E13 = GB 2025-919
Cyanuric acid removal from waste waters - 00224C/01
- CIBA 26.06.78 CIBA GEIGY AG C03 D22 E14 F06 = GB 2025-951
Insecticidal cyclopropane carboxylic acid thiol ester derivs. - 03790C/03
- CIBA 26.06.78 CIBA GEIGY AG C03 D22 E14 F06 = GB 2025-952
Insecticidal isopropyl-phenyl:acetic acid thiol ester derivs. - 03798C/03
- CIBA 29.06.78 CIBA GEIGY AG A91 D15 (A11) = GB 2025-921
Removing cationic substances from waste water - 03805C/03
- COLG 13.07.70 COLGATE PALMOLIVE CO D21 = IT 1035-517
Gel-form dentifrice - 04716T/03
- COLG 07.05.74 COLGATE PALMOLIVE CO A97 D25 = IT 1035-636
Free flowing detergents for automatic washing machines - 67358W/41
- COLG 15.05.74 COLGATE PALMOLIVE CO D25 = IT 1035-683
Detergent compsn for washing clothes - 69007W/42
- COLG 12.07.74 COLGATE PALMOLIVE CO D25 = CA 1069-259
Bleaching compsn. contg. peroxide, acylated cpd and a triazine - 81495W/50
- *COLG 24.02.75 COLGATE PALMOLIVE CO A96 D22 *US 4184-902
Absorbent article e.g. diaper mfr. - 09040C/05
- COLG 25.05.78 COLGATE PALMOLIVE CO A96 D21 E19 (A25 E33) = J5 4157-843
Dentifrice paste compsn. contg. calcium carbonate - 71767B/40
- COLG 25.05.78 COLGATE PALMOLIVE CO D25 E19 F06 = PT --69-657
Liq. bleach and fabric softening compsn. - 68037B/37
- COLG 25.05.78 COLGATE PALMOLIVE CO A84 D25 E16 F06 (A25 E13) = PT --69-658
Polyurethane foam dispenser - 71792B/40
- COLG 30.05.78 COLGATE PALMOLIVE CO D21 E33 = DK 7902-203
Extrudable opaque dentifrice paste - 71814B/40
- COLG 30.05.78 COLGATE PALMOLIVE CO D21 E33 = J5 4157-844
Extrudable opaque dentifrice paste - 71814B/40
- COLG 30.05.79 COLGATE PALMOLIVE CO A96 B05 D21 (A14 B04) #PT --69-705
Magnesium poly:carboxylate complex anti:tartar compsns. - 79129B/44
- COMP 10.10.73 SAINT-GOBAIN INDUSTRIES D22 F04 L01 = CA 1069-645
Mineral fibre panel mfg plant with wet scrubber - 27483W/17
- COMS 13.04.78 COMMISS ENERGIE ATOMIQUE D22 (D15) = FR 2422-323
Air conditioning system for greenhouse - 79471B/44
- *CONF= 18.02.77 CONFECTIONERY IND D13 *SU -663-367
Halva-type confectionery compsn. - 08859C/05
- CORP 25.11.74 CPC INTERNATIONAL INC D17 J04 = CA 1069-275
Fluidisation of difficult powders esp starch for dextrin - 44030X/24
- CORP 25.11.74 CPC INTERNATIONAL INC D17 J08 = CA 1069-277
Fluid bed reactor with heat exchange - 42406X/23
- CORP 09.07.78 CPC INTERNATIONAL INC D16 (D17) = GB 2025-978
Neutral glucamylase derived from Stachybotrys subsimplex - 84195B/47
- *CORP 01.09.78 CPC INTERNATIONAL INC D16 (D17) *BE -878-466
Glucoamylase of high thermal stability - 07376C/05
- CRDC 23.06.78 CORDIS DOW CORP A32 D15 J01 (A88) #DL -137-884
Moulding resin baffles at intervals along filamentary bundles - 89666A/50
- CUPR- 05.05.78 CUPRINOL LTD C01 D22 E12 F06 (F09) = PT --69-572
Antifungal compsn. esp. for preserving wood - 84573B/47
- *DAGE= 23.11.77 DAGESTAN WINE D16 *SU -662-582
Fruit juice extractor monitor - 08733C/05
- *DAII 05.06.78 DAIICHI KOGYO SEIYAKU D21 E16 *J5 4160-751
Cosmetics contg. pantetheine fatty acid ester(s) - 08542C/05
- *DAIL 29.05.78 DAICEL KK D13 E16 (E12) *J5 4157-858
Suppression of germination on storage of potatoes - 08056C/05
- DAIR- 10.05.78 DAIRY DEV LTD A97 D13 = J5 4160-778
Dairy blend butter substitute - 86444B/48
- *DAIZ 06.06.78 DAIDO TOKUSHOKO KK D14 M27 *J5 4158-324
Crusher teeth for food liquidiser - 08096C/05
- DANI/ 31.08.76 DANIELSON CV D21 E24 (E17) = US 4184-843
Thickened aq. hair dyeing compsn. contg. disperse dye - 00102A/01
- *DASU- 08.06.78 DASUKIN FRANCHISE K A97 D22 E19 *J5 4160-739
Gel structure for air cleaning - 08537C/05
- *DAUC 05.06.78 DAIICHI SEIYAKU KK D21 E17 *J5 4160-315
Pantetheine fatty acid ester(s) - 08373C/05
- *DAUC 05.06.78 DAIICHI KAGAKU YAKUJI D21 E16 *J5 4160-751
Cosmetics contg. pantetheine fatty acid ester(s) - 08542C/05
- *DEAK 22.04.77 AKAD WISSENSCHAFT DDR B02 D16 *DL -138-016
Spin-labelled adenosine triphosphate prodn. - 07511C/05
- *DEAK 20.12.77 AKAD WISSENSCHAFT DDR B04 C03 D16 *DL -138-247
Micro-test for detecting bovine leukaemia virus - 07594C/05
- *DEAK 21.08.78 AKAD WISSENSCHAFT DDR B03 D16 *DL -138-273
Macrolide antibiotic medicated feedstuff premix - 07596C/05
- *DEBA- 13.07.78 DEBAG DEUT BACKOFEN D11 *DT 2830-866
Dough mouldings sprinkling plant - 07727C/05
- DECO- 05.05.77 DECOFA KAFFEE-BEARB D13 = DS 2720-203
Decaffeinating green coffee by solvent extraction - 63481A/36
- DECO- 05.05.77 DECOFA KAFFEE-BEARB D13 E17 = DS 2720-204
Treatment of coffee grains with ester and ketone - 61930A/35
- DEGS 18.04.75 DEUTSCHE GOLD & SILBER D15 J04 (D25) = OE 7602-800
Type A zeolites consisting of fine particles - 81199X/44
- DEGS 19.03.77 DEUTSCHE GOLD & SILBER D25 E34 = DL -137-915
Stabilised sodium percarbonate for washing powders - 67099A/38
- DEGS 26.05.77 DEUTSCHE GOLD & SILBER D22 E16 (E12 E37) = OE 7803-803
Deodorising liquid manure esp. of pigs and poultry - 86111A/48
- DEIS/ 27.01.78 DEISENROTH R D12 = DL -137-880
Sausage filling machine - 58327B/32
- *DEMI/ 01.08.77 DEMISCH R R D15 *US 4184-947
Sewage treatment e.g. for effluent from septic tank - 09061C/05
- *DENT- 15.06.78 DENTAL THERAPEUTICS D21 E19 *WP 8000-057
Cleaning agent for dentine surfaces - 09172C/05
- DEWD/ 10.06.77 DEW D R L D12 = FR 2422-338
Treating poultry carcasses - 00428B/01
- DIAS 07.11.75 DIAMOND SHAMROCK EU A97 D15 E17 H03 (E14) = GB 1559-844
Nonflammable, nontoxic compsn. for dispersing oil spillages - 56148Y/32
- *DIAV/ 12.04.78 DIAVORINY B J D16 *FR 2422-907
Heater for recirculating liq. esp. fermenting must - 07884C/05
- *DIEM- 17.02.77 DIEMOLDING CORP A96 D22 (A14) *US 4185-072
Sealed orthopaedic acrylic bone cement mixer - 09119C/05
- DORO 03.01.75 DORR OLIVER INC D15 = CA 1069-444
Removal of grit and fibres from activated sludge - 42029X/23
- DORO 24.05.78 DORR OLIVER INC D15 J04 = PT --69-630
Flow distributor for fluid bed reactor - 86324B/48
- *DORO 19.07.78 DORR OLIVER INC D15 *GB 2025-780
Sedimentation tank for gravity settling suspended solids - 07917C/05
- DOUC/ 24.05.74 DOUCET C D15 J01 = IT 1035-796
Separation of solids from liquids - 70802W/43
- DOWC 29.05.78 DOW CHEMICAL CO C03 D13 #J5 4160-666
Feed compsns. contg. malic acid as ruminant feedstuff - 86136A/48
- DOWC 30.05.78 DOW CHEMICAL CO C03 D13 #DK 7802-381
Feed compsns. contg. malic acid as ruminant feedstuff - 86136A/48
- DOWO 27.07.77 DOW CORNING CORP A96 C03 D21 (A26) = DS 2829-388
Emulsions of polar liq. in methyl-siloxane fluid - 80048A/44
- *DREI/ 16.05.79 DOS REIS M J A D23 *PT --69-614
Frying oil recovery - C/05
- DRES 22.04.76 DRESSER INDUSTRIES INC D15 H03 J04 = CA 1069-338
Continuous oil-in-water sensing by fluorescence - 50356Y/28
- DSOB- 21.05.75 DSO BULGARPLD D13 #IT 1035-813
Fruit or vegetable milk drinks - 91774X/49
- DSOV- 21.04.72 DSO VINPROM D16 = IT 1035-527
Wine redox process parameters measurement - 47285V/26
- *DYNL 08.08.78 DYNAPOL A97 D13 E17 (E24) *US 4185-122
Foam-free aq. soln. coloured with polymeric dye prepn. - 09141C/05
- DYNN 28.03.70 DYNAMIT NOBEL AG B07 D13 E17 (D21) = J8 0000-370
Stable acetoglycerides for use as food coats - 55556S/34
- EAST 10.12.76 EASTMAN KODAK CO B04 D16 J04 = GB 1560-246
Compsn. for analysing lactate in blood - 42201A/24
- *EBAI 08.06.78 EBARA INFILCO KK D15 (D16) *J5 4160-059
Waste water treatment with aerobic and anaerobic digestion - 08355C/05

EGER/ 29.03.78 EGER G D16 = J5 4160-639
 Mono:karyons prodn. from di:karyotic Basidiomycetes strains - 71712B/40

EICH/ 16.08.78 EICHLER D D15 *DL-138-404
 Liquid manure decontamination - 07617C/05

ELEC- 07.07.78 ELECTRA FOOD MACH I D11 *US 4184-418
 Cooking taco shells on V/shaped former - 08961C/05

ELED 30.05.78 DENKI KAGAKU KOGYO CO A97 D16 *J5 4157-892
 Fixing enzyme to granular gelatin - 08061C/05

ELMQ 27.08.74 CIE ELECTROMECHANIQUE D15 J01 = OE 7506-589
 Gas and liq. reaction by mixing and re-sepg. flows - 05588X/04

ENGH 17.01.77 ENGELHARD MINERALS CORP D21 M27 = CA 1069-347
 Corrosion resistant silver-tin-copper dental alloy - 53856A/30

ENZA- 05.06.78 ENZAMIN KENKYU-SHO D13 (D16) *J5 4160-787
 Drink prodn. by bacterial fermentation - 08549C/05

EPAP- 14.05.74 EPAP ETUD PROC ASS D15 J01 = IT 1035-705
 Waste water purificn. by electrolytic flotation - 68978W/42

ERAP 15.05.74 ENTR RECH ACTIVIT PETROL D16 E17 H04 = IT 1035-724
 Fermentative prepn. of citric-isocitric acids - 68979W/42

ERAP 26.04.77 ELF AQUITAINE PROD A97 B04 D16 J01 = FR 2422-720
 Liquid phase chromatographic protein sepn. or purificn. - 89933A/50

ESSO 14.04.78 EXXON RES & ENG CO D16 E13 = FR 2422-652
 Lower alpha-olefin, esp. propylene or diene epoxidation - 79327B/44

ESSO 14.04.78 EXXON RES & ENG CO D16 E17 = FR 2422-714
 Methyl ketone prodn. from n-alkane sec. alcohol - 75324B/42

ETHI 31.10.75 ETHICON INC A96 D22 F06 #CA 1069-394
 Coating auxiliary surgical materials - 48357X/26

ETHI 13.04.77 ETHICON INC D22 = CA 1069-468
 Surgical thread package - 76813A/43

EVER- 10.07.79 EVERS D & ASSOC LTD C04 D15 E17 H06 = GB 2025-922
 Treating biodegradable effluent anaerobically to recover methane - 84213B/47

EXPE= 07.06.78 EXPER VETERINARY B04 C03 D16 = NO 7901-839
 Trichophytosis vaccine - 91409B/51

FARB 18.05.74 BAYER AG D18 E19 = IT 1035-757
 Chrome tanning of leather - 80936W/49

FARB 01.06.74 BAYER AG D15 = IT 1035-902
 Activated sludge treatment for effluents - 83197W/51

FARB 28.05.77 BAYER AG A25 D21 (A96) = DL-138-148
 Prodn. of polyurethane with vinyl gps. for dental impressions - 86157A/48

FARB 19.08.77 BAYER AG A93 D22 E13 G04 (A26) = DL-138-427
 Silicone sealant compsns. contg. benzimidazolyl carbamate cpds. - 18204B/10

FARB 13.05.78 BAYER AG A60 D25 E23 F06 = J5 4160-379
 Benzofuranyl-benzimidazole(s) - 84359B/47

FARH 11.07.72 HOECHST AG B03 D21 E13 = US 4185-106
 Anti-dandruff agents - 07516V/05

FARH 15.04.76 HOECHST AG B05 C03 D22 E19 = US 4185-098
 Disinfectant compsn. contg. aminopropyl-phosphonate - 75854Y/43

FARH 28.05.76 HOECHST AG A88 D18 F04 (A17) = OE 7703-805
 Cigarette filter contg. polyolefin fibres - 88426Y/50

FARH 16.12.76 HOECHST AG D15 E14 = GB 1560-138
 Purifying aq. liquor from caustic fusion of arylsulphonic acids - 44075A/25

FARH 11.08.77 HOECHST AG A81 D18 F06 G03 = DL-138-078
 Water vapour absorbent and permeable adhesive compsn. - 12365B/07

FARH 20.08.77 HOECHST AG D13 E17 (D21 E16) = DL-138-311
 Simultaneous prepn. of fatty acid nitrile(s) and glycerol - 18378B/10

FARH 08.06.78 HOECHST AG A60 D22 E14 G06 (E24) = J5 4160-326
 Resorcinol derivs. prodn. from delta-keto carboxylate ester - 00050C/01

FARM- 05.06.78 FARMECCANICA SPA A96 D22 = J5 4159-041
 Baby's disposable napkin pants - 91366B/51

FIRM 06.07.78 FIRMENICH SA D13 E17 = NL 7905-243
 Alpha, beta-unsatd. aldehyde food and drink aromatisers - 05712C/04

FLET- 20.07.78 FLETCHER W & R LTD D12 *GB 2025-883
 Removing gambrel from carcass - 07943C/05

FMCC 26.11.76 FMC CORP D22 E13 = GB 1560-149
 Tetra:chloro-ammelide used for bleaching and disinfecting - 38448A/22

FMCC 31.05.78 FMC CORP D13 = J5 4157-875
 Powder for stabilising and enhancing quality of dairy prods. - 89801B/50

FRAN/ 14.06.76 FRANCO P D22 = GB 1560-151
 Disposable external sanitary towel shaped for anatomical fit - 77504Y/44

FRAN/ 14.06.76 FRANCO P D22 = US 4184-498
 Disposable external sanitary towel shaped for anatomical fit - 77504Y/44

FREN 09.06.78 FREUND INDUSTRY LTD D13 *J5 4160-763
 Calcium stearyl lactate addition to rice - 08545C/05

FREU 16.10.78 FREUDENBERG, CARL FA A11 D22 F01 (A96) #US 4185-011
 Collagen fibres prodn., esp. for medical purposes - 08127B/05

FUCH/ 25.09.78 FUCHS H D15 *BE-878-731
 Flotation treatment of polluted liq., partic. aq. emulsion or colloid - 07440C/05

FUJI/ 08.06.78 FUJINO K D21 *J5 4160-406
 Aerosol hand cleaner compsn. for use when water is not available - 08412C/05

FUKO 26.03.73 FUJI OIL KK D23 = J8 0000-440
 Hardened oils with high plasticity over wide temp. range - 33177W/20

*GADE- 07.06.78 GADELIUS KK D15 *J5 4159-377
 Multistage evaporator for fresh water prodn. from brine - 08269C/05

GALL- 17.07.79 GALLAHER LTD C02 D16 E13 (D18) = GB 2025-959
 Prodn. of nicotine from *Nicotiana tabacum* or *rustica* - 05862C/04

*GASH- 10.04.78 GASHOR-OOMS SA D11 *FR 2422-335
 Machine for surface slitting bread dough pieces before baking - 07845C/05

GCDE- 30.06.78 GC SHIKA KOGYO KK A96 D21 = GB 2026-000
 Dental silicone compsns. curable at room temps. - 05690C/04

GENE 20.10.76 GENERAL ELECTRIC CO C03 D16 F09 (D13) = GB 1560-021
 Biological lignocellulose decomposition - 32422A/18

GENE 20.10.76 GENERAL ELECTRIC CO C03 D16 F09 (D13) = GB 1560-022
 Biological lignocellulose decomposition - 32423A/18

GENE- 08.11.77 GENENTECH INC B04 D16 = FR 2422-717
 Recombining plasmid for transformation of bacteria - 35257B/19

GENE- 08.11.77 GENENTECH INC B04 D16 = FR 2422-718
 Recombining plasmid for transformation of bacteria - 35257B/19

GENE- 08.11.77 GENENTECH INC B04 D16 = FR 2422-719
 Recombining plasmid for transformation of bacteria - 35257B/19

GENO 02.04.71 GENERAL FOODS CORP D13 E17 = IT 1035-520
 Purification of gums - 68486T/43

GENO 30.12.76 GENERAL FOODS CORP D13 (D12) = GB 1560-177
 Simulated bacon prodn. with fat and lean phases - 32122A/18

GENO 30.12.76 GENERAL FOODS CORP D13 (D12) = GB 1560-178
 Simulated fat product used in meat substitutes - 32149A/18

GENO 07.04.77 GENERAL FOODS CORP D13 = US RE30-197
 Storage stable chewing gum compsn. - 03840Y/02

GEOR/ 22.04.77 GEORGE J A96 D21 = DL-131-225
 Solid dental care agent in powder or tablet form - 56859A/32

GERG/ 03.12.76 GERGELY G D25 E19 = OE 7608-978
 Cleaning agents with a gas developing cleaning compsn. - 40321A/23

*GERL/ 13.07.78 GERLACH G D17 *DT 2830-744
 Pusher type centrifuge for dewatering sugar beet tops - 07721C/05

*GILM/ 24.08.78 GILMOUR N B04 C03 D16 *BE-878-430
 Pasteurellosis vaccine for cattle and sheep - 07364C/05

GIVA 19.09.75 GIVAUDAN L & CIE SA A96 B04 D16 (A21) #US 4184-986
 1,3-Phenylenediamine/glutaraldehyde condensation product - 63478V/36

GIVA 01.02.77 GIVAUDAN L & CIE SA D23 E15 = GB 1560-062
 Alpha-hydroxyethyl-4-tert-alkyl-cyclohexane perfume components - 57185A/32

GOLD 03.07.78 GOLDSCHMIDT TH AG B03 C02 D22 = NL 7810-275
 1,3-Di-n-decyl-2-methyl-imidazolium chloride and bromide - 27893B/15

*GOOD/ 19.06.78 GOODSON M G D15 *GB 2025-920
 Method and apparatus for waste water treatment - 07951C/05

GRAH- 14.11.75 GRAHAM AND SON LTD D25 E34 = GB 1560-076
 Spray dried granules contg. sodium tripolyphosphate and wax - 34482Y/20

GRAW/ 20.12.77 GRAWERT W B02 D16 = DL-138-223
 Recovering ergot alkaloid(s) from culture suspension - 54811B/30

*GRIS/ 15.05.76 GRISE F G J D13 *US 4184-422
 Homogenising egg contents within shell - 08962C/05

*GSAM= 13.04.77 GEOR SAMTREST D16 *SU-662-581
 Unit for must sulphitation in wine-making - 08732C/05

*GSAM= 25.07.77 GEORG SAMTREST IND D16 *SU-639-933
 Crude wine alcohol extractor - 08657C/05

*HAAG- 13.07.78 HAAGSE BAKKERIJMACH D11 *DT 2926-158
 Dough shapes mfr. - 07786C/05

HANC- 22.07.74 HANCOCK LAB INC D22 = IT 1035-993
 Preparing natural tissues, valves, blood vessels, for transplant - 11507X/07

*HARS 25.06.73 HARSHAW CHEM CO A96 D21 (A14) *US 4184-973
 Hair grooming aid in form of shampoo - 09071C/05

HAYB 09.04.69 HAYASHIBARA CO D17 = IT 1035-512
 Sugar-rich in maltose from starch - 76089R/41

HAYB 13.07.69 HAYASHIBARA CO B03 D13 E13 = IT 1035-514
 Sweetening compn based on maltitol - 06200S/03

HAYB 24.10.69 HAYASHIBARA CO D17 (D13) = IT 1035-516
 Heat stable low viscosity starch syrup mix-ture - 69737S/44

HEID/ 17.01.77 HEIDA A D12 = OE 7800-297
 Meat hook for refrigerator trucks - 53857A/30

*HEIN/ 07.08.78 HEINECKE H J A96 D22 *DL-138-275
 Bone tissue promoting device - 07597C/05

HELB/ 31.01.77 HELBIG R C03 D13 = DL-138-003
 Sulphite waste powder and mineral feedstuffs - 57072A/32

*HEND- 24.07.75 HENDRICK MFG CO D15 F09 *US 4184-950
 Apparatus for dewatering paper mill sludge - 09062C/05

HENK 03.10.74 HENKEL KG AUF AKTIEN D25 E37 = US 4184-975
 Pourable agglomerate contg. aluminosilicate calcium binders - 28683X/16

HENK 18.04.75 HENKEL KG AUF AKTIEN D15 J04 (D25) = OE 7602-800
 Type A zeolites consisting of fine particles - 81199X/44

HENK

- HENK 21.10.76 HENKEL KG AUF AKTIEN D24 =GB 1560-015
Mosaic-patterned coloured soap cakes - 30227A/17
- HENK 21.10.76 HENKEL KG AUF AKTIEN D24 =GB 1560-016
Mosaic-patterned coloured soap cakes - 30227A/17
- HENK 02.04.77 HENKEL KG AUF AKTIEN D21 E33 =GB 1560-189
Employing water-insol. aluminosilicate particles in shampoo - 72703A/41
- HENK 02.04.77 HENKEL KG AUF AKTIEN D21 E33 =OE 7802-280
Employing water-insol. aluminosilicate particles in shampoo - 72703A/41
- HENK 11.07.77 HENKEL KG AUF AKTIEN A96 D23 E17 (A25) =US 4184-985
Clear, stable solns. of oil-soluble perfume oils - 10055B/06
- HENK 31.05.78 HENKEL KG AUF AKTIEN C03 D22 E16 G03 =J5 4157-837
Antimicrobials cleaning, disinfecting and preservative compsns. - 89507B/50
- HENK 01.06.78 HENKEL KG AUF AKTIEN A97 D25 E19 F06 (A25) =BR 7802-489
Liq. cleaner contg. quat. ammonium textile softener - 89752B/50
- HENK 01.06.78 HENKEL KG AUF AKTIEN A97 D25 E19 F06 (A25) =DK 7901-362
Liq. cleaner contg. quat. ammonium textile softener - 89752B/50
- HENK 05.06.78 HENKEL KG AUF AKTIEN C02 D22 E13 G03 =J5 4160-366
3-Omega-aminoalkyl-oxazolidine derivs. - 89576B/50
- *HENK 21.07.78 HENKEL KG AUF AKTIEN D18 E33 *GB 2026-026
Dressing fur skins - 07997C/05
- *HERV/11.04.78 HERVEY D13 *FR 2422-324
Cheese making mould assembly - 07844C/05
- *HIEJ 31.05.78 HITACHI PLANT ENG CONST D15 M11 *J5 4158-059
Purificn. of waste water from chemical copper plating process - 08070C/05
- HISM 16.06.77 HISAMITSU PHARM KK A60 B05 D21 E19 (D25) =OE 7803-116
4-Iso:hexyl-cyclohexane-carboxylic acid derivs. - 03426B/02
- HISM 16.06.77 HISAMITSU PHARM KK A60 B05 D21 E19 (D25) =OE 7803-117
4-Iso:hexyl-cyclohexane-carboxylic acid derivs. - 03426B/02
- HOFM/23.11.72 HOFMANN T D13 =DL -108-451
Continuous chocolate paste prodn. - 41950V/23
- *HOKU-29.05.78 HOKUBEN NOGYO KYODO D13 E16 (E12) *J5 4157-858
Suppression of germination on storage of potatoes - 08056C/05
- *HOOL 05.06.78 NIHON PARKERIZING D15 M13 *J5 4158-061
Washing zinc phosphate coated metal - 08071C/05
- HOU1 14.04.78 SOC CHIM CHARBONNAGES D25 E12 =FR 2422-636
Dry mixt. of alkylbenzene sulphonate and corresp. hydroperoxide - 79469B/44
- *HOUS-27.07.76 HOUSE FOOD IND KK D11 *US 4185-125
Frying noodles in hot oil - 09142C/05
- HUBE 28.09.76 HUBER J M CORP D25 E33 J01 (D15) =GB 1560-056
Zeolite A prodn. of higher ion exchange capacity - 19559A/10
- HURK/21.10.77 HURKMANS A D11 =US 4184-614
Volumetric depositor for paste esp. edible paste - 31576B/17
- HYNN-30.05.78 HYNNAET OY D15 J01 =DK 7902-189
Continuous filter press for drying sludges - C/04
- ICIL 23.09.75 IMPERIAL CHEM INDS LTD A92 D22 =GB 1559-843
Sterilising bag for protecting contents during emptying - 22234Y/13
- ICIL 22.12.77 IMPERIAL CHEM INDS LTD C02 D13 =OE 7808-926
Treatment of ruminants with aplasmomycin or related cpds. - 52996B/29
- ICIL 16.05.78 IMPERIAL CHEM INDS LTD D16 E19 =J5 4157-895
Microbiological oxidn. of organic cpds. - 02269C/02
- IDEK 27.05.74 IDEMITSU KOSAN KK B04 D16 (D13) =IT 1035-836
Extn. of proteins antibiotics, etc. from microbial cells - 21256X/12
- *IDEK 02.06.78 IDEMITSU KOSAN KK D13 *J5 4157-882
Semi-solid emulsified foodstuff prepn. - 08059C/05
- *IMMU-22.12.78 IMMUNO AG B04 D16 *OE 7809-220
Early summer meningoencephalitis virus vaccine - C/05
- INFL 14.11.78 INT FLAVORS & FRAGR INC B07 D23 E15 (B05 D13 D18 D25) #FR 2422-616
Trans, trans-delta-damascone - 39304B/21
- *INPR= 13.04.77 IND PROC AUTOM RES INST D16 *SU -662-581
Unit for must sulphitation in wine-making - 08732C/05
- INRG 13.04.78 INST NAT AGRONOMIQUE D22 (D15) =FR 2422-323
Air conditioning system for greenhouse - 79471B/44
- INSF 15.05.74 INST FRANCAISE DU PETROLE D16 E17 H04 =IT 1035-724
Fermentative prepn. of citric-isocitric acids - 68979W/42
- INSP 26.04.77 INSTITUT PASTEUR A97 B04 D16 J01 =FR 2422-720
Liquid phase chromatographic protein sepn. or purificn. - 89933A/50
- INSP 13.04.78 INST PASTEUR B04 D16 J04 =FR 2422-956
Identification of nucleic acid fragments - 77171B/43
- INSP 14.04.78 INST PASTEUR B04 D16 =FR 2422-685
Modified lambda-bacteriophage DNA - 77170B/43
- ISCH-05.06.74 ISRAEL CHEMICALS LT C04 D13 E33 (E36) =IT 1035-932
Food quality dialcium phosphate-phosphoric acid - 84963W/52
- IWAT-04.02.75 IWATA KAGAKU KOGYO D13 =J8 0000-033
Bitterness free vinegared eggs - 72938X/39
- *JAOR 08.06.78 JAPAN ORGANO KK D15 *J5 4160-051
Desalination method employing mixed bed ion exchange towers - 18353
- *JERB/24.07.78 JERRELL E H D12 *GB 2025-754
- *JETS-21.08.78 JET SPRAY CORP D14 *BE -878-105
Machine cycle timing controller for dispensing e.g. water and potatoes - 07361C/05
- *JODE/07.09.78 JODEHL P A D15 *BE -878-606
Purifying water by flocculation - 07415C/05
- *JOHJ 04.05.78 JOHNSON & JOHNSON A96 D21 *US 4185-086
Perfumed talc compsns. contg. polyethylene glycol - 09129C/05
- JOHJ 05.05.78 JOHNSON & JOHNSON A97 D21 E11 (D25) =BR 7902-725
Novel phospho-betaine(s) and phosphitane(s) - 80842B/45
- JONE-24.04.75 JONES & ATTWOOD LTD D15 =CA 1069-443
Screening appts for removal of solids - 68795X/37
- KABI 01.12.76 KABI AB B04 D16 J04 =OE 7708-596
Chromogenic substrates for serine protease enzymes - 28830A/16
- *KANZ/04.07.78 KANZLER H D15 F09 *DT 2926-520
Pulp waste water purification - 07789C/05
- KAOS 05.06.78 KAO SOAP KK A97 D25 E19 =J5 4158-408
Liq. cleaner for oily kitchen soil - 89604B/50
- KAOS 05.06.78 KAO SOAP KK A97 D25 E19 (E34 E36) =J5 4158-409
Liquid detergent compsns. for bathrooms etc. - 89939B/50
- *KAOS 13.07.78 KAO SOAP KK D21 E19 *DT 2927-278
Hair shampoo compsn. - 07802C/05
- KAPA 26.11.75 KANSAI PAINT KK A97 B04 D16 =J8 0000-040
Immobilising enzymes or microbial cells - 41979Y/24
- KATO/11.06.76 KATO M D15 =US 4184-946
Sewage treatment tank with paddle mixer - 02469A/02
- KEND 12.08.74 KENDALL CO A96 D21 =CA 1069-639
Dental compsns. of improved colour stability - 88634X/47
- KEND 03.07.78 KENDALL CO A96 D22 F04 (A11 A23) =NL 7904-700
Light, absorbent, disposable surgical dressing - 80855B/45
- *KERJ 10.07.78 KERNFORSCHUNGS JULICH D16 E17 *DT 2830-327
Alcohol oxidase prepn. by Hansenula polymorpha yeast fermentation - 07700C/05
- *KHSU= 16.01.78 KHARK SUPPLY INST D13 *SU -663-366
Meat broth concentrate prodn. - 08858C/05
- *KIER/03.07.78 KIER T S D16 *NL 7905-088
Conc. fruit flavoured alcoholic drink - 08609C/05
- KIKK 08.12.69 KIKKOMAN SHOYU KK D13 (D16) =IT 1035-511
Fruit juice treatment - 40680S/24
- *KISA= 08.12.77 KIEV SALE ECONOM IN D12 *SU -663-361
Meat tenderiser - 08853C/05
- KISH/08.05.75 KISHIDA N D13 =J5 1130-558
Mfr. of seasoned boiled egg - 08575C/05
- *KISH/08.05.75 KISHIDA N D13 *J8 0000-034
Mfr. of seasoned boiled egg - 08575C/05
- KLEI/07.07.78 KLEIN M A97 D15 F09 J01 (A13 A17 A25 A88) =NL 7905-308
Absorption and filtration mat for waste liquids - 04079C/03
- KNHS 10.04.78 HOOGO VENS IJMUIDEN BV C04 D15 H09 =FR 2422-600
Ammonia and ammonium salt removal from waste water - 77650B/43
- KNOL/30.03.70 KNOLL H D16 =DL -83-659
Agar plates cutter-cross slide and optical projection - 03113V/02
- *KNOS/21.08.78 KNOSCHER D15 *DL -138-421
Mechanical surface water aeration - 07625C/05
- *KNOT/18.07.78 KNOTT J M D13 *GB 2025-751
High protein foodstuffs prepn. - 07911C/05
- *KOCK-18.04.74 KOCKUMS CHEMICAL AB B04 D16 *US 4184-920
Stable, carrier adsorbed enzyme substrate compsns. - 09050C/05
- KOGY 11.11.75 IND RES INST OF JAPAN D15 =J8 0000-119
Waste water treatment apparatus - 45921Y/26
- KONI/26.02.71 KONIG H D11 =DT 2265-562
Dough portioner/leveller - 58293T/37
- KONN 22.12.72 GIST-BROCADES NV B03 C02 D13 E13 (B02 D22) =OE 7805-024
Oxadiazolyacetic acid antibiotics - 51365V/28
- KONN 15.10.75 GIST-BROCADES NV D13 =OE 7607-562
Prod. of cocktail snacks - 27151Y/16
- KONN 05.06.78 GIST-BROCADES NV B04 D13 =BR 7903-419
Test unit for simplified testing of biological fluids - 89770B/50
- KONN 05.06.78 GIST-BROCADES NV B04 D13 =J5 4159-295
Test unit for simplified testing of biological fluids - 89770B/50
- KONN 05.06.78 GIST-BROCADES NV B04 D13 =NO 7901-821
Test unit for simplified testing of biological fluids - 89770B/50
- *KORY/05.03.74 KORYAKIN A G C03 D13 (C04) *SU -663-693
Biuret orthophosphate used as fodder additive - 08945C/05
- KRFT 30.11.77 KRAFT INC D13 =FR 2422-341
Cheese-making process using concentrate of protein fat and salts - 25998B/14
- KRFT 27.03.78 KRAFT INC D13 =US 4184-825
Appts. for pressing and deaeration of curd cheese - 79095B/43
- *KRUM/18.07.78 KRUMMSDORF C03 D13 *DL -138-032
Feedstuff prodn. from slaughterhouse waste - 07516C/05
- KUBL-05.03.77 FA KUBLER H D16 =OE 7801-414
Sewage sludge processing tower - 65560A/37
- KURE 15.10.69 KUREHA CHEM IND KK B04 D16 =J8 0000-363
Polysaccharide anti cancer agent - 24864S/14

- *KURE 20.07.70 KUREHA KAGAKU KOGYO D12 *IT 1035-515
Ham and salami prodn. - C/05
- KURE 13.04.77 KUREHA KAGAKU KOGYO B04 D16 =DL -138-276
Increasing antibiotic activity against resistant bacteria - 79384A/44
- *KURS 08.06.78 KURARAY KK A96 D21 E11 *J5 4160-439
Adhesive for bone and tooth enamel - 08421C/05
- *KURS- 15.07.78 SPEZ MASCH KURSCHNE D23 *DT 2831-218
Continuous candle mfr. - 07765C/05
- KURT/ 23.06.67 KURTZ LD B07 D22 =IT 1035-503
Impregnating articles with germicidal cpds - 32699R/19
- *KYOK- 05.06.78 KYOKUTO SHIBOSAN K D13 *J5 4158-382
Sepg. rancidity-preventing agent from rice bran oil - 08121C/05
- *KYOW 09.06.78 KYOWA HAKKO KOGYO KK B03 D16 *J5 4160-795
Antibiotic Gentamycin C-1A prepn. - 08550C/05
- *KYOW 21.07.78 KYOW HAKKO KOGYO CO B04 D16 *GB 2025-979
Glycerol oxidase - 07978C/05
- LAND- 14.06.78 AKAD LANDWIRTSCHAFT C03 D13 (D16) =DL -137-965
Drying and sterilising protein contg. suspensions - 01907C/02
- LANG/ 06.06.78 LANG JL C03 D13 H09 #J5 4159-409
Fuel e.g. alcohol and plant and animal nutrient - 89704B/50
- *LANG/ 20.07.78 LANGHANS G D15 (D16) *DL -137-943
Froth dissipation device - 07490C/05
- LENO- 22.06.78 LENOX INST RES INC D15 F09 =US 4184-967
Appts. for removing floating solids from settling tank - 00395C/01
- LESI 31.05.78 LESIEUR COTELLE SA D13 (D23) =J5 4159-412
Treating fats, esp. palm oil - 71796B/40
- LICN 02.10.76 LICENTIA PATENT GMBH D22 E18 J01 =DS 2644-623
Filter material for removing alkaline gases from the air - 10317A/06
- *LIEP/ 20.07.78 LIEPE F D15 (D16) *DL -137-942
Froth dissipation device - 07489C/05
- *LIEP/ 31.07.78 LIEPE F D15 *DL -138-038
Aeration of non-coalescent sewage - 07518C/05
- *LIOC 12.06.78 LION DENTIFRICE KK A96 B04 D21 *J5 4160-752
Liq. medicinal compsn. for preventing dental caries - 08543C/05
- LIOT- 15.10.76 LIOT R SA D13 =OE 7707-321
Preserving liquid egg prod. with salt, sugar, or both - 28783A/16
- LIOY 23.05.75 LION FAT & OIL KK D25 E17 (E36) =US 4185-034
Olefin sulphonate bleaching with hydrogen peroxide - 92844X/50
- *LIOY 30.05.78 LION FAT & OIL KK A96 D21 *J5 4157-841
Hair conditioning compsn. - 08054C/05
- *LIOY 06.06.78 LION FAT & OIL KK A97 D25 E19 (E34) *J5 4159-414
Heavy duty cleaning compsn. for clothes - 08285C/05
- *LIOY 06.06.78 LION FAT & OIL KK A97 D21 (A25) *J5 4159-415
Liq. shampoo compsn. with improved stability - 08286C/05
- *LIOY 07.06.78 LION FAT & OIL KK A97 D21 (A25) *J5 4159-416
Liq. cleaning compsns. with anionic and cationic surfactant components - 08287C/05
- *LIOY 07.06.78 LION FAT & OIL KK D25 *J5 4159-417
Granular cleaning compsn. prepn. - 08288C/05
- *LIOY 08.06.78 LION FAT & OIL KK D25 E34 *J5 4160-404
Aluminosilicate particles-contg. detergent slurry prodn. - 08410C/05
- LKBP 29.06.78 LKB PRODUKTER AB B04 D16 =GB 2026-156
Creatine kinase sub-unit M determ. by emission photometry - 03721C/03
- *LOCH/ 04.09.78 LOCHEN C D14 *BE -878-593
Conditioning sausages, fish etc. - 07413C/05
- LOMS 26.05.78 LAB OM SA B04 D16 =PT --69-674
Prevention and treatment of respiratory tract infections - 75331B/42
- *LUCA/ 14.04.78 LUCAS LF D12 *FR 2422-337
Manual tongs for extermination of game birds and poultry - 07846C/05
- *MAGN- 14.07.78 MAGNET ACTIV MUNZER D15 J04 *DT 2830-956
Water activation system - 07735C/05
- MANC/ 06.06.77 MANCHAK F D15 H01 L02 =US 4184-958
Treating oil field or sewage sumps with lime - 43257Y/24
- *MART/ 31.05.78 MARTEAUX R D23 *J5 4157-860
Production of karite-wood seed butter - C/05
- MASW 15.07.78 MASCH FAB BUCKAU R D17 =DT 2831-214
Ring for sugar cane mill roll - 05980C/04
- *MAUE- 07.07.78 MAUERMANN J BACKOFFE D11 *DT 2829-910
Air circulation baking oven - 07681C/05
- *MEAD- 12.04.77 MEADE - LONSDALE GR D12 *GB 1559-900
Hide chain stripper safety enclosure - 07902C/05
- MECA- 11.12.75 MECAFINA SA D15 (D13 D16) =OE 7608-891
Aq. effluent purification by microbial fermentation - 41660Y/24
- MEGG 22.06.77 MEGGLE MILCHIND GMB D13 =OE 7804-513
Constant quality ripened soft cheese prepn. - 02101B/02
- MEGG 05.04.78 MEGGLE MILCHIND GMB C03 D13 =OE 7902-521
Colostrum utilisation in feeding older calves - 75498B/42
- MERC- 31.01.78 MERCER LTD D13 =FR 2422-344
Food prod. consisting of opt. filled, pref. tubular net - 60155B/33
- MERE 11.11.76 MERCK PATENT GMBH A96 B05 D22 G03 =GB 1560-017
Compsn. contg. polyacrylate or polymethacrylate and antibiotic - 34958A/20
- *MERE 24.07.78 MERCK PATENT GMBH B04 D16 *GB 2026-015
Compsn. for staining cell smears in a single step - 07991C/05
- MERI 25.11.70 MERCK & CO INC B04 D16 =IT 1035-519
Cell free stable virus suspensions - 35525T/22
- MERI 21.11.75 MERCK & CO INC B02 C02 D22 (D13) =OE 7608-634
Broad spectrum antibacterial (N)-methylene subst. thienamycins - 36254Y/21
- MERI 09.02.77 MERCK & CO INC B04 D16 =GB 1560-185
Syncytial respiratory virus vaccine prepn. - 60477A/34
- METN 24.05.74 METZELER SCHAUM GMBH A32 D18 F06 =IT 1035-827
Appts. for coating sheets with foam material - 72513W/44
- MEYN/ 28.11.76 MEYN P D12 =CA 1069-262
Machine for cleaning fowl stomachs when giblets are removed - 19713A/11
- *MICR= 05.01.70 MICROBIOL PLANT PRO D16 *SU -328-749
Entomopathogenic microorganisms culture medium - 08623C/05
- MIDU/ 10.04.78 MIDULLA M D13 =FR 2422-340
Milk substitute for children with e.g. food allergies - 75816B/42
- MILE 01.10.71 MILES LABORATORIES INC D13 =IT 1035-524
Egg substitute - 45859U/33
- MILE 26.10.71 MILES LABORATORIES INC D13 =IT 1035-526
Synthetic fruit filling - 47356U/34
- MILE 31.10.75 MILES LABORATORIES INC D13 #CA 1069-374
Simulated bacon with natural texture - 42710W/26
- *MILK= 04.01.76 MILK IND RES INST D13 (D16) *SU -581-701
Lactic flora bacteria starter concentrate prodn. - 08645C/05
- MINN 02.06.78 MINNESOTA MINING CO A96 D21 E11 (A14 A26) =BR 7903-478
Oligomeric methacrylated siloxane prepolymer used in dental filler - 91399B/51
- MINN 02.06.78 MINNESOTA MINING CO A96 D21 E11 (A14 A26) =NO 7901-790
Oligomeric methacrylated siloxane prepolymer used in dental filler - 91399B/51
- MIRK- 05.05.78 MIRKOZ DIESEL ES HU D15 J01 =PT --69-578
Flotation separator partic. to skim surface oil from sewage - 68156B/38
- *MITK 07.06.78 MITSUI TOATSU CHEM INC A97 D15 J01 *J5 4159-387
Pelletised oil absorbent for oil-water mixts. - 08274C/05
- *MITO 05.06.78 MITSUBISHI HEAVY IND KK D15 K07 *J5 4158-598
Treating waste liq. contg. boric acid from atomic power plant - 08185C/05
- MITP 29.08.72 MITSUBISHI PETROCH KK D15 =J4 9042-144
Electrodialysis device for waste water - 08576C/05
- *MITP 29.08.72 MITSUBISHI PETROCH KK D15 *J8 0000-115
Electrodialysis device for waste water - 08576C/05
- *MITR 02.06.78 MITSUBISHI RAYON KK A96 D22 F07 *J5 4158-096
Menstrual tampon with improved absorption properties - 08075C/05
- *MITR 08.06.78 MITSUBISHI RAYON KK A97 D15 *J5 4159-774
Treating material for oil-contg. waste water - 08350C/05
- *MITR 08.06.78 MITSUBISHI RAYON KK A97 D15 *J5 4159-775
Treating material for oil-contg. waste water - 08351C/05
- *MITR 12.06.78 MITSUBISHI RAYON KK A14 D22 E32 F01 (A60) *J5 4160-821
Zinc oxide-filled disinfectant acrylic copolymer fibre - 08555C/05
- *MITU 14.07.78 MITSUBISHI CHEM IND KK D13 E17 *DT 2928-002
Isobutyric acid prepn. by continuous catalytic isobutyraldehyde oxidn. - 07821C/05
- MOCH/ 07.12.77 MOCHIDA N A96 D21 (A17 A26) =FR 2422-395
Solid powder stick for cosmetics and toiletry use - 45948B/25
- *MOCH= 12.09.66 MOSC CHAMPAGNE WINE D16 *IT 1035-502
Champagne-like drink prodn. and appts. - C/05
- *MOCH= 01.10.76 MOSC CHEM IND RES A82 D18 (A12) *SU -632-782
Abrasive and colourant rubber-based material - 08656C/05
- *MOGI= 09.11.77 MOGILEV TECHN INST D14 *SU -663-368
Vacuum deaerator for liq. food prodn. - 08860C/05
- *MOMD 02.12.77 MOSCOW MEAT DAIRY INST D12 *SU -663-360
Animal carcass processing cutter - 08852C/05
- *MOMD 12.01.78 MOSCOW MEAT DAIRY INST D12 *SU -663-362
Semi-dry party smoked sausage meat - 08854C/05
- MONA- 05.05.78 MONA INDS INC A97 D21 E11 (D25) =BR 7902-725
Novel phospho-betaine(s) and phosphitane(s) - 80842B/45
- MONS 26.06.78 MONSANTO CO D16 =US 4184-916
Apparatus for continuous cell culture - 68020B/37
- *MOSU 30.12.76 MOSCOW LOMONOSOV UNIV B04 D16 *SU -663-404
Fibrin monomer analytical biochemical prodn. - 08868C/05
- MRSC 18.04.74 MARS LTD C03 D13 =CA 1069-377
Pectate thickener or gelifying agent for foods - 60378W/37
- MUND 12.06.78 MUNDIPHARMA AG A96 D22 =PT --69-711
Germicidal iodophor powder prodn. - 02060C/02
- NATT 03.07.78 NAT STARCH & CHEM CORP D13 =NL 7904-809
Prepn. of dispersible chocolate liquor - 02228C/02
- *NCPO= 12.12.77 NOVCH POLY D15 *SU -663-436
Hydrocyclone for removing mechanical impurities from water - 08889C/05
- NENG- 00.00.75 NORTHERN ENG IND D15 J01 =GB 1559-809
Ion exchange to remove protein from effluent water - 66223Y/37
- NENG- 04.08.75 NORTHERN ENG IND D13 J04 =GB 1559-792
Quantitative analysis of dispersions - 16724Y/10

NEST

- NEST 08.01.75 SOC PRODS NESTLE A97 D13 =CA 1069-376
De-cafeinating aq. tea and coffee extract - 56320X/30
- NEST 17.03.77 SOC ASSIST TECHN NE D13 =US 4185-121
Ultrafiltration of vegetable acid hydrolysate - 65264A/37
- NEST 16.03.78 SOC PROD NESTLE SA D16 (D13) =GB 1560-208
Stable plasmid- contg. Lactobacillus species culture prodn. - 70242B/39
- *NEUG/ 13.07.78 NEUGEBAUER B A41 D15 E16 *DL -138-196
Treating waste water from unsatd. nitrile prodn. - 07572C/05
- *NIES 02.06.78 JAPAN METAL & CHEM D15 H07 *J5 4158-057
Cutting oil-contg. waste water treatment - 08069C/05
- *NIKO- 05.06.78 NIPPON KODOSHI KOGY A97 D15 H03 (A11) *J5 4158-391
Oil adsorbent prodn. - 08129C/05
- *NIOC 02.06.78 NIPPON OIL KK D22 E32 F06 *J5 4160-900
Germicidal cellulosic fibre mfr. - 08571C/05
- *NIPK 07.06.78 NIPPON KAYAKU KK D12 *J5 4160-775
Processed meat contg. colourant and enzymatically digested peptide - 08547C/05
- NIRA 12.04.78 UNITIKA KK A96 B04 D22 =FR 2422-407
Wound healing material - 77682B/43
- *NIRA 27.05.78 UNITIKA KK B04 D16 *J5 4157-816
Fixing physiologically active substance to polymer substrate - 08034C/05
- *NISB 09.06.78 JAPAN TOBACCO & SALT PUB D18 (D16) *J5 4160-800
Treating tobacco leaves and stems to give improved taste - 08551C/05
- *NISI 05.06.78 NISSHIN STEEL KK D15 H07 M21 *J5 4158-374
Reducing COD of waste soluble oil used in cold rolling steel - 08114C/05
- *NISW 07.06.78 NISSHIN OIL MILLS KK A96 D21 (A25) *J5 4160-314
Esterified cpd. useful in cosmetic materials - 08372C/05
- *NISY 02.06.78 NIPPON SYNTH CHEM IND D12 E17 *J5 4157-821
Sorbic acid based food preservative compsn. - 08038C/05
- *NNSH 16.12.76 NIPPON SHINYAKU KK D13 *J5 4160-757
Foods or drinks contg. succinylated gluten - 08544C/05
- *NONC- 31.05.78 NONCHI KK A96 D21 E12 (D22) *J5 4157-833
Liq. deodorant comprising sodium acrylate in aq. medium - 08048C/05
- *NONC- 01.06.78 NONCHI KK A96 D21 (D22) *J5 4157-834
Liq. deodorant comprising sodium polyacrylate in aq. medium - 08049C/05
- *NONC- 02.06.78 NONCHI KK A96 D21 E16 (D22) *J5 4157-835
Liq. deodorant comprising acrylamide in aq. medium - 08050C/05
- *NONC- 05.06.78 NONCHI KK A97 D21 (A14 D22) *J5 4160-737
Liquid deodorant for use e.g. in toilets - 08535C/05
- *NONC- 05.06.78 NONCHI KK A97 D21 (A14 D22) *J5 4160-738
Liquid deodorant for use e.g. in toilets - 08536C/05
- NORM- 31.05.74 NORMATIC APS D12 =DS 2523-752
Cutter for removal of tough surface layers - 83534W/51
- NORM- 24.09.75 NORM AMC AG D15 =GB 1559-868
Sewage surface aeration impeller - 23830Y/14
- NORV- 30.11.77 NORVIDAN ENG APS D14 =FR 2422-343
Ring mould press for fodder pellets - 42688B/23
- NOVO 04.07.78 NOVO INDUSTRI A/S D16 (D25) =NL 7905-172
Protease concentrate for use in washing compsns. - 03854C/03
- NYBL- 07.06.78 NEW YORK BLOOD CENT B04 D16 =J5 4160-716
Sub: particulate mass contg. hepatitis B surface antigen - 89757B/50
- *ODFO= 16.03.76 ODESS FOOD SUPPLY D13 *SU -640-467
Heat treatment unit for vegetable prods. - 08658C/05
- OLIN 29.06.78 OLIN CORP A26 D25 E11 (A25 A60 A97) =GB 2025-999
Alkoxy-bis (trialkoxysiloxy)-silane surfactant - 56220B/30
- OREA 21.07.76 L'OREAL SA D21 E24 =US 4184-844
Stable solutions of specified indoaniline and indophenol dyes - 06389A/04
- OREA 23.06.78 L'OREAL SA A96 D21 =GB 2026-004
Cosmetic compsn. contg. tetra:polymer - 01949C/02
- *OREA 11.07.78 L'OREAL SA D21 E14 *DT 2927-820
UV radiation-absorbing 3-para-oxy:benzylidene-2 bornanone derivs. - 07814C/05
- OREA 11.07.78 L'OREAL SA D21 E14 =GB 2025-957
UV radiation-absorbing 3-para-oxy:benzylidene-2 bornanone derivs. - 07814C/05
- OREA 12.07.78 L'OREAL SA A96 D21 E19 =DT 2928-037
Compsn. for treating greasy skin and hair - 06019C/04
- OREA 12.07.78 L'OREAL SA D21 =DT 2928-239
Assessing surface oxidn. of keratin fibres - 06066C/04
- *OREA 12.07.78 L'OREAL SA D21 E24 *GB 2025-958
1-Alkoxy-4-amino-2-(hydroxyalkyl)aminobenzene(s) - 07964C/05
- *OREA 13.07.78 L'OREAL SA A96 B04 D21 E19 (A97 B07 D25) *DT 2928-190
Surfactive statistical oligomer derivs. - 07830C/05
- OSAG 15.04.78 OSAKA GAS KK D15 =FR 2422-601
Activated sludge treatment of sewage - 79282B/44
- *OSBA/ 05.06.78 OSBAR W A32 D15 F01 *DL -137-922
Purifying waste water from synthetic fibre prodn. - 07478C/05
- *OSTR- 28.06.78 VEB OSTRA ENTWICKLU D16 (D12 D13) *DL -137-941
Conidia contg. Penicillium suspensions prodn. - 07488C/05
- PALL 15.05.78 PALL CORP A23 D15 J01 (A88) =PT --69-611
Skinless hydrophilic alcohol insoluble polyamide membrane - 86275B/48
- PAPI- 08.06.78 VU PAPIERU A CELLU C03 D16 F09 (D13) #J5 4160-665
Conversion of waste paper by enzymatic hydrolysis - 87877B/49
- *PARS/ 28.05.75 PARSI G D11 *IT 1035-868
Ravioli prodn. appts. - C/05
- *PARS/ 30.05.75 PARSI G D11 *IT 1035-910
Ravioli prodn. appts. control system - C/05
- PASE 02.01.78 PASSAVANTW MICHELbacher D15 =FR 2422-596
Sewage purification system - 51094B/28
- PAUL/ 07.02.77 PAULUCCI JF D11 =US 4184-421
Pizza frying pan - 86865Y/49
- *PEGA- 07.06.78 PEGASUS CANDLE KK A95 D23 E37 *J5 4160-068
Candle giving coloured flame - 08356C/05
- PENO- 02.10.72 PENOVA AB D14 =DS 2349-195
Smoky flavouring chamber for food - 30092V/16
- PERM- 01.06.78 PERMO SA D15 =NO 7901-531
Sea water purification by reverse osmosis - 75180B/41
- PERR- 16.06.78 PERRIER H SA A92 D16 (A17 A23) =GB 2025-894
Sterilisable plastic bags - 03012C/02
- PERU 27.04.76 PERMUTIT LTD D15 =CA 1069-626
Heavy metal elimination - 07454A/04
- *PETE/ 23.03.79 PETERSON A C D15 *US 4184-954
Sedimentation device for clarifying waste water - 09065C/05
- PHIM 26.12.67 PHILIP MORRIS INC D18 =IT 1035-505
Tobacco product of increased filling powder obtd by expanding - 75746S/48
- PHIM 29.06.78 PHILIP MORRIS INC A88 D18 (A11) =US 4184-495
Aromatised cellulose mfr., e.g. for cigarette filters - 76208Y/43
- PHIP 31.08.76 PHILLIPS PETROLEUM CO D13 =US 4184-613
Patterned three coloured ice cream dispensed into container - 88722X/47
- PHIP 30.11.77 PHILLIPS PETROLEUM CO C03 D16 (D13) #GB 1560-060
Single cell protein prodn. from mixed thermophilic culture - 44073A/25
- *PILL/ 10.07.78 PILLA D P D16 *DT 2849-290
Domestic brewing appliance - 07772C/05
- POLA 10.04.78 POLAK'S FRUTAL WORKS INC D23 E13 =FR 2422-656
Perfume component cyclic acetal(s) and ketone(s) - 75302B/42
- *POLA= 21.07.76 POLAR FISHING IND D12 *SU -663-363
Oriented fish conveying track - 08855C/05
- *POLI/ 02.07.75 POLIN M N D14 *SU -662-783
Drying food cans - 08822C/05
- PROC 28.12.70 PROCTER & GAMBLE CO D13 =IT 1035-522
Simulated meat prodn - 44819T/28
- PROC 22.11.71 PROCTER & GAMBLE CO D13 =DT 2265-528
Instant carbonated drinks prodn - 32529U/23
- PROC 16.04.74 PROCTER & GAMBLE CO D25 E17 F06 =CA 1069-260
Textile softening compsn. for automatic driers - 72499W/44
- PROC 07.05.74 PROCTER & GAMBLE CO D21 =IT 1035-612
Antiperspirant compsn for aerosols - 78692W/48
- PROC 13.05.74 PROCTER & GAMBLE CO D13 =IT 1035-688
Potato crisps mfr from edible paste sheet - 78724W/48
- PROC 13.05.74 PROCTER & GAMBLE CO A96 B07 D22 =IT 1035-693
Medicated catamenial tampons for treating vaginitis - 61881W/37
- PROC 13.11.74 PROCTER & GAMBLE CO D12 =CA 1069-373
Meat substitute from rolled vegetable protein dough - 70603W/42
- PROC 14.11.75 PROCTER & GAMBLE CO D25 E34 =GB 1560-076
Spray dried granules contg. sodium tripolyphosphate and wax - 34482Y/20
- PROC 10.12.75 PROCTER & GAMBLE CO D13 E16 =GB 1560-000
Supplementing foods having insufficient threonine - 45476Y/26
- PROC 24.12.75 PROCTER & GAMBLE CO A97 D25 E17 (A25) =GB 1560-083
Detergents for removing oil stains on fabrics - 49046Y/28
- PROC 21.06.77 PROCTER & GAMBLE EU A97 D25 E33 (A14 E14 E17 E34) =DT 2857-154
Low phosphate fabric washing detergent compsn. - 02331B/02
- PROC 28.02.78 PROCTER & GAMBLE CO D25 E19 =J5 4160-403
Detergent bleach compsn. effective under dark conditions - 64996B/36
- PROC 13.03.78 PROCTER & GAMBLE CO A26 D25 E11 M14 =J5 4160-599
Capped silicate cpds. - 48921B/26
- PROC 13.03.78 PROCTER & GAMBLE CO D25 =J5 4160-897
Fabric care compsn. - 68459B/38
- *PROC 16.11.78 PROCTER & GAMBLE CO D25 E19 F06 *US 4184-970
Antistatic, fabric softening detergent additive - 09070C/05
- PROC- 15.12.76 PROCESS ENG CO D16 =OE 7708-932
Vinegar prodn. in aerated fermentation liquor - 46133A/26
- PROT- 30.06.76 PROTECON BV D12 =GB 1559-931
Press for meat paste prodn. using meat and bone mixt. - 04719A/03
- *PRZE- 21.07.78 PRZED INS INSTAL D15 *DL -137-917
Biological sewage treatment tank - 07473C/05
- PRZE- 25.07.78 PRZED INS INSTAL D15 #GB 2025-918
Biological sewage treatment tank - 07473C/05
- *PUJO/ 09.09.76 PUJOL M D12 *FR 2422-339
Friction machine for plucking poultry without tearing skin - 07847C/05
- *PUJO/ 27.01.77 PUJOL JF D13 *FR 2422-713
tumbling action laceration to extract oil from olives - 07877C/05
- PURD 19.06.74 PURDUE RESEARCH FOUNDATI D14 (D22) =IT 1035-656
Aseptically connecting fitting to aseptic food storage tank - 22267W/13

*PACJ 04.05.77 PATTERSON C J CO B07 D21 *US 4184-978

Stable water in oil emulsion system - 09073C/05

- PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 = J5 4160-755
Glucose prodn. by cellulose acid hydrolysis - 68608B/38
- PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 F01 = J5 4160-756
Glucose prodn. from cellulosic materials - 70256B/39
- PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 F09 = J5 4160-801
Recovering cellulose from waste materials - 73955B/41
- QPPP 30.07.75 Q.P. CORP D13 = J8 0000-022
Dry powdered egg albumen prodn. - 83085X/45
- QPPP 22.09.75 Q.P. CORP D13 = J5 2041-267
Frozen boiled egg prodn. - 08574C/05
- *QPPP 22.09.75 Q.P. CORP D13 *J8 0000-024
Frozen boiled egg prodn. - 08574C/05
- QPPP 07.07.76 Q.P. CORP D13 (D16) = J8 0000-023
Dried egg white prepn. - 16950A/09
- QUAK 19.06.78 QUAKER OATS CO C03 D12 = GB 2025-750
Extruded foods esp. meat products for pet foods - 58003B/32
- *QUAT- 22.05.79 QUATRUM EMPRESA NAC B07 D22 *PT --69-652
Cold sterilisation of unstable steroid powders in sealed packages - C/05
- *RADL/ 25.07.77 RADLOVE S B D11 *US 4185-127
Dry dietary cake mix - 09144C/05
- RALS 27.05.69 RALSTON PURINA CO D13 = IT 1035-513
Souffle product contg protein for incorpora- - 88320R/47
- *RAQU/ 07.09.78 RAQUE G F D14 *US 4184-423
Fruit section appts. with indexed rotatable table - 08963C/05
- *RAUE/ 22.12.77 RAUENHORST G W D14 *US 4184-538
Ventilating heat exchanger for barns - 08980C/05
- RECA 25.04.77 RECHERCHES & IND THERAPE B04 C03 D16 = OE 7802-922
Fowl pest vaccine - 77499Y/44
- *RECK 28.10.72 RECKITT & COLMAN PR A96 D21 (A25) *GB 1559-823
Single phase aq. shampoo - 07895C/05
- *REFR= 31.10.75 REFRIG IND RES INST D13 J04 *SU -587-774
Storage period determ. of animal origin prod. - 08646C/05
- RESE 12.07.74 RESEARCH CORP B04 D16 K08 = DS 2531-176
Gonorrhoea antibodies detection - 07910X/05
- RHEE 03.07.78 RHEEM MFG CO D12 = DT 2914-424
Device for feeding ribbon of sausage clip loops - 02227C/02
- RHOD/ 04.03.77 RHODES J A96 D22 G03 = OE 7801-481
Medical adhesive gel e.g. for surgical tape - 65276A/37
- RHON 24.03.76 RHONE-POULENC INDUSTRIES A97 D25 E19 (A25) = OE 7702-075
Nonionic surfactant contg. mixt. of ethoxylated alcohols - 68825Y/39
- RHON 14.04.76 RHONE-POULENC INDUSTRIES A14 D15 (A97) = OE 7702-616
Water soluble, high mol. wt. acrylic (co)polymers - 74153Y/42
- RHON 02.03.78 RHONE-POULENC INDUSTRIES D25 E33 = J5 4160-598
Synthetic alkali silico-aluminate prodn. - 68504B/38
- RIES/ 01.06.78 RIESS G A96 D21 = NO 7803-793
Dental surgical implant for securing crowns, bridges etc. - 24021B/13
- *RODE/ 31.07.78 RODEL K D15 J04 *DL -138-039
Viscous liquid metering system - 07519C/05
- ROHM 21.06.76 ROHM & HAAS CO D15 E34 J01 (E12) = CA 1069-624
Regenerating weak acid cation exchange resins - 13846A/07
- ROHM 31.05.77 ROHM & HAAS CO D15 = US 4184-948
Deionisation of water streams contg. monovalent and divalent cations - 91658A/51
- ROMO- 28.01.77 ROMO NP D15 = OE 7800-562
Continuous sewage cleaning reactor - 59051A/33
- *ROQF 12.07.78 ROQUETTE FRERES SA C03 D13 *DT 2928-200
High fat-contg. premix prepn. - 07831C/05
- *RORE= 14.05.76 ROST REFRIGERATION D13 *SU -663-365
Chocolate coated ice-cream prepn. - 08857C/05
- ROST- 05.07.78 VU ROSTLINNE VYROBY C03 D16 = NL 7905-268
Protecting sugar beet against damping off - 80863B/45
- ROUS 17.08.70 ROUSSEL UCLAF B03 C02 D22 E13 (D15 D21) = IT 1035-518
3-methyl-4,4-dichloro-5-pyrazolone - 12907T/08
- RUHR 31.05.74 RUHRCHEMIE AG A60 D15 E19 = IT 1035-867
Polymer plasticisers prodn. effluent treatment - 78856W/48
- *RUTH/ 01.03.79 RUTHNER O D15 *OE 7901-550
Working up rubbish and sewage slurries - C/05
- *SACH- 04.08.78 SACHSISCHES SERUMWE B04 C03 D16 *DL -138-329
Tetanus vaccine prodn. from intracellular toxin - 07607C/05
- SADE/ 03.12.76 SADER G D15 H07 = US 4184-949
Hydrocarbon separation from waste water purification layers - 42459A/24
- SAKB 03.03.71 OTSUKA KAGAKU YAKUHI D15 = J4 7030-154
Removal of oxygen from water - 08577C/05
- *SAKB 03.03.71 OTSUKA KAGAKU YAKUHI D15 *J8 0000-116
Removal of oxygen from water - 08577C/05
- *SAKB 05.06.78 OTSUKA KAGAKU YAKUHI A97 D15 H03 (A11) *J5 4158-391
Oil adsorbent prodn. - 08129C/05
- *SAKB 06.06.78 OTSUKA KAGAKU YAKUHI A97 D15 J01 (A11) *J5 4159-386
Polymeric adsorbent for treating waste dye water - 08273C/05
- *SALI- 13.04.78 CIE SALINS MIDI EST D13 *FR 2422-342
Salting food products esp. cheese, for reduced saltiness - 07848C/05
- *SALT= 19.05.77 SALT IND RES INST C03 D13 *SU -663-662
Nutrient salt with improved moisture resistance for livestock - 08919C/05
- *SANE 02.06.78 SAN EI CHEM IND KK D13 *J5 4157-880
Cold water soluble cocoa prepn. - 08058C/05
- SANO 01.04.74 SANDOZ AG B04 D16 #US 4184-917
Modified interferons with anti-viral activity - 75219V/43
- SANY 24.05.78 SANKYO KK B04 D16 = J5 4160-302
Anti:mycobacterial peptide antibiotic mycoplanecin - 87986B/49
- SANY- 19.05.78 SANYO MOKUZAI BOFU C02 D22 E13 F09 = GB 2025-769
Wood preservative contg. 2-mercapto-benzothiazole - 86218B/48
- *SAPB 29.05.78 SAPPORO BREWERIES C03 D16 (D13) *J5 4157-890
Prepn. of microbial body contg. calcium, iron, iodine and/or cobalt - 08060C/05
- SAWY/ 10.05.76 SAWYER P N B04 D22 = GB 1559-946
Modifying thrombogenicity of collagen prostheses - 88491Y/50
- SCHA/ 12.11.70 SCHAPIRO A D13 = IT 1035-521
Water dispersible foodstuff - 33754T/21
- SCHA/ 14.07.77 SCHANZER C03 D13 = OE 7804-845
Dairy by/products, e.g. whey, conversion into animal feed - 10072B/06
- SCHD 25.01.78 SCHERING AG B01 D16 = FR 2422-689
17-Alpha-hydroxy-corticoid derivs. substd. by acetal or thio:acetal - 58435B/32
- *SCHI/ 02.11.78 SCHIMKE F D11 *OE 7807-820
Proofing cupboard for bakery prods. - C/05
- SCHW- 12.09.74 SCHWARZ H KG B04 D16 = SU -663-329
Determination of iso-enzymes of lactate dehydrogenase - 09287X/06
- SCIL 13.05.74 SCHILL & SEILACHER A97 D18 (A14) = IT 1035-641
Polymer-aldehyde dispersion tanning agent - 78964W/48
- SCMZ 05.06.78 SCM CORP D13 = J5 4159-413
Compsn. contg. confectionery hard butter - 89838B/50
- SEAR 27.06.68 SEARLE G D & CO B05 D13 E14 #IT 1035-504
Artificially sweetened consumable products - 26966V/14
- *SENE= 13.12.77 SENEZH WOOD PRESERV C03 D22 E16 F09 (E34 E35) *SU -663-581
Protecting building timber against rot and fire - 08917C/05
- *SETZ/ 21.07.78 SETZER F D16 *DL -137-944
Kiln-dried malt having high diastatic capacity - 07491C/05
- *SHAF 06.06.78 SHARP KK D15 *J5 4159-293
Reducing COD of sample soln. contg. chlorine ions - 08240C/05
- SHEL 27.02.76 SHELL INT RES MIJ BV D23 E17 (D21 E15) = GB 1560-091
Tertiary alcohols - 63357Y/36
- *SHIJ 07.06.78 SHIKOKU CHEM IND KK C02 D15 *J5 4160-730
Chemical sterilisation tablets contg. chlorine contg. fungicide - 08531C/05
- SHIS 08.06.78 SHISEIDO KK A96 D21 E17 G02 (A11 A25 A82) = J5 4160-753
Thixotropic nail varnish with stable viscosity - 91322B/51
- *SHOY 01.06.78 SHOWA YAKUHI KAKO KK A96 D21 *J5 4158-094
Two/part tooth root canal filling compsn. - 08074C/05
- SICO 25.02.75 SOC INTERET COLLECT AGRI C03 D13 = SU -663-269
Mfr. of dried oil cake from vegetable matter - 00381Y/01
- SIFR 22.05.74 SOC FR SILICATES SPEC D21 E36 = IT 1035-829
Amorphous silicic acid for use in toothpaste - 80588W/49
- SIFR 10.06.74 SOC FR SILICATES SPEC D25 E36 = IT 1035-988
Sodium metasilicate for use in washing up compsns. - 83584W/51
- SIFR 10.06.74 SOC FR SILICATES SPEC D25 E36 = IT 1035-989
Sodium metasilicate for use in washing up compsns. - 83583W/51
- SILC 23.08.75 STILL C & CO GMBH D15 E35 H09 = DS 2537-640
Treatment of aq. condensates and effluents from coking plants - 14893Y/09
- SLIT 13.07.76 SCHLITZ J BREWING CO D16 E34 (E35) #CA 1069-625
Reducing foam of carbonated liq. e.g. beer effluent - 90414X/48
- SNAM 05.07.77 SNAMPROGETTI SPA D17 E13 (D16) = DL -138-330
Fructose prepn. from glucose solns. - 01939B/02
- SNAM 12.07.77 SNAMPROGETTI SPA D14 = GB 1560-209
Sterilising milk and other liquid foods with hydrogen peroxide - 04054B/03
- SNAM 24.05.78 SNAMPROGETTI SPA D14 J01 (D23) = PT --69-662
Continuous solid-liq. extn., esp. of vegetable material - 85965B/48
- SNOE/ 05.06.78 SNOEYENBOS G B04 C03 D16 = J5 4160-719
Compsn. for protecting poultry against Salmonella - 03880C/03
- SNOW 31.03.76 SNOW BRAND MILK PRODUCTS D16 J04 = US 4184-919
Gelling microscopic cells having enzymatic activity - 76176Y/43
- SODA- 19.12.72 SODA SANGYO CO LTD D13 E17 = J8 0000-031
Milk-like flavouring material prodn - 24841W/15
- *SOLV 12.07.78 DEUT SOLVAY-WKE GMB C01 D22 E12 F09 *DT 2830-503
Wood preservatives contg. fungicide and insecticide - 07709C/05
- SORG/ 11.08.77 SORGE E C03 D16 (D13) = DL -138-033
Protein-rich nutrient material prepn. from cellulose material - 16143B/09
- *SPAD- 20.04.77 SPAD LAB D21 E32 (E14 E15) *FR 2422-394
Dental filling paste - 07849C/05

SPAD-

- SPAD- 20.04.77 LAB SPAD B05 D21 E14 = US 4184-879
Endodontic treatment paste used esp. for filling infected teeth - 76290A/43
- *SPEC= 13.07.78 SPEC DES-CONS BUR C03 D13 *GB 2026-027
Bacterially produced animal feedstuff - 07998C/05
- *SPEC= 13.07.78 SPEC DES-CONS BUR C03 D16 (D13) *GB 2026-028
Bacterially produced dietary supplement for humans and animals - 07999C/05
- SPEY- 30.05.78 SPEYWOOD LAB LTD A96 B04 D11 (A97) = J5 4157-852
Oral admin. of large doses of anticholesterolaemi carbohydrate gums - 89808B/50
- STAH/ 22.05.78 STAHLER T D15 = PT --69-649
Aerobic sewage treatment - 86284B/48
- *STAN- 12.07.78 STANDARD-MESSO DUIS D15 *DT 2830-514
Desalination plant - 07710C/05
- *STAR= 11.10.76 STARCH PROD RES INS C03 D13 *SU -612-603
Animal feed concentrate prodn. - 08648C/05
- STAU 21.05.74 STAUFFER CHEMICAL CO D11 E33 = IT 1035-776
Non-agglomerating monocalcium phosphate prepn. - 80255W/49
- *STEM 14.07.78 STEINMULLER L & C GMBH D15 *DT 2830-987
Potable water producing plant with reverse osmosis system - 07740C/05
- STER 22.06.70 STERLING DRUG INC D15 = J8 0000-118
Biological treatment of sludge liquid - 01861T/02
- STER 05.06.78 STERLING DRUG INC B05 C01 D22 = J5 4160-348
Arylalkyl and aryloxy-alkyl di:alkyl phosphonate(s) - 87592B/49
- STER 05.06.78 STERLING DRUG INC B05 C01 D22 = NO 7901-770
Arylalkyl and aryloxy-alkyl di:alkyl phosphonate(s) - 87592B/49
- STER 05.06.78 STERLING DRUG INC B05 C01 D22 = PT --69-693
Arylalkyl and aryloxy-alkyl di:alkyl phosphonate(s) - 87592B/49
- STOP- 21.07.78 STOPPANI L SPA B05 C03 D13 = GB 2025-976
Stable anti-haemorrhagic vitamin/k adducts with other vitamin cpds. - 84211B/47
- STRA- 07.01.78 FA STRATE W D15 = DS 2800-556
Sewage venting assembly - 52749B/29
- SUMO 27.01.78 SUMITOMO CHEMICAL KK D15 E36 J04 = FR 2422-953
Analysis of nitrogen derived from nitrites and nitrates - 56291B/31
- SUMO 01.06.78 SUMITOMO CHEMICAL KK C02 D22 = DK 7902-283
Prepn. of antimicrobial N-trityl-imidazole cpds. - 92203B/51
- SUNG 19.07.78 SUNBEAM CORP D14 = GB 2025-779
Multipurpose kitchen appliance with high and low speed spindles - 90982B/50
- *SUNP- 07.06.78 SUN POLE KK A97 D25 *J5 4159-418
Acidic fine granular cleaner, for waste water pipes, etc. - 08289C/05
- SUPE- 12.07.78 SUPER IRIDE SPA A96 D22 = DT 2928-195
Absorbant pads or tampons dissipating aq. fluids in core - 80871B/45
- SUTU 17.06.68 SUTURES INC A36 D22 F06 = IT 1035-506
Natural or synthetic fibre sutures with pro - 01680R/02
- SVME- 11.08.76 SVENSKA MEJER RIKSF D16 = GB 1560-054
Distribution technique for determination of germs in milk - 88285Y/50
- SWIF 16.06.75 SWIFT & CO D22 E14 G03 H07 = CA 1069-375
Tert. butyl hydroquinone antimicrobial and antirancidity agent - 62960Y/35
- *SYLU 25.02.76 SYLVACHEM PTY LTD D23 *US 4185-026
De-oiling spent crystalline clays - 09097C/05
- SYST- 05.11.73 SYSTEM INFOTEKN AB D15 M11 = CA 1069-302
Treating heavy metal hydroxide suspensions - 22516W/14
- *TABA/ 03.06.78 TABARA Y D15 (D16) *J5 4158-055
Coagulation and sedimentation of impurities from water - 08068C/05
- *TAIF 31.05.78 TAIYO FISHERY KK A97 D12 *J5 4157-845
Prodn. of film for wrapping meat - 08055C/05
- TAKU- 22.08.72 TAKUMA KK D15 = J4 9039-267
Activated sludge treatment of sewage - 08579C/05
- *TAKU- 22.08.72 TAKUMA KK D15 *J8 0000-120
Activated sludge treatment of sewage - 08579C/05
- TAPR- 11.11.76 TAPROGGE L REINIGUNGS A97 D15 = DS 2651-438
Water additives preventing deposit-formation of heating surfaces - 36751A/21
- TASH/ 12.04.73 TASHIRO H D15 L02 = J4 9128-932
alumite plant waste water treatment - 08589C/05
- *TASH/ 12.04.73 TASHIRO H D15 L02 *J8 0000-347
alumite plant waste water treatment - 08589C/05
- *TECH- 11.04.78 SOC GEN TECHN NOUV D16 *FR 2422-602
Pretreating strongly organic effluent from wine prodn. etc. - 07871C/05
- *TEIC/ 25.07.75 TEICH W D16 H04 *DL -138-328
Cultivating microorganisms on liq. hydrocarbon - 07606C/05
- *TEIC/ 10.02.76 TEICH W A97 D16 H04 *DL -138-327
Cultivating microorganisms on liq. hydrocarbon contg. medium - 07605C/05
- TEIJ 17.10.77 TEIJIN KK D15 E36 G06 J03 = J8 0000-738
Bromide removal from waste photographic developer soln. - 46283B/25
- *TEIJ 06.06.78 TEIJIN KK A88 D15 J01 *J5 4158-379
Semipermeable membrane for desalination of sea water or brine - 08119C/05
- TEIJ 07.06.78 TEIJIN KK A60 D13 E36 G04 (D22) = J5 4159-385
Oxygen scavenging and heat generating compsn. - 68443B/38
- *TEXT= 20.08.76 TEXTILE IND DES D13 F07 J01 *SU -662-641
Prodn. line for cotton filters for milk - 08788C/05
- *TEXT= 31.01.77 TEXTILE IND DES D13 F07 J01 *SU -662-642
Milk filter prodn. unit - 08789C/05
- *THIE/ 31.08.78 THIELE W A81 D25 E34 *DL -138-191
Sodium carbonate per-hydrate prodn. - 07567C/05
- THOM 05.11.77 THOMAE K GMBH B02 D13 E13 = PT --68-743
Furo and thieno (3,2-d)-isothiazole-3-one-1,1 di:oxide(s) - 35252B/19
- TOGO/ 12.05.76 TOGO Y D16 = J5 2136-747
Cultivating mushrooms - 08573C/05
- *TOGO/ 12.05.76 TOGO Y D16 *J8 0000-004
Cultivating mushrooms - 08573C/05
- *TOKD 25.05.77 TOKYO IKA SHIKA UNI D21 L02 *J5 4158-099
Mfg. artificial bones or teeth - 08076C/05
- TOKU 14.02.75 TOKUYAMA SODA KK A97 D16 E17 = DS 2605-921
L-Tartaric acid prepn from cis-epoxy-succinic acid - 81470X/44
- *TOKU 05.06.78 TOKUYAMA SODA KK A91 D15 J01 *J5 4158-388
Cation exchange membrane prodn. - 08126C/05
- *TOKZ 06.06.78 TOKYO ORG CHEM IND KK C01 D15 *J5 4160-721
Fungicidal, algicidal complex - 08523C/05
- *TOKZ 06.06.78 TOKYO ORG CHEM IND KK C01 D15 *J5 4160-722
Fungicide and algicide for treating crops - 08524C/05
- *TOKZ 06.06.78 TOKYO ORG CHEM IND KK C01 D15 *J5 4160-723
Fungicide and algicide for treating crops - 08525C/05
- *TOPP 06.06.78 TOPPAN PRINTING KK D12 E36 *J5 4160-774
Preserving redness of stretch film packaged meat - 08546C/05
- *TORI- 29.11.78 TORII WINDING MACH D15 *PT --69-653
Textile yarn tension regulator for circular loom - C/05
- *TOSH 08.06.78 TOSHIBA PHARM KK C03 D13 *J5 4160-662
Mfg. stable solid table salt prepn. for livestock - 08510C/05
- *TOXN 19.04.78 TOYO JOZO KK B04 D16 *J5 4160-301
Antibiotic aculeacin A-gamma - 08367C/05
- TOXN 28.04.78 TOYO JOZO KK A96 B04 D16 E13 = J5 4158-488
Carrier-bound di:sulphide cpds. of benzothiazole and pyridine N/oxide - 82813B/46
- *TOXW 31.05.78 TOYO INK MFG KK A92 D12 *J5 4157-866
Oxygen-free storage of fish roe - 08057C/05
- TOYM 31.05.75 TOYOBO KK D15 = J5 1141-468
Treatment of waste water with ozone - 08578C/05
- *TOYM 31.05.75 TOYOBO KK D15 *J8 0000-117
Treatment of waste water with ozone - 08578C/05
- TSUB 06.02.78 KUMIAI CHEM IND KK B04 D16 = FR 2422-680
Beta:galactosidase powder cultured from penicillium multicolour - 60177B/33
- UENO 01.06.76 UENO PHARMACEUTICAL KK D13 = J8 0000-020
Food additive powder contg. sugar or sugar alcohol and surfactant - 68929Y/39
- UGIN 29.07.77 PCUK-PROD CHIM KUH D15 J01 = DS 2832-947
Continuous prepn. of zeolite-A of uniform quality - 06080B/04
- UHDE 24.05.77 UHDE F GMBH D15 = OE 7803-744
Demineralised water prodn. - 70828A/40
- ULTD 29.07.66 ULTRA DYNAMICS CORP A88 D22 = DS 1642-154
Ultraviolet water purifying unit - 37119Q/00
- *UNDE/ 04.09.78 UNDERBERG E C03 D13 (D16) *BE -878-568
Foods, edible products and fodders with low biogenic amine content - 07407C/05
- UNIC 15.10.76 UNION CARBIDE CORP D12 = OE 7707-372
Cellulose casing for sausage type large dia. food prod. e.g. salami - 28800A/16
- UNIC 28.12.76 UNION CARBIDE CORP A96 D22 (A18 A23) = GB 1560-179
Material for orthopaedic casts prodn. - 48191A/27
- *UNIC 28.12.77 UNION CARBIDE CORP A96 D21 (A26) *US 4185-087
Hair conditioning compsns. - 09130C/05
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = PT --69-596
Conc. aq. smoke flavour compsn. for coating tubular food wrapping - 82544B/46
- UNIC 09.05.78 UNION CARBIDE CORP A97 D12 = PT --69-597
Wrapping for food products esp. sausages - 82545B/46
- *UNIC- 02.06.78 UNICHARM KK A96 D22 F07 *J5 4158-096
Menstrual tampon with improved absorption properties - 08075C/05
- UNIL 08.04.71 UNILEVER NV D13 E16 = DS 2216-390
Cheese products - 70324T/44
- UNIL 04.09.75 UNILEVER LTD D23 E17 = GB 1559-794
Recovering fatty acid from soapy soln. - 16456Y/10
- UNIL 17.10.75 UNILEVER LTD A97 D25 = GB 1560-073
Washing powders contg. nonionic surfactant and water-soluble soap - 27114Y/16
- UNIL 14.07.76 UNILEVER NV D12 = OE 7704-995
Meat deboning process and machine - 04174A/03
- UNIL 15.10.76 UNILEVER LTD A97 D25 = GB 1560-074
Washing powders contg. nonionic surfactant and water-soluble soap - 27114Y/16

- UNIL 18.11.77 UNILEVER NV D25 E19 (E37) = PT --68-793
Aq. bleaching compsn., esp. hypochlorite, coloured by pigment - 38987B/21
- UNIL 20.03.78 UNILEVER NV D21 E19 = J5 4158-406
Deodorant non-germicidal toilet soap tablet - 69929B/39
- UNIL 31.05.78 UNILEVER NV A97 C03 D13 = DK 7902-254
Stable liquid animal feed, e.g. milk substitute for calves - 87598B/49
- UNTC 22.05.74 ECODYNE CORP D15 = IT 1035-578
Steam heated, rising out flow, chemical water softener - 60404W/37
- UNTC 30.05.78 ECODYNE CORP A97 D17 = J5 4160-754
Colour purificn. of polyhydric alcohol liquids esp. sugar syrup - 89940B/50
- *USGO 11.11.77 US GOVERNMENT D16 *US 4184-922
Cell culture in tube with two perfusion circuits - 09051C/05
- USII 07.11.77 US INDUSTRIES INC D12 = US 4184-230
Appts. for cutting and breaking poultry necks - 53115A/29
- USMC 19.10.77 USM CORP D17 = FR 2422-721
Sugar cane crushing mill - 33608B/18
- *USME-08.05.73 US MEDICAL RES & DE B04 D16 *US 4184-483
Culture collecting swab and culture medium - 08969C/05
- UYAL-16.11.76 UNIV OF ALABAMA B04 D16 = GB 1559-951
Maltase prepn. which can hydrolyse maltotetraose slowly - 13830A/07
- VELW 20.06.77 VEB LEUNA-WERK W ULBRICH D25 E14 F06 = DL -131-467
Acyl-tauride surfactants continuous prodn. - 56907A/32
- VERE 27.08.76 VER PAPIERW SCHICKEDANZ A96 D22 (A11) = DS 2638-654
Absorbent cellulose-sodium CMC fibres - 00084A/01
- *VIME= 06.01.76 VILIN MECHAN AUTO D15 M11 *SU -614-621
Low conductivity metal plating waste water purificn. - 08649C/05
- *VIME= 05.04.76 VILIN MECH AUTO D15 M11 *SU -617-914
Removal of heavy metal ions from metal plating aq. effluent - 08651C/05
- *VIME= 05.04.76 VILIN MECHAN AUTO D15 M11 *SU -626-551
Metal plating etc. waste water purificn. - 08653C/05
- VISA 16.05.74 VISKASE LTD D12 = IT 1035-749
Machine for forming skinless sausages - 17283X/10
- *VLAN= 02.07.76 VOLG ANTI-PLAGUE B04 C03 D16 *SU -663-405
Coccidiomycosis diagnosis allergen prodn. - 08869C/05
- *VLEU/ 16.05.74 VAN LEUVEN J W A96 B05 D22 E32 (E19) *US 4184-974
Liquid biocidal compsn. for topical use - 09072C/05
- *VOGT- 07.07.78 VOGT-WERKE KG D12 *DT 2829-883
Overhead abattoir transport line - 07678C/05
- VSCO/ 07.09.76 VAN SCOTT E J A96 B05 D21 = FR 2422-398
Topical treatment of dry skin - 17668A/10
- *WAHL/ 15.06.78 WAHLSTAM H E A D21 E19 *WP 8000-057
Cleaning agent for dentine surfaces - 09172C/05
- *WARD/ 13.06.78 WARDEN J C D15 *WP 8000-077
Solar distn. appts. esp. for sea water - 09176C/05
- *WARN 12.12.77 WARNER-LAMBERT CO A96 D21 *US 4184-253
Denture preform - 08950C/05
- *WASS- 24.07.78 INST WASSERWIRTSCHA D15 *DL -137-918
Liquid pig manure treatment - 07474C/05
- *WASS- 24.07.78 INST WASSERWIRTSCHA D15 *DL -137-919
Sewage sludge dewatering - 07475C/05
- *WASS- 24.07.78 INST WASSERWIRTSCHA D15 *DL -137-920
Liquid manure treatment - 07476C/05
- *WASS- 24.07.78 INST WASSERWIRTSCHA D15 *DL -137-921
Liquid manure treatment - 07477C/05
- WEIS- 21.12.77 GEBR WEISS KG D16 = US 4184-269
Organic garbage composting plant - 44109B/24
- WENG- 26.04.78 WENGER MFG D13 (D12) = US 4185-123
Meat analogue formed by extruding vegetable protein - 74221A/41
- WINT 11.02.78 WINTERSHALL AG D16 E13 H01 = FR 2422-715
Oil extn. by flooding with water - 61639B/34
- YAMA- 19.05.78 YAMAHATSU SANGYO D21 E17 (E37) = GB 2026-052
Permanent wave preparation for warm setting - 87939B/49
- YAMS 14.04.78 YAMASA SHOYU KK B03 D13 E13 = FR 2422-684
Periandrin I,II,III and IV from Periandra roots - 79572B/44
- *YANA/ 03.06.78 YANAGASE K D15 *J5 4158-062
Waste water treatment by insolubilisation and filtration - 08072C/05
- ZAID 15.10.75 ZH BISEIBUTSU KAGAKU KEN B02 D16 = OE 7805-271
Neothramycins A and B and methylneothramycins - 12856Y/08
- *ZENI 14.07.78 ZENITH RADIO CORP D15 *DT 2830-990
Sludge digestion tower - 07741C/05
- ZINI 11.11.76 GRILLO WERKE AG A97 D15 = DS 2651-438
Water additives preventing deposit-formation of heating surfaces - 36751A/21
- ZOND/ 13.07.76 ZONDEK K D13 J01 #CA 1069-427
Multistage concn. of solns. by freezing and sepn. of crystals - 25727A/14
- ZSCH- 19.11.76 ZSCHEYGE CHEM & MOL D13 = DS 2652-626
Fresh acid milk prods. and whipped cream prodn. - 38667A/22

37140-F	BCDH	J7	7044-616	Y48	33754-T	D	ZA	7301-036	U52	CH	-579-109	X39	CH	-610-955	B23	FR	2309-631	Y09	DT	2519-860	W49		
CA	-806-155	Q00+	J7	7044-615	Y48	BE	-775-206	T21	J4	8098-649	V08	IL	--43-904	Y07	CA	1056-568	B27	GB	1504-168	A11	FR	2269-923	X09
CH	-471-159	Q01	J7	7044-614	Y48	DT	2155-725	T22	DL	-102-408	V10	OE	7401-410	Y27	US	4171-265	B43+	CA	1036-456	A35	J5	1032-721	X18
DT	1442-067	Q01	J7	7044-613	Y48	J4	7011-965	T26	DS	2306-846	W38	CH	-589-666	Y34	HU	T017-466	C03	IT	1035-636	C05	GB	1498-255	A03
DS	1470-507	Y50+	J7	7044-612	Y48	FR	2114-566	T43	US	3919-112	W48	CA	1022-864	A02	CA	1069-645	C05				CA	1038-295	A39
IT	1035-501	C05+	J7	7044-611	Y48	CA	-962-115	W08	GB	1416-274	W49	US	4184-986	C05+				68978-W	DJ		IT	1035-612	C05
			J7	7044-610	Y48	CH	-563-721	W34	IL	--41-558	W52				33177-W	D	BE	-829-007	W42				
37119-Q	AD		J7	7044-609	Y48	IT	1035-521	C05	CH	-571-569	X12	75219-V	BD		J4	9121-808	W20	NL	7505-621	W49	78724-W	D	
GB	1167-578	Q00	J7	7044-608	Y48				CA	-993-306	X32	NL	7404-424	V43+	J8	0000-440	C05	FR	2271-180	X10	BE	-828-945	W48
DS	1642-154	C05	J7	7044-607	Y48	35525-T	BD		HU	T012-249	X43	BE	-813-308	V43+				DT	2520-950	X16	NL	7505-573	W48
			J7	7044-606	Y48	BE	-775-747	T22+	CS	7301-256	Y15	DT	2416-019	V44+				GB	1463-240	Y05	DT	2520-596	W49
01680-R	ADF		J7	7044-605	Y48	NL	7115-348	T24	J7	7009-067	Y16	SW	7404-153	V49+	BE	-825-123	W26	CH	-597-103	A15	FR	2270-803	X10
DT	1930-876	R02	J7	7044-604	Y48	J4	7011-147	T24	SU	-663-296	C05	DK	7401-853	V49+	DT	2504-318	W33	IT	1035-705	C05	US	3956-517	X21
FR	2011-944	R23	J7	7044-603	Y48	DT	2158-293	T25				SF	7400-914	W01+	NL	7501-236	W34				GB	1466-018	Y09
GB	1274-683	T20	J7	7044-602	Y48	ZA	7106-689	T29	03113-V	D		FR	2224-133	W05+	J5	0107-164	W42	68979-W	DEH		CA	1024-396	A06
IT	1035-506	C05	J7	7044-601	Y48	FR	2115-379	T43	SU	-373-296	V02	J4	9134-826	W09+	FR	2259-542	W47	BE	-829-035	W42	IT	1035-688	C05
			J8	0000-363	C05	CA	-935-091	U43	DL	--83-659	C05	DK	7501-933	W36+	US	3930-033	X02	NL	7505-620	W49			
32699-R	BD					US	3783-098	V02				DK	7501-932	W36+	ZA	7500-294	X13	DT	2521-469	W49	78746-W	D	
FR	1583-560	R19	40680-S	D		GB	1374-123	V46+	07516-V	BDE		DL	-116-058	X05+	GB	1454-071	X44	DK	7502-107	X09	BE	-829-029	W48
GB	1229-425	S15	DT	2014-472	S24	IL	--37-849	W21+	DT	2234-009	V05	DL	-116-621	X10+	CA	1069-374	C05+	FR	2271-287	X10	NL	7508-188	X08
GB	1241-288	S30	FR	2071-577	S51	CS	7107-906	X30	BE	-802-208	V05	DL	-118-436	X22+				US	3997-399	X52	DT	2436-792	X08
CA	-927-745	U26	US	3666-487	T24	CH	-581-193	X47+	NL	7309-506	V05	GB	1471-461	Y17	52741-W	BCD	GB	1464-334	Y06	SW	7508-657	X13	
DT	1792-806	B25	J7	2041-021	T42	DS	2158-293	B05+	FR	2191-904	V14	GB	1471-462	Y17	DT	2501-788	W32+	IT	1035-724	C05	SF	7502-174	X19
DS	1767-484	B40	DT	2014-472	U45	IT	1035-519	C05+	ZA	7304-620	V27	GB	1471-463	Y17	BE	-824-781	W32+				FR	2280-590	X21
IT	1035-503	C05	IT	1035-511	C05				DL	-105-391	V28	SF	7701-924	Y46+	NL	7500-845	W33+	69007-W	D		ZA	7503-776	X26
						44819-T	D		J4	9050-142	V29	SF	7701-923	Y46+	SW	7500-793	W38+	BE	-829-148	W42	US	4007-116	Y07
76089-R	D		55556-S	BDE		NL	7117-793	T28	OE	7306-052	W31	US	4061-538	Y50+	DK	7500-227	W42+	NL	7505-703	W49	GB	1472-528	Y18
BE	-748-651	R41	BE	-762-688	S34	BE	-777-383	T30	GB	1440-975	X27	OE	7402-751	A13	ZA	7500-039	X13	DT	2521-883	W50	CA	1048-940	B10
NL	7005-070	R42	NL	7101-674	S41	DT	2164-552	T32	CH	-584-033	Y09	SW	7714-086	A27+	PT	--63-272	X19+	SW	7505-464	X02	IT	1035-672	C05
DT	2017-043	R43	DT	2015-085	S43	US	3693-533	T41	DS	2234-009	Y12	SW	7714-085	A27+	DL	-119-790	X28+	NO	7501-701	X03			
ZA	7002-354	S09	J4	6004-018	S47	FR	2120-914	T49	CA	1013-675	Y30	CH	-601-336	A33	J5	1125-069	X51	J5	0155-507	X04	78856-W	ADE	
FR	2043-054	S17	FR	2084-324	T10	GB	1335-597	U44	SU	-580-806	B17	OE	7600-607	A44	DL	-125-212	Y25	SF	7501-404	X07	DS	2426-448	W48
CH	-531-045	U07	GB	1317-533	U21	CH	-559-010	W13	US	4185-106	C05	CH	-606-070	A48+	DL	-125-213	Y25	DK	7502-150	X09	BE	-829-476	W51
GB	1319-460	U23	CA	-926-413	U22	CA	-967-054	W21				US	4184-917	C05+	DL	-125-211	Y25	FR	2271-286	X10	NL	7505-820	W51
US	3804-715	V17	US	3766-227	U44	OE	7111-201	X46	26966-V	BDE					FR	2333-801	Y37+	BR	7502-975	X15	SW	7505-851	X06
CA	-951-665	V32	CH	-549-550	V26	IT	1035-522	C05	US	3800-046	V14+	00001-W	D		GB	1499-582	A05+	ZA	7502-732	Y04	J5	1004-117	X09
J7	7009-739	Y15	DS	2015-085	X22				IT	1035-504	C05	BE	-816-248	W01	J5	1125-069	X51+	GB	1505-274	A13	FR	2272-956	X12
IT	1035-512	C05	J8	0000-370	C05	58293-T	D		DT	2208-899	T37	NL	7408-017	W01	OE	7500-426	B18+	IT	1035-683	C05	OE	7407-225	X15
						DT	2208-899	T37	30092-V	D		NO	7402-149	W06	CS	7500-448	B33+	70603-W	D		BR	7503-289	X24
38320-R	D		69737-S	D		DL	--95-537	U16	NL	7313-276	V16	SW	7407-660	W07	CS	7801-231	B33+	US	3911-157	W42	GB	1467-936	Y12
BE	-751-048	R47	FR	2066-516	S44	US	3733-058	U22	DT	2349-195	V20	FR	2233-285	W13	CS	7801-232	B33+	GB	1517-008	A27	US	4066-835	A03
NL	7006-978	R48	DT	2052-473	T23	CH	-533-951	U22	FR	2201-038	V27	DK	7203-194	W16	CS	7801-233	B33+	CA	1060-899	B36+	HU	T014-544	A12
ZA	7002-495	S09	US	3692-580	T40	OE	7101-698	W50	CH	-570-115	X07	ZA	7403-517	W27	CA	1060-899	B36+	CA	1069-373	C05	CA	1056-738	B27
DT	2024-442	S10	GB	1331-966	U39	DT	2265-562	C05	DT	2365-721	X17	GB	1423-494	X06	IT	1035-548	C05				IT	1035-867	C05
FR	2048-855	S24	IT	1035-516	C05				DS	2349-195	C05	OE	7404-945	X10				70802-W	DJ		78964-W	AD	
GB	1271-173	T16				68486-T	DE		FR	2114-701	T43	IL	--45-000	X45	60378-W	CD		BE	-829-441	W43+	BE	-829-227	W49
US	3662-673	T23	75746-S	D		GB	1327-897	U34	DT	2341-639	V23	CH	-582-628	Y02	BE	-828-047	W37+	NL	7505-827	W50+	DT	2423-118	W48
CA	-910-114	T40	GB	1256-529	S48	US	3755-494	U37	DL	-108-451	V48	DS	2428-910	Y21	NL	7504-674	W45+	DT	2522-350	W50+	FR	2271-291	X10
DS	2024-442	V09	J7	3010-240	U14	US	3755-494	U37	GB	1414-384	W47	HU	T013-918	Y41	DT	2517-274	W46+	FR	2271-858	X11+	DS	2423-118	X23
NL	-151-619	Y03	DS	1815-169	Y49	CA	-959-333	W01	IT	1032-042	B39+	CA	1024-276	A05	SW	7504-448	W50+	CH	-579-415	X42	GB	1465-453	Y08
IT	1035-513	C05	IT	1035-505	C05	IT	1035-520	C05	IT	1032-042	B39+	CS	7404-255	B06	NO	7501-344	W51+	CH	-583-580	Y09	IT	1035-641	C05
						DL	-108-451	C05	41950-V	D		SU	-663-297	C05	IT	0142-744	X02+	IT	1035-796	C05+			
06200-S	BDE		01861-T	D		70324-T	DE		DT	2341-639	V23				22267-W	D		FR	2267-711	X06+	72499-W	DEF	
BE	-753-320	S03	DT	2130-922	T02	NL	7204-793	T44	CH	-549-801	V26	US	3871-824	W13	US	3871-824	W13	NL	7511-824	X17	BE	-827-986	W44+
NL	7010-316	S04	NL	7108-527	T02	DT	2216-390	T45	HU	T012-116	X37	FR	2275-156	X15	FR	2275-156	X15	NL	7504-510	W44+	NL	7505-959	W50
DT	2034-700	S12	J4	7001-786	T06	BE	-781-847	T47	RU	--60-282	X40	ZA	7502-756	X24	FR	2275-156	X15	DT	2516-104	W45+	DT	2518-543	W50
FR	2055-084	S32	ZA	7103-967	T09	FR	2135-158	U09	SU	-563-629	A21	BR	7503-859	X30	BR	7503-859	X30	SW	7504-334	W49+	J5	0150-698	X03
ZA	7004-795	T14	FR	2099-799	T26	GB	1381-655	W04	IT	1035-527	C05	CA	1029-536	A18	DK	7504-530	X28	DK	7501-636	X06+	FR	2272-030	X11
CH	-527-573	T47	GB	1346-467	V07	OE	7203-079	W31				CA	1029-536	A18	FR	2287-180	X30	FR	2269-601	X08+	US	3954-939	X20
US	3705-039	T50	CH	-548-956	V26	US	3922-365	W50	51365-V	BCDE		IT	1035-656	C05	US	3973-051	X33	US	4022-938	Y20+	ZA	7502-293	X21
CA	-926-795	U23	CA	-954-241	V38	CH	-571-321	X12	NL	7317-432	V28				US	3982-003	X40+	CH	-594-778	A09+	IL	--47-034	Y47
DS	2034-700	V50</																					

80936-W

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ZA 7507-357 Y01
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DT 2512-998 X42
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J5 1110-592 X46 +
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81199-X DJ

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81470-X ADE

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91409-B BCD DT 2923-144 B51 GB 2025-222 C04 + NO 7901-839 C05 +	03854-C D EP ---6-638 C03 GB 2024-830 C03 + DT 2926-808 C04 NL 7905-172 C05	07478-C ADF DL -137-922 C05	07721-C D DT 2830-744 C05	07951-C D GB 2025-920 C05 +	08079-C AD J5 4158-096 C05	08531-C CD J5 4160-730 C05	08651-C DM SU -617-914 C05
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	05764-C BDE EP ---7-058 C04 DS 2831-580 C05	07491-C D DL -137-944 C05	07765-C D DT 2831-218 C05	07998-C CD GB 2026-027 C05	08084-C AD J5 4157-816 C05	08543-C ABD J5 4160-752 C05	08732-C D SU -662-581 C05
	05862-C CDE EP ---7-244 C04 GB 2025-959 C05 +	07511-C BD DL -138-016 C05	07772-C D DT 2849-290 C05	07999-C CD GB 2026-028 C05	08085-C DE J5 4157-821 C05	08544-C D J5 4160-757 C05	08733-C D SU -662-582 C05
		07516-C CD DL -138-032 C05	07786-C D DT 2926-158 C05	08034-C BD J5 4157-816 C05	08086-C ADE J5 4157-822 C05	08545-C D J5 4160-763 C05	08734-C D SU -662-583 C05
		07518-C D DL -138-038 C05	07789-C DF DT 2926-520 C05 OE 7804-822 B40	08038-C DE J5 4157-821 C05	08087-C ADE J5 4159-414 C05	08546-C DE J5 4160-774 C05	08735-C D SU -662-584 C05
		07519-C DJ DL -138-039 C05	07802-C DE DT 2927-278 C05	08049-C AD J5 4157-834 C05	08088-C AD J5 4159-415 C05	08547-C D J5 4160-775 C05	08788-C DFJ SU -662-641 C05
		07524-C AD DL -138-057 C05	07814-C DE DT 2927-820 C05 GB 2025-957 C05	08050-C ADE J5 4157-835 C05	08089-C AD J5 4159-416 C05	08548-C AD J5 4160-781 C05	08789-C DFJ SU -662-642 C05
		07567-C ADE DL -138-191 C05	07821-C DE DT 2928-002 C05 +	08054-C AD J5 4157-841 C05	08090-C AD J5 4159-417 C05	08549-C D J5 4160-787 C05	08822-C D SU -662-783 C05
		07572-C ADE DL -138-196 C05	07830-C ABDE DT 2928-190 C05	08055-C AD J5 4157-845 C05	08091-C AD J5 4159-418 C05	08550-C BD J5 4160-795 C05	08851-C D SU -663-359 C05
			07831-C CD DT 2928-200 C05	08056-C DE J5 4157-858 C05	08092-C AD J5 4159-419 C05	08551-C D J5 4160-800 C05	08852-C D SU -663-360 C05

08853-C

08853-C D SU -663-361 C05	09071-C AD US 4184-973 C05 +
08854-C D SU -663-362 C05	09072-C ABDE US 4184-974 C05 +
08855-C D SU -663-363 C05	09073-C BD US 4184-978 C05 +
08856-C D SU -663-364 C05	09097-C D US 4185-026 C05 +
08857-C D SU -663-365 C05	09119-C AD US 4185-072 C05
08858-C D SU -663-366 C05	09129-C AD US 4185-086 C05
08859-C D SU -663-367 C05	09130-C AD US 4185-087 C05
08860-C D SU -663-368 C05	09140-C BCD US 4185-120 C05
08861-C D SU -663-369 C05	09141-C ADE US 4185-122 C05
08868-C BD SU -663-404 C05	09142-C D US 4185-125 C05
08869-C BCD SU -663-405 C05	09143-C D US 4185-126 C05 +
08889-C D SU -663-436 C05	09144-C D US 4185-127 C05
08917-C CDEF SU -663-581 C05	09172-C DE WP 8000-057 C05
08919-C CD SU -663-662 C05	09176-C D WP 8000-077 C05 +
08945-C CD SU -663-693 C05	
08947-C D US 4184-229 C05	
08950-C AD US 4184-253 C05	
08961-C D US 4184-418 C05	
08962-C D US 4184-422 C05 +	
08963-C D US 4184-423 C05	
08969-C BD US 4184-483 C05 +	
08980-C D US 4184-538 C05	
09004-C D US 4184-789 C05	
09034-C CDEH US 4184-892 C05 +	
09040-C AD US 4184-902 C05 +	
09050-C BD US 4184-920 C05 +	
09051-C D US 4184-922 C05	
09061-C D US 4184-947 C05	
09062-C DF US 4184-950 C05 +	
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09070-C DEF US 4184-970 C05	

BE -878

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* 430 07364C B04C03D16
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* 481 07381C D14J01Q6
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* 593 07413C D14
* 606 07415C D15
* 731 07440C D15

BR 7802

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BR 7903

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= 478 91399B A96D21E11

CA 1069

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= 262 19713A D12
= 275 44030X D17J04 + Q7
= 277 42406X D17J08 + Q7
= 302 22516W D15M11 + Q3
= 338 50356Y D15H03J04R1 + Q4
= 347 53856A D21M27
= 373 70603W D12
374 42710W D13
= 375 62960Y D22E14G03H07
= 376 56320X A97D13
= 377 60378W C03D13
= 378 57879X D15 + P7
394 48357X A96D22F06P3
427 25727A D13J01
= 443 68795X D15 + Q3
= 444 42029X D15P4
= 468 76813A D22P3 + Q3
= 522 45241Y A87D15F06 + P3
= 624 13846A D15E34J01
625 90414X D16E34
= 626 07454A D15
= 639 88634X A96D21 + P3
= 645 27483W D22F04L01 + P4

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DK 7802

381 86136A C03D13

DK 7901

= 362 89752B A97D25E19F06

DK 7902

= 189 C D15J01
= 197 71825B A96B04D21
= 203 71814B D21E33
= 254 87598B A97C03D13
= 283 92203B C02D22P3

DL --83

= 659 03113V D16 + R1

DL -108

= 451 41950V D13

DL -131

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= 467 56907A D25E14F06

DL -137

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* 919 07475C D15
* 920 07476C D15
* 921 07477C D15
* 922 07478C A32D15F01
* 941 07488C D16
* 942 07489C D15
* 943 07490C D15
* 944 07491C D16
* 945 07492C B03D16
= 965 01907C C03D13Q7

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* 032 07516C C03D13
= 033 16143B C03D16
* 038 07518C D15
* 039 07519C D15J04
* 057 07524C A35D15
= 078 12365B A81D18F06G03
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* 191 07567C A81D25E34
* 196 07572C A41D15E16

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* 247 07594C B04C03D16R1
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* 275 07597C A96D22P3
= 276 79384A B04D16
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= 311 18378B D13E17
* 327 07605C A97D16H04
* 328 07606C D16H04
* 329 07607C B04C03D16
= 330 01939B D17E13
* 404 07617C D15
* 421 07625C D15
= 427 18204B A93D22E13G04

DS 1642

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DS 2127

854 16041T A89B05D22 + P3

DS 2216

= 390 70324T D13E16

DS 2349

= 195 30092V D14

DS 2523

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DS 2531

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DS 2638

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DS 2644

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DS 2652

= 626 38667A D13

DS 2720

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= 204 61930A D13E17

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* 883 07678C D12
* 910 07681C D11

DT 2830

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* 503 07709C C01D22E12F09P6
* 514 07710C D15
* 744 07721C D17P4
* 866 07727C D11
* 956 07735C D15J04
* 987 07740C D15
* 990 07741C D15

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* 218 07765C D23

DT 2849

* 290 07772C D16

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* 158 07786C D11
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* 520 07789C D15F09

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* 278 07802C D21E19
* 820 07814C D21E14

DT 2928

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* 190 07830C A96B04D21E19
= 195 80871B A96D22P3
* 200 07831C C03D13
= 239 06066C D21R1

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* 335 07845C D11
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* 337 07846C D12
= 338 00428B D12
* 339 07847C D12
= 340 75816B D13
= 341 25998B D13
* 342 07848C D13
= 343 42688B D14P7 + R1
= 344 60155B D13
* 394 07849C D21E32
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= 398 17668A A96B05D21
= 407 77682B A96B04D22P3
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= 597 59870B D15
= 599 35799B D15E11
= 600 77650B C04D15H09
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* 602 07871C D16
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= 684 79572B B03D13E13
= 685 77170B B04D16
= 689 58435B B01D16
* 713 07877C D13
= 714 75324B D16E17
= 715 61639B D16E13H01Q4
* 716 07878C D16E17
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= 721 33608B D17 + P4
* 731 07879C C03D13E11M14P1
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GB 1559

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= 989 29152Y B05D13E17
= 990 29203Y D13 + Q7

GB 1560

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= 179 48191A A96D22P3
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= 246 42201A B04D16J04R1 + P3

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* 028 07999C C03D16
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= 506 01680R A36D22F06 + P3
= 511 40680S D13
= 512 76089R D17
= 513 88320R D13
= 514 06200S B03D13E13
* 515 C D12
= 516 69737S D17
= 517 04716T D21
= 518 12907T B03C02D22E13
= 519 35525T B04D16
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= 522 44819T D13
= 524 45859U D13
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559 W C03D13
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= 612 78692W D21
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= 641 78964W A97D18
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= 672 78746W D15
= 683 69007W D25Q3 + P2
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IT 1035

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J4 9039
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J4 9042
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J4 9128
 = 932 08589C D15L02

J5 1130
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J5 1141
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J5 2041
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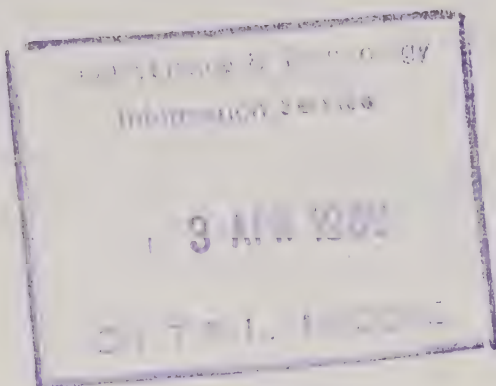
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ABSTRACTS

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Section D:

FOOD DETERGENTS

COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	1 JAN - 22 JAN 80	877,390 - 877,824
-Non Delayed	16 JAN 80	878,814 - 878,950
BRAZIL	22 JAN 80	7,804,412 - 7,907,666
CANADA	22 JAN 80	1,070,051 - 1,070,450
CZECHOSLOVAKIA	17 SEP 79	6,901,368 - 7,708,755
DENMARK	7 JAN 80	7,802,364 - 7,902,336
	14 JAN 80	7,802,498 - 7,902,407
W. GERMANY		
-DAS	31 JAN 80	1,522,689 - 2,918,422
-OLS	31 JAN 80	2,757,029 - 2,929,999
EUROPE		
-Unexamined	6 FEB 80	7,318 - 7,920
FRANCE*	16 NOV 79 (BOPI 21 DEC 79)	2,423,117 - 2,423,956
UNITED KINGDOM	6 FEB 80	1,560,261 - 1,560,780 2,026,291 - 2,026,820
ISRAEL	30 DEC 79	44,882 - 55,830
ITALY	30 OCT 79	1,036,001 - 1,036,500
JAPAN		
-Unexamined	— 20 DEC - 27 DEC 79	46,001,897 - 54,035,080 54,160,901 - 54,164,400
-Examined	10 JAN - 16 JAN 80	80,000,761 - 80,001,760
NETHERLANDS	15 JAN 80	162,538 - 162,819
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NORWAY	7 JAN 80	7,801,802 - 7,901,976
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SWEDEN	21 JAN 80	7,806,500 - 7,909,894
UNITED STATES		
-Reissues	29 JAN 80	Re30,198 - Re30,199
-Patents	29 JAN 80	4,185,327 - 4,186,441

*Printed patents actually published mid January, 1980

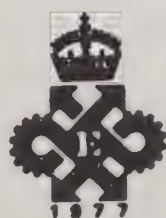
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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry	H	Petroleum
B	Pharmaceuticals	J	Chemical Engineering
C	Agricultural Chemistry	K	Nucleonics, Explosives, Protection
D	Food, Disinfectants, Detergents	L	Refractories, Ceramics
E	General Chemistry	M	Metallurgy
E+	General Chemistry Applns.		

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.

Patentee Code	Patentee Name	Other Classes	Publication Date	Main CPI Class for Section	Latest Priority	Earliest Disclosure Basic Patent	Accession No	Earliest Priority	Patent No	IPC
MEDA-				A89			69369W/42		=US 3964-992	
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)										
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)										
B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26										

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

DEBA- D11 09899U/08 = DS 2137-770
Automatic bakery plant - esp for bread roll prodn
DEBAG DEUT BACKOFEN (DEB-) 28.07.71-DT-137770
+ Q35 (31.01.80) *DT2137-770 A21c-09/08

A transfer device for lumps of dough from an endless chain conveyor with rocking troughs to a discharge carrier has along the upper strand of the conveyor a control rail on which the rollers of the hinged trough levers run. The rail is moved down in a parallel motion to cause the troughs to discharge the pieces of dough, by an eccentric drive on both ends. The eccentric drive is actuated by a feeler above the conveyor which enters the troughs and detects the presence of a lump of dough.

The result is a gentle tipping motion and a complete charging of the discharge carrier. 28.7.71 as 137770 Div. ex 2167135(11pp39)

CHFW ★ D11 09267C/06 ★ DS 2851-053
Whole-meal bread mfr. - with admixture of partly germinated grains dried and extruded at specified temp. and pressure
WERNER & MERTZ 25.11.78-DT-851053
(31.01.80) A21d-02/38

Partely germinated grains of tye or wheat for bread baking are dried in hot air at $\leq 60^{\circ}\text{C}$ to a residual moisture content of 15-26 (18-22) wt. % After rough grinding the material is pressed through an extruder at a pressure of 50-150 bar and a temp of 140-180 $^{\circ}\text{C}$.

Method inactivates the enzymes, which are responsible for pasty bread, and gives an excellent taste and improves the nutritional value. 25.11.78 as 851053(4pp39)

FANT- D11 72063A/40 = EP ---7-350
Device for cutting sheet cakes into small pieces, e.g. petits/fours - having rotating notched cutter discs engaging cake moving on horizontal conveyor

FANTASIA CONFECTION 02.09.77-US-830195
P62 (06.02.80) *US4100-830 B26d-03/22 + B26d-01/16
D/S: E(FR)

12.7.78 as 900103 (WP 7900125)

POUP/ D11 33315B/17 = EP ---7-361
Treating and deep freezing of raised dough prods. - using instantaneous hyperfrequency heating followed by deep freezing

POUPARD M 11.10.77-FR-030599
(06.02.80) *WP7900-195 A21d-08 A21d-15/02
D/S: E(CH, DT, GB, LU, SW)

10.10.78 as 900150

GASH- ★ D11 09729C/06 ★ FR 2423-159
Automatic loader for charging fermented dough pieces into bakery oven - has successive conveyor bands with alternative common and independent drives

GASHOR-OOMS SA 18.04.78-ES-468917
(21.12.79) A21b-03/07

The loader is of the type which automatically transfers a predetermined number of fermented dough pieces from a prover to the oven. The loader comprises two conveyor bands arranged in succession between the prover and the oven. The first conveyor receives dough pieces from the prover and transfers them to the second conveyor. The second conveyor discharges the dough pieces into the oven.

The drive shafts of both conveyors are driven via individual free-wheel sprockets from a drive transmission common with the oven conveyor. This means that the drive to both conveyors is normally synchronised with that of the oven conveyor. Each conveyor also has an independent drive motor and transmission so that either or both conveyors may be driven faster than the synchronous speed by over-riding the free wheel sprocket clutches. 17.4.79 as 009648 (10pp448)

LOCO/ ★ D11 09767C/06 ★ FR 2423-757
Volumetrically adjustable depositor esp. for dividing baker's dough - has horizontal rotary drum contg. double acting depositing piston
LOCOLAS C 20.04.78-FR-012445
R13 (21.12.79) A21c-05 G01f-11/06

The machine has a cylindrical drum which rotates beneath a feed hopper. A cavity in the drum is filled with material from the hopper. As the drum rotates and the contents of the cavity are deposited below the drum. The volume of material accepted by and delivered from the cavity is adjustable.

The drum has a diametral bore housing a double action piston with limited free movement. Displacement of the piston takes place with the bore in line with the hopper outlet. The top of the piston draws in a measured vol. of material; the bottom of the piston simultaneously discharges a similar vol. of material from the lower end of the bore.

Used partic. as an automatic dough divider but also as a volumetric depositor for pastes, powders, granules, flakes, etc. The machine is simple, robust and inexpensive. It is easily adjusted for product vol. and requires little maintenance. 20.4.78 as 012445 (7pp448)

BUHL D11 33193Y/19 = GB 1560-545
Fluidised bed drying tunnel for pasta prods. - which is adaptable to dry or roast e.g. cocoa, coffee, fruit or nuts

BUEHLER GEBR AG 14.06.76-CH-007495 (31.07.75-CH-009988)
Q76 (06.02.80) *FR2319-863 F26b-03/08 + A23n-12/12

Bulk pasta pieces, partic. small conical or purse-shaped shells, are dried by forming into a bed between an inlet and outlet, passing drying gas through the bed, and maintaining the pieces in free relative motion. The gas flow pref. continuously fluidises the whole bed and augments rotation of pieces by being differently directed at different points in the bed.

The gas flow through the bed may be pulsed, and the bed may be heated by microwaves in addition to the gas being preheated so that total heating is sufficient to inactivate any harmful organisms. The gas is pref. at least partly recycled. 30.7.76 as 031968 (27pp1358).

REMY/ ★ D11 09791C/06 ★ GB 2026-297
Oven for dough products - includes steam nozzles and IR and microwave heaters

REMY R 26.07.78-FR-022143
(06.02.80) A21b-01 A21b-02

An oven for the automatic baking of bread or other similar products includes jets for the application of steam to the dough to be baked. The jets include a perforated rack fed from a steam generator which itself comprises a coil of nickel-chromium alloy having electrical connections to it. Water entering the coil can be vapourised by the electrical heating of the coil itself. Preferably the oven is divided into successive compartments so that the dough is subjected to different successive conditions.

The prod. can be optionally baked by the successive application of long wave length infra red and microwave radiations. 20.7.79 as 025293 (4pp295).

NISS ★ D11 10354C/06 ★ J5 4163-841
Bulky bread prodn. - by combining (dehydro) ascorbic (salt) in sponge, fermenting and combining reducing agent

NISSHIN FLOUR MILL KK 15.06.78-JA-071550
(26.12.79) A21d-02/22

Process comprises (a) combining (dehydro)ascorbic (salt) in a sponge; (b) fermenting; and (c) combining reducing agent in the dough obtd. Pref. (dehydro)ascorbic acid (salt) is combined as 2-100 ppm on flour. Reducing agent is pref. cysteine, glucose-cysteine, glutathione, -riboacid, their salt, Na sulphite, sodium hyposulphite, K metaper-sulphite, yeast powder contg. glutathione, keratin hydro-

lysate contg. cysteine, etc. Reducing agent is pref. used so that the reducing gp. is present as 0.02-1.0 ug equiv. on lg of flour. Pref. viscosity-increasing agent (e.g. xanthane gum, carrageenan, guar gum, locust bean gum, etc.) is combined.

Being excellent in extendability the dough obtd. can be easily handled and voluminous bread excellent in outer and inner texture can be obtd. 15.6.78 as 071550(3pp5).

ORIY ★ D11 10355C/06 ★ J5 4163-842
Bread prepn. - by adding L-ascorbic acid and glycerine fatty ester to dough and opt. adding protease and/or phospholipid

ORIENTAL YEAST KK 16.06.78-JA-072783
(26.12.79) A21d-02/22

Method comprises combining 5-100ppm L-ascorbic acid and 0.03-0.5% glycerin respectively and, if necessary, further combining 50-300 units protease and/or 0.02-0.2% phospholipid (on flour). The glycerin fatty acid ester and phospholipid are used in the wt. ratio of 1:1/3-1, esp. 1:1.

Problems previously encountered using L-ascorbic acid as oxidising agent, are obviated and a dough which

has excellent extending property and mechanical resistance and is free of caving, is obtd. 16.6.78 as 072783(4pp5).

ITMU- ★ D11 10937C/06 ★ US 4185-528
Cleaning rotating disc cutter - by pads mounted on pivoting arms swung over disc surface

INT MULTIFOODS CORP 06.04.78-US-893913
P62 (29.01.80) B26d-07/08

A rotating disc cutter is cleaned by a pair of pads which sandwich the disc while they are moved radially. Each pad is attached to an arm pivoted at its other end and swung about this point. Cams force the pads onto the surface of the disc but lift them away when the pads are adjacent the cutting surface. The arms are mounted on a frame which is rotated through 360° to provide the cleaning action for the entire disc surface. Pref. the frame is rotated by an electric motor and a control circuit.

The appts. cleans the blade of a cutter for slicing bakery prods. The cams ensure that the pads are not damaged by contacting the cutting edge. 6.4.78 as 893913 (17pp)
See Also

D13 J8 0001031

D12: MEAT; FISH PROCESSING

NMHB ★ D12 09271C/06 ★ DT 2810-573
Fish heat treatment plant - with endless chain conveyor for automatic loading and unloading of suspended baskets

NORDISCH MASCH R BAADER 11.03.78-DT-810573
Q35 (D14) (31.01.80) A22c-25 A231-03/04 B65g-49

A plant for the heat treatment (steaming, dewatering, drying) of fish in open tins consists of an endless chain conveyor for carrier baskets with perforated bottom plates for the tins. The baskets are fitted with a guide roll and the return sprockets for the conveyor chain are fitted with guide rails for automatic loading and unloading of the baskets.

This saves manual labour for loading and unloading and requires no perforated plates to cover the open tins. 11.3.78 as 810573 (9pp39)

PROT- D12 77156B/42 #EP ---7-327
Collecting blood sample from animals - by inserting sterilised self-piercing hollow instrument into artery or vein and conducting blood into container

PROTEAN HOLDINGS LT 19.07.78-ZA-004116 (19.07.78-EP-300167)
+ P32 P34 (06.02.80) *ZA7804-116 + A22b-05/04 A61d-01/14 A611-02/04

D/S: E(BE, CH, DT, FR, GB, LU, NL, SW).

Blood is collected from a stunned animal in a sterile condition by suspending the animal and stripping a portion of its hide to expose an area adjacent a major artery or vein. A sterilized self-piercing hollow instrument is inserted through the exposed area into the vein or artery and the blood is conducted in a sterile manner from the instrument to a collection container.

The process is used for collecting animal blood for use, e.g. as a source of protein.

19.7.78 as 300167.(24pp67).
(E) ISR: DT2035019; DS-870957; DS-821467; US1644698; GB-982910; DS1240757; DS-599471; GB1070435; US2178129; US1472377.

VOGT- D12 07678C/05 =EP ---7-469
Overhead abattoir transport line - with raisable track section for carcass skinning station

VOGT-WERKE GMBH 07.07.78-DT-829883
+ Q35 (06.02.80) *DT2829-883 A22b-07 + A22b-05/16 B65g-19/02

D/S: E(BE, CH, FR, GB, IT, LU, NL, OE, SW).

In a processing flow line in an abattoir, the carcasses are conveyed from station to station suspended from an overhead track. At a station where the carcasses have to be skinned, a section of the track is offset so that the chain conveyor does not act on it, and this section can be lifted up with the carcass to create enough space at the floor

for the skinning roll.

This saves having to excavate a pit for this station which is often impossible.

2.7.79 as 102218.(11pp39).

(G) ISR: US3046597; DS-957190; US2383835; US3261301.

HUMB/ ★ D12 09730C/06 ★ FR 2423-161
Fluid power press for reconstituted meat partic. ham - has multiple interchangeable moulds for high output e.g. 50 units per hour

HUMBERT H 20.04.78-FR-011982
(21.12.79) A22c-17

The machine frame houses a set of fixed mould jaws and a corresp. set of opposed, mobile mould jaws. The mobile jaws are fixed to a sliding carriage which brings them up to the fixed jaws to form vertical mould passages. The tops of the passages are closed by a hinged door which is swung down into contact with the mould jaws by a fluid power cylinder. The door is locked in this position by a sliding bar displaced by a fluid power cylinder.

The contents of each mould cavity is then put under pressure by a ram driven upwards into the mould passage by a fluid power cylinder. The sliding carriage is displaced by a set of four fluid power cylinders. The carriage is pref. carried on two slides fixed to the machine frame. The carriage pref. travels along the slides for a distance not exceeding 0.61 m.

Provides a compact press using interchangeable mould jaws. The machine can be loaded very quickly. Output capacity is on an industrial scale, e.g. each press has 10 moulds, a loading time of 2 minutes and a pressing time of 10 minutes. This gives a nominal output of 400 hams per 8-hour working day. 20.4.78 as 011982 (13pp448)

JOHJ D12 63962R/36 =NL-162-543
Edible collagen casings by extrusion

JOHNSON & JOHNSON 16.09.68-US-759931 (27.09.67-US-670998)

A11 (A33 A97) (15.01.80) *GB1204-438 B29d-23/04 + A22c-13
Sausage casings are mfd. by extruding a collagen fibrous mass, expanded with acid, with a solid content of 3.5-5 wt.%. As the casing is formed, it is held open by NH₃ which permeates through the wall of the casing. The casing is supported by the NH₃ until the acid has been neutralised and the casing has attained its full strength.

The use of gaseous NH₃ eliminates the traditional washing, neutralising, plasticising and drying stages and also the risk of damaging the initially weak wall material during the treatment is considerably reduced. 27.9.68 as 013904 (11pp1370)

PRIN- D12 54342R/31 =NL-162-544
Method and apparatus for removing meat - from bones
 PRINCE MFG CO (PRI-) 10.04.68-US-720052
 (15.01.80) *US3522-738 A22c-17/04
 Meat is removed from a bone by a ring of blades which rotate about the bone, and, by means of a displacement of the bone relative to the blades, push the meat clear. The blades are convex relative to the direction of displacement and have a blunt outer edge. The action of the blades is to push the meat off the bone rather than to cut it and their shape is such that the meat is removed intact. 23.4.75 as 004830 Div. ex. 8.4.69-005373 (9pp1370)

GOJO D12 32425Y/18 =NL-162-545
Poultry evisceration by cooperating pullers - gripping gizzard and proventricus to prevent rupture of oesophagus
 GORDON JOHNSON CO 30.01.76-US-653666
 (15.01.80) *US4019-222 A22c-21/06
 The innards of a slaughtered fowl are removed by a multi-tool device in an automatic prodn. line. Each tool comprises a loop and a tongue with a hinged tip. Each part of the tool is separately actuated and controlled by cam guide surfaces as the fowl is moved along the prodn. line.
 The tool is inserted into the fowl so that the loop runs along the breast side of the carcass and the tongue along the back. When the tool is inserted to a sufficient depth, the tongue end turns over and the tool is withdrawn complete with innards. The device ensures the clean removal of the innards without the risk of rupturing the weaker parts and contaminating the meat. 28.1.77 as 000919 (9pp)

MEAT = ★ D12 10762C/06 ★SU-664-624
Collagen prodn. from waste meat products - by mincing and treating with solns. of sodium sulphate and caustic alkali under controlled conditions

MEAT IND RES INST 22.04.77-SU-479782
 A11 (A97) (30.05.79) A22c-13 A23j-01/10
 Method for the production of a collagen mass, from collagen-contg. waste material from the meat ind. for the production of edible sausage skins and coverings for other meat products, as well as for the production of artificial leather, and by the medical profession for obtaining wound dressing material has been developed. The minced meat waste is broken open by a soln. contg. caustic alkali and sodium sulphate, followed by removal of the alkali and neutralisation with a soln. of mineral acid. A mass with a fibrous structure is produced by an accelerated process by making the concentration of the alkali 3-5% and using a 0.5-1% solution of sulphuric acid for the neutralisation.

Babloyan, O.O., Gorbatov, V.M., Komlev, A.P. et al.
 Bul. 20/30.5.79. 22.4.77. as 479782 (2pp29)

JYTI = ★ D12 10772C/06 ★SU-664-653
Blood protein sepn. for use in medicine and food - includes haemolysis of blood cells in water contg. acetic acid and salt and extn. with ether

TIFLIS UNIV 09.01.78-SU-595059
 B04 (30.05.79) A61k-37/02
 Blood proteins, useful in medicine and in food industry, are prepd. by removing plasma by centrifugation of blood followed by the haemolysis of blood cells in acidified aq. medium to separate haem from globin and the removal of the former from haemolysate.

The yield of the final prod. is increased if the blood is centrifuged for 15-30 mins. at 2500-300 r.p.m. and the blood cells are haemolysed in water acidified with acetic

acid with addn. of NaCl (acid: salt ratio is 2:1-4:1). The haemolysate is then heated at 90-110°C for 5-15 mins, cooled and haem is extd. with diethyl ether.

Aleksidze, N.G., Mikeladze, G.G., Davidova, E.S. et al. Bul. 20/30.5.79. 9.1.78. as 595059 (2pp938)

FARH D12 20104U/15 =US 4185-358
Tubular sleeve corrugator - for compaction of eg sausage skins for transport

HOECHST AG (KALL) 26.06.72-DT-231145 (23.09.71-DT-147498)
 (29.01.80) *NL7212-414 A22c-13/02

Appts. for shirring sausage casings includes rollers forwarding a casing onto a mandrel, a shirring sleeve with a helical projection in its inner wall rotating about the casing, and a backing element holding the casing forward end fluid-tightly and having a through passage for inflating gas.

The sleeve and rollers drives are connected by gearing allowing mutual adjustment of speeds. Sleeve and projection are pref. integral. Grooved rollers may hold the inflated casing against rotation before shirring, and a lubricator may apply a lubricant or moistening agent. 9.8.78 as 932402 (+21.9.72; 30.8.76-US-290816; 718537) (+26.6.72-DT-231144) Div.ex. 3988804 (15pp1358)

HARR- D12 15435B/08 =US 4185-359
Cleaning abdominal cavity of poultry - using supporting rack and pressurised water jets directed towards kidneys

HARRIS HATCHERY INC (EMPI-) 03.06.77-US-803412 (06.06.78-US-913736)
 (29.01.80) *US4106-161 +A22c-21/06

Contamination is removed from a poultry body cavity by locating the carcass tail-down on a support and directing water jets from relatively movable nozzles in the cavity by moving a group of nozzles relative to the carcass and creating relative movement between another group of nozzles and the support.

The water is pref. fed through a rotary vertical pipe with a top vertical nozzle and fixed side nozzles, while a carcass supporting and positioning rack positioned over the nozzles and oscillated so that the water removes kidneys and contamination. Alternatively the nozzles may oscillate about the pipe axis and the rack is stationary. 6.6.78 as 913736 Div.ex. 4106161 (7pp1358)

ROTH/ ★ D12 11104C/06 ★US 4186-216
Removing meat scraps from bones - by bombardment with frozen meat particles and simultaneous shaking of the bones

ROTH EN 14.04.78-US-896174
 (29.01.80) A22c-17/04

In removing meat from bones, the bones are placed in an impingement region where small frozen meat particles are directed against them at a high velocity. Simultaneously, the bones are agitated to separate the meat from the bones. The agitation exposes all surfaces of the bones to the impinging particles. The impinged particles and sepd. meat are removed from the impingement region for further processing. The

The method is used to remove residual scraps of meat from bones which have already had most of their meat removed. The method does not involve excessive processing of the meat and so it retains a high nutritional value. 14.4.78 as 896174 (8pp295)

D13: OTHER FOODSTUFFS

ESCH/ ★ D13 09216C/06 ★BE-878-821
Hardened animal foodstuff additive - contg. urea-formaldehyde polymer in an automatic dispenser

ESCH M 27.12.78-GB-050045
 A97 C03 (16.01.80) A23k
Animal foodstuff additive in cake form comprising an animal foodstuff and a chemical binding agent in an automatic dispenser.

The pref. binding agent is an aq. mixt. of urea/formald

-ehyde (35-50% concn.). About 5-35% of binding agent is used in the cake. A suitable dispenser is a pot which contains the foodstuff additive and protects it on all but one side which the animal can lick.

The binding agent prevents the disintegration of the cake during damp weather but allows the animals to lick the cake freely. 17.9.79 as 877821 (7pp288)

ELLE/ ★ D13 09224C/06 ★ BE-878-848
Protein hydrolysate prodn. by acid hydrolysis of lactalbumin - in presence of phosphorous acid and activated montmorillonite

ELLENBERGER W 18.09.78-DT-840592

C03 (16.01.80) A23j

Hydrolysis of lactalbumin (including albumin, globulin and casein) is effected with non-oxidising mineral acids at 60-100°C in the presence of (a) H₃PO₃ and/or its salts and (b) acid-activated montmorillonite. Additives (a) and (b) inhibit discoloration of the hydrolysate during hydrolysis, giving hydrolysates suitable for use in foodstuffs and animal feeds.

The mineral acid is pref. aq. HCl and/or H₂SO₄ and is used in an amt. of 1-4 g-equivs. per g-atom of amine N in the lactalbumin, additive (a) is pref. H₃PO₄ or its Na, K, Ba and/or NH₄ salts and is used in an amt. of ≤ 15 (0.1-10, esp. 0.2-2) wt. % based on the mineral acid. Additive (b) is pref. used in an amt. of 0.1-10 (esp. 1-3) wt. % based on the mineral acid. 18.9.79 as 878848 (14pp)

CARD- ★ D13 09241C/06 ★ BE-878-929
Machine which homogenises heats and freezes liq. mixt. - using centrifugal pump with heating and cooling elements in casing

CARDIGIANI BRUTO MA 22.09.78-IT-015257

(16.01.80) A23g B01f

Machine for homogenising a liq. and subjecting it to thermal treatment comprises a recycling and storage vessel and a centrifugal pump which has its suction and delivery orifices connected into the base of the vessel. Liq. is drawn from the vessel into the pump and homogenised as it is returned to the vessel.

Pump is fitted with heating and cooling elements for transferring heat to or from the liq. passing through the pump. The pump is pref. mounted directly on the underside of the base of the vessel. The pump impeller axis being at right angles to the base. The pump casing has an axial suction orifice and peripheral delivery orifices and peripheral delivery orifices aligned with corresp. holes in the base of the vessel.

Used to homogenise and thermally process liqs., partic. to mfr. ice-cream.

Appts. mixes, homogenises, heats, cools and freezes as required. Ideal as a compact, single unit for mfg. and dispensing soft ice-cream. The machine is simple to operate and easy to clean. 21.9.79 as 878929 (7pp448)

APAL/ ★ D13 C/06 ★ CS 7408-647
Waste lignocellulose materials treatment - to increase nutritional value

APALOVIC R 17.12.74-CS-008647

(17.09.79) A23k-01/12

LANG/ D13 21801T/14 =DS 1767-046
Agglomerating powder - for milk substitutes to raise fat content in closed gas circulation system

LANG F (GRU -) 23.03.68-DT-767046

(31.01.80) *GB1269-575 + B01j-08/22

A plant for spraying powder or granules with a liq. e.g. the prodn. of milk substitute fodder for fattening calves, consists of a tower with a pneumatic feed for the solids on top and with spray nozzles in the tower periphery. The gas circuit which includes a filter and a cooler is divided into four branches. One branch leads to the pneumatic feed and a second to the tower discharge for the sprayed solids. A third is divided into side streams, one for each spray nozzle. The fourth branch supplies cold air to the screen and conveyor for the finished prod.

This optimises the prod. conditions and permits a quick adaptation to changes in the solid compsn. Ingress of air and egress of dust are eliminated. 23.3.68 as 767046 (6pp)

ZSCH- D13 05836Y/04 =DS 2528-196
Stable sour cream buttermilk prepn. - with addn. of multivalent sugar alcohol and pectin before or after souring

ZSCHEYGE CHEM & MOL 25.06.75-DT-528196

A97 (31.01.80) *DT2528-196 A23c-09/12

Production of sour cream buttermilk comprises addition of pectin and also sorbitol. The sorbitol is introduced before or after the souring process. Pref. the sorbitol/pectin ratio is 6/4 by wt.

The prods. are used in the prodn. of a wide range of foodstuffs. 25.6.73 as 528196 (3pp047)

MORG D13 86973X/47 =DS 2630-157
Flowable lactulose powder prodn. from lactose soln. - by isomerisation with calcium hydroxide, heating, concentrating and drying

MORINAGA MILK KK 08.07.75-JA-083188 (04.07.75-JA-081936)

B04 C03 (31.01.80) *BE-843-777 A23c-23

Prepn. of free-flowing lactulose-contg. powder for foodstuffs from whey or whey prods. comprises adding Ca(OH)₂ to the starting soln.; adjusting the pH to 9.4-11.2; heating the soln. at 60-95°C or, when using an ultrafiltrate, at 70-130°C until the pH is 7.5-9.0% homogenising the soln. at 60-90°C and 20-60 kg/cm²; concentrating while keeping the pH at 7.5-9.0; and drying.

Specifically, the starting soln. is a whey partially freed from lactose, or an ultrafiltrate obtd. by ultrafiltration of whey or skim milk. Prod. has high lactulose content and can be mixed with other nutrient base materials to form (animal) foodstuffs, e.g. for calves or pigs. Lactulose is a bifidus factor having a favourable effect on the intestines. 5.7.76 as 630157 (11pp927)

FARB ★ D13 09283C/06 ★ DT 2830-457
6-Substd. amino-6-deoxy-l-sorbo:furanose salts - useful as glucosidase inhibitors e.g. for treating diabetes or as feed additives

BAYER AG 11.07.78-DT-830457

B03 C02 (31.01.80) A23k-01/16 A61k-31/70 C07h-03/02

L-sorbofuranose derivs. of formula (I) are new.

In (I), R is opt. substd. aliphatic hydrocarbyl, which may be branched, linear, cyclic, satd. or unsatd., or is opt. substd. aromatic; and HX is a physiologically acceptable acid. Pref. R is 1-12C alkyl, phenyl or phenyl (1-4C) alkyl, the phenyl gps. opt. substd. by 1-4C alkyl or alkoxy, F, Cl, Br, NO₂, CN or NH₂. (I) are made by acid deprotection of corresp. 2,3-O-isopropylidene cpds.

(I) inhibit -glucosidases, esp. disaccharases, so are useful for regulating metabolism of carbohydrates and/or fats. They are esp. useful for treating adiposity, diabetes and hyperlipoproteinaemia but can also be used to control pre-diabetic states, gastritis, constipation, caries and atherosclerosis. (I) may also be used as animal feed additives to improve utilisation of protein feed and to encourage formation of lean meat at the expense of fat. 11.7.78 as 830457 (27pp1251)

HENK ★ D13 09323C/06 ★ DT 2831-306
Animal feed giving improved weight gain and/or feed efficiency - contg. fumaric acid and a protease, esp. microbial acid protease

HENKEL KG AUF AKTIEN 17.07.78-DT-831306

C03 (31.01.80) A23k-01/16

New animal feed mixts. based on carbohydrates, proteins, fats and, opt. usual additives, contain 0.1-5 wt.% fumaric acid and proteolytic enzymes in an amt. such as to give an enzymatic activity of 0.05-2.5 mTU/g.

Addn. of a combination of fumaric acid and a proteolytic enzyme gives improved feed utilization and/or improved weight gain. The feeds are partic. suitable for poultry, piglets and pigs raised for meat.

Pref. proteolytic enzymes are acid proteases active at pH 2.5-6.5, esp. microbial acid proteases, e.g. those from *Aspergillus niger* or *Rhizopus rhizopodiformis*. The proteolytic enzyme concn. should be such as to give an enzymatic activity of 0.05-2.5 (esp. 0.1-0.5) mTU/g. One TU is that enzyme concn. which releases in 1 min. under standardised conditions from a 1.2% casein soln. cleavage prods. which have the same extinction as a 1M tyrosine soln. 17.7.78 as 831306 (10pp280)

NORD- ★ D13 09325C/06 ★ DT 2831-338
Colourless protein for food use made from blood - by removal of haemin by acid hydrolysis followed by treatment with acid protease

NORDFLEISCH AG 17.07.78-DT-831338

B07 (31.01.80) A23j-01/06 A23k-01/04

Substantially colourless new protein prod. from blood or blood corpuscle concentrate comprises an haem-free, par

-tially hydrolysed globin prod. with an isoleucine content (based on total amino acids) or $\geq$ ca 2.0 wt.% (pref. 0.3-1.8 wt.%) and a potassium content (based on the dry substance) of 0.6-2.5 wt.% (pref. 0.7-2.0 wt.%).

The protein prod. can be mixed with other proteins or protein prods, carbohydrates, fats, vitamins and minerals to give complete foodstuffs. The protein prod. can also be used as a carrier for pharmaceuticals or as an additive for cosmetics or foodstuffs. 17.7.78 as 831338 (10pp280)

NEME-★ D13 09326C/06 ★DT 2831-351
Animal faeces utilisation in feedstuff prodn. - by mixing with loosely structured protein-contg. food waste prod. and aerobic fermentation

ING NEMETZ & RUESS 17.07.78-DT-831351

C03 (D15) (31.01.80) A23k-01

Animal faeces (I) is made use of by admixing with a loosely-structured high protein-contg. food industry waste prod. (II), as a carrier, to prepare a porous mixt. opt. with the addn. of an already rotted recycle material. A controlled air stream is forced through the mixt. and aerobic fermentation takes place.

Pathogenic bacteria-free end prods. can be used as animal feedstuffs. (II) supplies proteins, nutrients and minerals. A quick reaction takes place by creating large contact surfaces for initiating fermentation. 17.7.78 as 831351 (7pp200)

CORP ★ D13 09343C/06 ★DT 2831-556
Storage-stable aq. acidic condiment dispersion e.g. salad dressing - contains edible acid, esp. acetic and/or citric acid, and glutamic acid thickener (BE 9.1.80)

MAIZENA GMBH 18.07.78-DT-831556

(31.01.80) A23l-01/24 A23p

Acidic, aq. food mixt. dispersion contg. $\geq$ 1 thickener, has pH 2.5-6.7, partic. 4.1-5.6, set with an edible, condiment acid, esp. AcOH and/or citric acid. At least part of thickener(s) consist(s) of amorphous and/or micro-crystalline glutamic acid, provided glutamic acid content is 6-60 partic. 8-38 wt.% w.r.t. total dispersion wt.

The dispersion can be used directly or as a base for a viscous to pasty food mixt., e.g. pickles, marinades, sauces and salad dressings, which resist storage and unmixing. Fresh additives, e.g. herbs, may be incorporated without risk of quick decay. 18.7.78 as 831556 (14pp200)

FARB ★ D13 09408C/06 ★DT 2832-268
Sisomycin-type pseudo-trisaccharide cpds. - are amino:glycoside antibiotics esp. effective against urogenital infections caused by e.g. escherichia coli

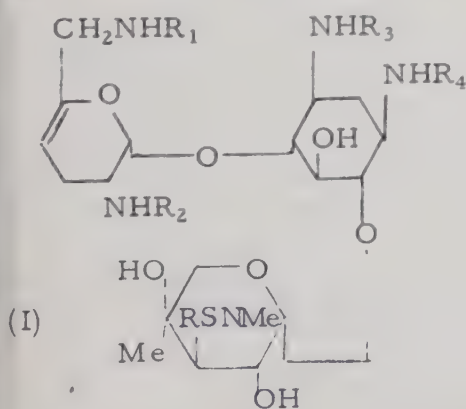
BAYER AG 22.07.78-DT-832268

B03 C02 (31.01.80) A23k-01/17 A61k-31/70 C07h-15/22

Pseudotrisaccharides of formula (I) are new. In (I) R_1 -5, R_2 , R_3 , R_4 and R_5 are each H or a gp. of formula $\text{CH}_2-(\text{CH}_2)_n-(\text{OR}_6)_{n_2}-\text{An}_3-(\text{OR}_6)_{n_4}-\text{CH}_2\text{R}_7$; A is $-\text{CH}=\text{CH}-$ or $[-\text{CH}(\text{CH}_2-\text{n}_5)-(\text{CH}_2\text{OR}_6)_{n_5}]$; R_6 is H, triaryl mettryl, alkyl or acyl, or 2 R_6 together form alkylidene; R_7 is H or OR_6 ; n_1 is 0, 1, 2 or 3; n_2 is 0, 1, 2, 3, 4 or 5; and n_3 , n_4 and n_5 are each 0, 1 or 2, provided that n_1 , n_2 , n_3 and n_4 together add

up to 4-5 and that the total no. of R_6 gps. in $\geq$ 1 of R_1 -5 is 2-6, and that $\geq$ 1 of these 5 gps. is not H.

(I) are antimicrobials and can be used to treat diseases of humans and animals which are caused by microbes. (I) can also be used to promote animal growth and as a feedstuff additive to improve utilisation of the



food. 22.7.78 as 832268 (48pp1401)

NEST ★ D13 09506C/06 ★EP ---7-411
Gravimetric dispenser for ice cream container filling machine - does not pressurise prod. while empty container replaces full one

SOC PROD NESTLE SA 20.07.78-FR-021507

Q31 R13 (06.02.80) A23g-09/28 B65b-03/28 G01g-01/04

D/S: E(BE, CH, DT, GB, IT, LU, NL, OE, SW).

Two filling heads are arranged alongside each other transversely of and between container infeed and discharge conveyors. Ice-cream is dispensed continuously alternately through each of the filling heads; one head is always filling a container while the other head is closed so that a filled container can be removed and replaced with an empty one to be filled. During the filling of a container, its progressively increasing wt. is transmitted to one arm of an intermediate fulcrumed lever with adjustable counter-weight on its other arm.

The machine is used for automatic filling of ice-pail type containers with ice-cream. Typically, each container is filled with 3 to 4 kg of ice-cream. The machine fills about 1000 containers per hour. Dispensing flow does not have to be interrupted between containers. This means that the prod. is not held back under pressure. 9.6.79 as 101855 (25pp448).

(E) ISR: US3137358; US2354087.

ROEC-★ D13 09527C/06 ★EP ---7-474
Steryl glycoside hemiester(s) - with enhanced biological effects and increased water solubility

ROECAR HOLDINGS 05.07.78-GB-028833

B01 C03 (06.02.80) A61k-31/58 C07j-17

D/S: E(BE, CH, DT, FR, IT, LU, NL, OE, SW).

Steryl glycoside hemiesters (I) are new.

(I) have enhanced biological effects and increased water solubility compared with the parent steryl glycosides, and there are no side effects associated with the use of (I) at normal or high oral dosage levels. (I) are used for the same purpose as the parent cpds. in pharmaceuticals, veterinary prods. and in foods. Medicinal uses include treatment of conditions involving the alimentary tract and metabolic functions, systemic hormonal conditions, hyperlipidemia, cardiovascular disorders, dermatitis, inflammatory conditions, epilepsy, allergies etc. and in organ transplants, for wound-healing, as synergists for other therapeutic agents and to prevent or alleviate adverse effects caused by radiation, cytostatics and other pharmaceutical agents. Dose is 100-200 mg/kg. daily.

3.7.79 as 102235 (38pp1248).

(E) ISR: J51008259; FR2312257; DT2113215; 1 Journal Reference.

FIRM ★ D13 09534C/06 ★EP ---7-486
3-Methyl tri:cyclo(6.2.1.0)-undecane derivs. - including 9,10-unsatd. cpd. and ester(s) are perfumes and flavouring agents used in soaps, food, drinks, pharmaceuticals, tobacco etc.

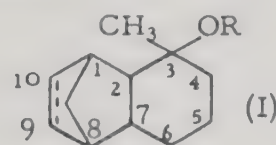
FIRMENICH SA 05.07.78-CH-007320

B05 E15 P15 (B07 D21 D23) (06.02.80) A23l-01/22 A23l-02/26

A24b-15/28 A61k-07/46 C07c-35/37 C07c-69/06

D/S: E(CH, DT, FR, GB, IT, NL, SW).

3-Methyl-tricyclo[6.2.1.0^{2,7}]-undecan-3-ol derivs. of formula (I) are new



(where the 9,10 bond is double or single; and R = H or (opt. unsatd.) 1-6C carboxylic acyl).

(I) are perfume ingredients and flavouring agents. They can be used in perfumes and perfumed products, and as an artificial flavouring in food, drinks, pharmaceutical compositions and tobacco.

4.7.79 as 102278 (21pp395)

(F)ISR: FR1414969; DT2362877; FR2236823; DT2737525.

POLA ★ D13 09617C/06 ★EP ---7-673
Methylthio-methyl ester cpds. - useful in flavouring or flavour enhancing compsns.

POLAK'S FRUTAL WORKS INC 18.07.78-GB-030161

E17 (06.02.80) A23l-01/23

D/S: E(BE, CH, DT, FR, GB, IT, NL).

Flavouring or flavour enhancing compsn. contains one or more methylthiomethyl esters of formula (I)



(R = H, 1-9C alkyl, 2-9C alkenyl, or 4-9C polyunsatd. alkyl).

(I) have a wide variety of flavour effects, and are useful in fruit, cheese, cream, milk, meat, and vegetable flavours. Thus (I; R = H) has a cabbage, meaty, onion, and metallic flavour effect. Amt. of (I) used is pref. 0.00001-5% by wt. of foodstuff.

18.7.79 as 200410 (24pp478).

(E) ISR: DT2802821; US3870800; US3873731.

GOET/ ★ D13 09671C/06 ★EP ---7-777
Incubating jacket for yoghurt culture - comprising nesting shells of polyurethane foam with high impact polystyrene skin

GOETTING T J 21.07.78-US-926686

A97 P28 Q34 (A13 A25) (06.02.80) A23c-09/12 A47j-41 B29d-27/04 B65d-81/38

D/S: E(DT, FR, GB, SW).

An incubating jacket for cultures which incubate at 40-125°C comprises two nesting shells (1,2) of foam (3,4) with a highly polished external (5,6) skin of hard plastic-like material and opt. an internal skin (13,14) of the same material. Pref. the foam is 1 inch thick polyurethane, and the skins are of high impact polystyrene, 0.05 inches thick. The mfr. of the jacket is claimed.

The prepn. of sweet yoghurt without the addn. of heat during incubation is also claimed by (a) scalding milk at 180-200°F, (b) cooling to 115-125°F, (c) adding yoghurt culture and mixing, (d) placing the mixt. in the incubating jacket and (e) incubating for 3-4 hrs. to 8-10 hrs.

The incubating jacket, which lowers the temp. of the mixt. to 90°F over 8-10 hrs. ensures good culture development, and yields mild-tasting prods., and there is no danger of "over-cooking" the culture. The jacket is designed to fit any glass jar.

19.7.79 as 301434 (27pp960).

(E) ISR:-

TRIB- ★ D13 09728C/06 ★FR 2423-148
Conditioning arrangement for cheese during draining - comprises impermeable plastics sack enclosing container holding drainer sealed at neck

TRIBALLAT LAITERIES 18.04.78-FR-011361 (18.04.74-FR-013518)

P13 (21.12.79) A01j-27

A cheese draining tub is fitted into a container leaving a space between the sides and the bottom, the vol. of which is equal to the amt. of liquid which will drain from the cheese. The tub and the container are then placed inside a sack of plastics material impermeable to the liquid and the neck of the sack is closed by a self-adhering tape.

No force is exerted on the sensitive neck of the tub and the cheese is kept white and fresh without drying out.

18.4.78 as 011361 Add to 18.4.74-013518(5pp1014)

ARIE- ★ D13 09731C/06 ★FR 2423-163
Cold milk-based food prod. expanded with air - used in yoghurt, mousses, milk shakes, ice creams, etc.

ARIESEA 16.11.77-FR-034398

(21.12.79) A23c-09/12 A23c-19/02 A23g-09/02

The compsn. comprises a milk which may be whole and may be coagulated and/or fermented. It is mixed by expansion with 20-85 vol. % of air and/or N₂, the whole being maintained at -1 to -25°C. The compsn. is partic. used as a milk product, a dessert, a drink or yoghurt normally served at 2°C.

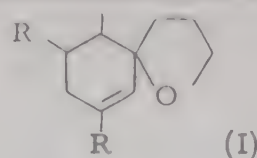
The prods. are e.g. yoghurts, kumis, mousse, milk shake, ice cream, cream cheese, cheese dessert, etc. They do not contain unnatural food additives. 16.11.77 as 034398 (10pp597)

FIRM D13 34615B/18 #GB 1560-286
Tetra:methyl-oxa-spiro-deca:diene cpds. - useful as perfumes and flavours

FIRMENICH SA 11.10.77-NL-011135 (04.10.77-GB-041252)

B07 E13 + P15 (B03) (06.02.80) *NL7711-135 A61k-07/46 C07d-307/36

Spiranic derivs. of dihydrofuran of formula (I) (where one R is CH₃ and the other is H) are new.



Specific (I) are 2,6,9,10-tetramethyl-1-oxa-spiro[4,5]deca-3,6-diene and 2,6,7,10-tetramethyl-1-oxa-spiro[4,5]deca-3,6-diene.

(I) are useful as perfumes or flavour modifying cpds. for improving, enhancing or modifying organoleptic properties of perfumes, foods, drinks, tobacco, drugs, etc.. 4.10.77 as 041252 (6pp982).

FORM- D13 32117Y/18 =GB 1560-414
Machine for forming hamburgers or similar prods. - with minimal working of the feed material, to preserve its structure

FORMAX INC 20.10.75-US-623986

(06.02.80) *NL7609-907 A22c-07

Machine for moulding meat or fish patties includes a pump housing with a narrow deep elongate chamber with a longitudinal outlet port at one end, a multi-cavity mould plate cyclically moved between fill and discharge positions, and a continuous food supply to the housing side access port.

A plunger is movable through the housing by a reversible fluid pressure motor to maintain a constant pressure on the material, the plunger drive being actuated synchronously with the plate cycle. On retraction to the fill position, the plunger speed is at least 150 ft/s to draw a partial vacuum and draw in material with no marked external force applied. The method of moulding is claimed. 5.8.76 as 032740 (20pp1358).

KANE- D13 80729A/45 =GB 1560-607
Granulating moist foodstuffs under vacuum - without denaturation due to over compression

KANESA MISO KK (KYOW-) 12.03.77-JA-027496

+Q76 (06.02.80) *J53112-287 +B29b-01/02

Moist material, partic. bean paste, is granulated by extruding through perforations into a chamber under a vacuum of < 4 Torr so that some water is flashed off and the paste forms coherent strands which are hardened by evaporation cooling causing freezing of remaining liquid.

The strands are subsequently mechanically sheared under vacuum to form granules. Initial moisture content is pref. 33% and vacuum is 0.1-0.5 Torr, the paste being cooled to -15°C. Paste is pref. extruded by a ram or screw auger, and a second vacuum chamber is connected via a valve for passage of granules to be dried. 6.3.78 as 008845 (6pp1358).

BAKP ★ D13 09805C/06 ★GB 2026-378
Depositor placing cooked viscous confection in advancing moulds - using pulses of heated air to break flow into discrete units

BAKER PERKINS LTD 07.08.79-GB-027429 (11.05.78-GB-019013)

(06.02.80) B29b-05/04

Highly viscous confectionery, e.g. toffee, is deposited into moulds traversing beneath a depositor. The depositor comprises a pair of concentric nozzles and a pump arranged to perform alternative discharge and suction strokes.

At each discharge stroke a measured quantity of the confectionery is deposited into a mould through the outer nozzle. After each discharge stroke a pulse of heated compressed air is discharged through the inner nozzle.

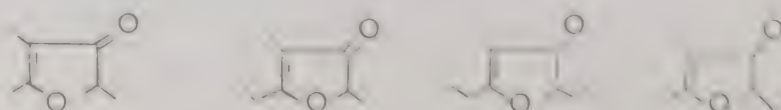
The apparatus is used for depositing measured quantities of toffee into individual moulds. The use of the heated pulse of air breaks off the flow of toffee completely. 7.8.79 as 027429 (5pp295).

INFL ★ D13 09819C/06 ★GB 2026-482
2,5-Di:alkyl- and 2,4,5-tri:alkyl-di:hydro-furanone(s) - useful in flavour enhancing compsns.

INT FLAVORS & FRAGR INC 27.07.78-US-928606

E13 (06.02.80) A23I-01/22 C07d-307/32

Flavour enhancing or augmenting compsns. contain ≥ 1 dihydrofuranone of formula (I)-(IV):



(I) (II) (III) (IV)
(I)-(IV) have sweet, brown sugar, pineapple-like, caramel, buttery, scolded butter-like, dried hazelnut, and earthy aromas, and sweet, brown sugar-like, pineapple-like, caramel, buttery, cheese-like, roasted, vanilla-like, dried hazelnut and earthy tastes, and are useful (at 0.1-50 ppm) in foodstuffs, chewing gums, and toothpastes, etc..

Compsns. pref. contain 0.1-15 % by wt. of one or more (I)-(IV), together with 1 or more of a range (17) of adjuvants (including eugenol, guaiacol, vanillin, sucrose, maltol, rum ether, etc.).. 16.7.79 as 024688 (42pp478).

ZARO/ ★ D13 C/06 ★ IT 1036-162
Mould for confectionery products
ZAROL 04.06.75-IT-068430
(30.10.79) A21d

FERRR ★ D13 C/06 ★ IT 1036-352
Nougat-like confectionery product prodn.
FERRERO P & CIA SPA 23.06.75-IT-068610
(30.10.79) A23g

TAHA/ ★ D13 10164C/06 ★ J5 4162-733
Coating compsn. providing easily cleaned surface - comprises montmorillonite type clay, papain enzyme and adhesive
TAHARA K 14.06.78-JA-072371
C03 G02 (24.12.79) C09d-05

A coating compsn. for coating the surface of a structure to increase cleaning activity, comprises mixing montmorillonite type clay, papain enzyme and an adhesive. The coating agent is coated and baked onto the surface of the structure to prevent toxic material in it from bleeding out. It can be used with perfect safety and is non-toxic.

As the adhesive, a small amt. of vegetable adhesive is used in order not to reduce synergistic effect of montmorillonite and enzyme. For some use, it is made permanently insoluble, and in some other cases, it is used as food for fish and shellfish by gradual dissolving. These conditions can be easily achieved by controlling thickness of the coating film and amt. of the adhesive. As it has high heat resistance (m.pt. 1300-1800°C) and high surface activity, it can be used for coating bathtubs walls, and lavatories. 14.6.78 as 072371(2pp57).

POKK ★ D13 10264C/06 ★ J5 4163-508
Bis(diglyceryl) ether cpds. - useful in cosmetics, foodstuffs and as stabilisers for PVC resin and lubricants
POLA KASEI KOGYO KK 12.06.78-JA-070588
A60 E17 H07 (A14 D21) (26.12.79) A23g-01 A61k-07 C07c-43/11
C09k-07 C10m-01/20
Bis (diglyceryl) ether cpds. of formula (I) (where X is 2-3 C alkylene; n is 2-4; and R is 1-5C alkyl) are novel.

$$\text{ROCH}_2\text{CH}(\text{OH})\text{CH}_2\text{O}-(\text{XO})_n-\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{OR}$$
 (I) is prepd. be reacting diethylene glycol, triethylene glycol, tetraethylene glycol, etc. with an alkylglycidyl ether in the presence of Lewis acid (e.g. boron trifluoride stannic, chloride, aluminum chloride) or alkali (e.g. sodium hydroxide, potassium hydroxide).

A water-alcohol solvent system contg. 3-20% (I) is useful as a base for cosmetics. When 2-20% of (I) is added to chocolate, it prevents the surface of chocolate from becoming white. A lubricant contg. 5-20% of (I) is stable at high temp. PVC resin is stabilised using a plasticiser contg. 2-20% (I).

In an example, to diethylene glycol (51g) is added boron trifluoride etherate (0.5g) and the mixt. is thoroughly stirred. To the mixt. is added ethylglycidyl ether (102g) dropwise at room temp. over 9.5 hrs. The mixt. is then stirred at about 100°C for 3 hrs. Finally, anhydrous sodium carbonate (10g) is added to the reaction mixt. and the resulting mixt. is stirred thoroughly. The ppte. is filtered off and the filtrate distilled under reduced pressure to provide bis(ethylglyceryl)-diethyleneglycol ether (98g). 12.6.78 as 070588(4pp16).

SHOS ★ D13 10352C/06 ★ J5 4163-834
Preventing fall in activity of foodstuff beaching agent - comprising soybean powder and/or defatted soybean powder with lipoxidase activity, by adjusting water content or adding soybean lecithin
SHOWA SANGYO KK 13.06.78-JA-070401
(26.12.79) A21d-02/26 A23l-01/20

Bleaching agent comprises (a) raw soybean powder and/or defatted soybean powder with lipoxidase activity; and opt. (b) grain powder, starch, protein powder, etc. is treated either by adjusting its water content to <10% or by combining soybean lecithin as 0.5-10 w/w%.

The preservative properties can be further improved by preserving it under low O₂ conditions. Agent is used partic. for bleaching flour. 13.6.78 as 070401(12pp5).

LOTT ★ D13 10353C/06 ★ J5 4163-836
Preventing hydrolysis of lauric acid oil and fat contg. foodstuffs - e.g. chocolate, by addn. of sodium citrate to acid and/or ester stabilisers

LOTTE KK 14.06.78-JA-070789
(26.12.79) A23l-03/34

Method comprises combining 100-1000ppm pref. 300-500 ppm of ascorbic acid, tannic acid and/or ascorbic acid-stearic acid ester singly or together in the lauric acid-oil and fat to be used in chocolate and confectionaries and further increasing the stability of the foodstuff by including Na citrate, in the same amt. as the acid(s) and/or ester.

Lauric acid-oil and fat (I) (e.g. coconut oil, palm kernel oil, etc.) is in preparing chocolate etc. as a substit. for cacao butter. About 70% of (I) is composed of capric acid, lauric acid and myristic acid and they are easily hydrolysed by lipase produced by the microbes present in chocolate and confectionaries, giving soap-like smell to them. 14.6.78 as 070789(5pp5).

KUBO/ ★ D13 10356C/06 ★ J5 4163-845
Bean curd prepn. - by adding magnesium chloride powder to soybean milk with stirring at elevated temp. and maturing
KUBOTA S 12.06.78-JA-071940
(26.12.79) A23l-01/20

Method comprises adding 20-35 g, esp. 25-30g powdery MgCl₂ to bean milk obtd. from 1.8l soybean at 70-90°C, esp. 80-90°C with stirring, standing for ≥2 minutes, esp. 10-20 mins. and maturing.

The bean curd obtd. has excellent preservative property and a homogeneous fine texture, . 12.6.78 as 071940 (2pp5).

TOXO ★ D13 10357C/06 ★ J5 4163-848
Citrus juice prodn. without forming bitter tasting cpds. - using enzyme produced from Trichoderma or Aspergillus to avoid vegetable tissue collapse
TOYO SEIKAN KAISHA 14.06.78-JA-070760
(26.12.79) A23l-02/06 C07g-03 C11b-09

Method comprises (1) steaming (i) citrus fruit with peel or (ii) peel of citrus fruit; (2) grinding it; (3) adding to it an enzymatic agent (II) produced from a microorganism belonging to Trichoderma or Aspergillus, from which no enzyme having vegetable tissue-mixture at 30-55°C; (5) inactivating the enzyme; and (6) filtering the liq.

Bitter-tasting cpds. do not form in (I) produced by the present method, because cells of flavedo are not collapsed by (II). 14.6.78 as 070760(8pp42).

HOKK- ★ D13 10359C/06 ★ J5 4163-852
Prodn. of jam contg. tangle as principal component - useful as health food having high iodine content
HOKKAIDO GYOGYO-KYO 14.06.78-JA-072425
(26.12.79) A23l-01/33

Prodn. of jam (I) contg. tangle (II) comprises (1) preparing paste of (II) by heating and then grinding (II) after fully soaking into water; (2) heating it with addition of sugar; and (3) adding Ca ion to the paste.

(I) can be used as health-food, because it contains many iodine cpds. (I) can be produced by simple procedures. (I) contains rich nutrients other than iodine.

In the present method, alginic acid in (II) forms gel depending on the formation of Ca alginate produced by the reaction with Cai on. (II) is soaked in 10 times wt. of water during the night, boiled for 1-3 hrs. and then grinded, to obtain paste. The amt. of sugar added is about

30% of that of raw (II). After addition of Ca ion, pG is adjusted to 2.8-3.3 for formation of gel. 16.6.78 as 072425 (3pp42).

SAOK ★ D13 10360C/06 ★ J5 4163-866
Edible yellow pigment compsn. - composed of fine cellulose powder dyed with curcumin
SANYO KOKUSAKU PULP 15.06.78-JA-071531
E24 (26.12.79) A231-01/27

Compsn. (I) for edible yellow-pigment is composed of fine cellulose powder dyes with circumine. (I), is prepd. comprising by wet-grinding of cellulose before or after dyeing by contact of cellulose with aq. arcumine soln.

(I) has no bitter taste. And can be easily dispersed in water and oil, a nd colours bright yellow. The polymerisation-degree of (II) should be less than 500, and mean particle dia. of cellulose should $< 200\mu$. 15.6.78 as 071531(6pp42).

KIKK ★ D13 10364C/06 ★ J5 4163-899
Agent for improvement of soy sauce brightness - comprises water-soluble tannin deriv. obtd. by reacting tannin and water-soluble high molecular cpd.
KIKKOMAN SHOYU KK 15.06.78-JA-071554
(26.12.79) A231-01/23

An agent (I) contg. water-insoluble tannin deriv. (II) as principal component is obtd. by reaction between tannin (III) and one or more of the substances (IV) selected from water-soluble high-molecular cpds., active carbon, chitin and gluten. Prod. of soy sauce, (V) comprises contact of (V) with (I) and then removal of (II) from (I).

When (V) is contacted with (I), the colour of (I) becomes reddish and discolouration of (V) by oxidn. is prevented, without loss of taste and aroma.

As (III), tannic acid, pyrogallol tannin, catechol tannin, etc. are used. Examples of water-soluble high-molecular cpds. are gelatin, casein, soy bean protein, egg white, acetylcellulose, methylcellulose, etc. The reaction between (III) and (IV) is carried out at 0-50°C and pH 7 for 10 mins., (V) is contacted with (I) at 30-50°C by passing through (I)-bed column at space velocity 2-20. 15.6.78 as 071554(5pp42).

TAKA- ★ D13 10477C/06 ★ J8 0001-019
Maintaining the freshness of eggs - by coating the surface of the egg shell with edible oil by spraying, immersion, etc.
TAKA SHOKUHIN KOGYO 22.08.77-JA-100886
(11.01.80) A23b-05/06

A coating of edible oil is formed on the surface of the egg shell, so that the freshness of the egg can be maintained for a long period of time. 22.8.77 as 100886 A23b-5/06 (11.1.80) TAKA SHOKUHIN KOGYO (5pp22)(J5 4035080)

NISW ★ D13 10478C/06 ★ J8 0001-020
Rice cake or snack - oxidant added to mixt. before frying to eliminate unpleasant odour
NISSHIN OIL MILLS KK 13.12.76-JA-148690
(11.01.80) A23g-03 A231-01/10

In preparation of rice cake or snack, an oxidant is added to the material before frying. The oxidant includes hydro-gen peroxide, ammonium persulphate ect, used in amt. of 0.005-0.03%. The prod. is free of unpleasant odour. 13.12.76 as 148690 A23g-3/00, A231-1/10 (11.1.80) NISSHIM OIL MILLS KK (3pp22)(J5 3075358)

GENM D13 96194X/51 = J8 0001-022
Freeze thaw stabilisers for ice cream etc. - comprise mixt. of guar gum and xanthomonas gum
GENERAL MILLS INC 25.02.76-US-661197
(11.01.80) *US3996-389 A23g-09/02

Ice cream compsns. are stabilised with a mixt. of Xanthomonas gum and guar gum. The ice cream can with-stand repeated freeze-thaw cycles without separation or development of iciness or chewy texture, but the mixt. prior to freezing has a lower viscosity than compsns. stabilised with carrageenan gum and is easier and quicker to mfr. The stabiliser component can comprise 1-10%wt. Xanthomonas gum and 90-99% wt. guar gum, and forms 0.1-3.0% wt. of ice cream compsns. 17.9.76 as 110909 (clg. 26.2.76-US-661197) A23g-9/02 (11.1.80) GENERAL MILLS INC (9pp)(J5 2114054)

GENO D13 15471T/10 = J8 0001-024
Artificial meat products - esp sausages from gelled vegetable protein contg discrete fat particles
GENERAL FOODS CORP 11.02.71-US-114720 (20.08.70-US-065716)
(11.01.80) *NL7111-506 +A23j-03

Artificial meat products are made by mixing a vegetable protein, a gel precursor, water and an oil or fat and heating to gel the protein under such conditions that discrete particles of oil or fat remain in the product. The vegetable protein may be derived from soya or ground nuts. The gel precursor may be a heat-sensitive material such as egg white, casein or whey, or a heat-stable carbohydrate which gels on the addition of an alkaline earth ion such as Ca. The fat is pref. beef kidney fat which may be frozen and milled to fine particle size. 20.8.71 as 063084 (clg. 20.8.70, 29.12.70(2), 11.2.71-US-065716, 102548/9, 114720) A23j-3/00 (11.1.80) GENERAL FOODS CORP. (7pp)(J4 7005269)

HAGI/ ★ D13 10479C/06 ★ J8 0001-027
Extracting germ components from crops - using hot water in presence of starch hydrolysis enzyme, boiling and sepg. solid from liq.

HAGIWARA Y 14.09.71-JA-070886
(11.01.80) A231-01/17

Germ of crop is extracted with hot water in the presence of enzyme for hydrolysing starch, then the resultant is boiled and the solid is separated from the liquid component. Germ components can be obtained at high yield without decomposition thereof. 14.9.71 as 070866 A231-1/172 (11.1.80) HAGIWARA Y (5pp22)(J4 8036375)

RALS D13 44637S/26 = J8 0001-028
Enzyme treatment of soya food proteins
RALSTON PURINA CO 30.01.70-US-007224
(D16) (11.01.80) *BE-760-418

YOSH- D13 32624A/18 = J8 0001-029
Processed defatted soybean prodn. - by adding compsn. comprising viscous polysaccharide, alkaline salt and aluminium potassium sulphate to denatured soybean
YOSHIHARA SEISAKUSHI 28.08.76-JA-103427
(11.01.80) *J53029-950 A231-01/20

The processed defatted soy bean is adding > 0.3 w/w% of compsn. composed of (a) viscous polysaccharide, (b) alkaline salt and (c) aluminium potassium sulphate, the proportion (a):(b):(c) = 1.0.25-4.0.01:3 pref. 1:07-1.5:0.5-1.3 to low denatured defatted soy bean. The polysaccharide is e.g. sodium arginate, carrageenan, viscous substance from tamarind seeds, viscous substance from yam, konjak powder, etc.

By combining the compsns. to the low denatured defatted soy bean excellent bean curd and fried bean curd can be prepd. 28.8.76 as 103427 A231-1/20 (11.1.80) YOSHIHARA SEIYU KK (5pp5)(J5 3029950)

MITK ★ D13 10480C/06 ★ J8 0001-031
Fibrous protein prodn. - by wet-spinning alkaline soln. of protein with addn. of yeast extract
MITSUI TOATSU CHEM INC 08.10.70-JA-087898
(D12) (11.01.80) A231-01/31

In the mfr of fibrous protein by wet spinning alkaline soln. of protein, the improvement comprises adding to the spinning soln. extract (I) of yeast as viscosity-stabiliser. (I) is prepd. by (a) treating yeast with dilute acid, (b) extracting the treated yeast with water, salt soln. or alkali soln. (c) acidifying the extract soln.; and (d) adding organic solvent to the soln. to ppte. extracted substance.

Used for producing artificial meat from vegetable proteins. The yeast extract prevents gelation of protein soln. at high viscosity and viscosity redn. of protein soln. with time. 8.10.70 as 087898 A231-1/31 (11.1.80) MITSUI TOATSU CHEM INC (2pp83)

KAGO- D13 25093B/13 = J8 0001-31
Carotenoid-contg. material for foodstuff colouration - prepd. by adding alkali to crushed tomatoes, filtering, acidifying filtrate and processing coagulated deposit
KAGOME KK 26.07.77-JA-088850
E24 (12.01.80) *J54024-940 C09b-61

The material is prepd. by (1) adding an alkali to crushed tomatoes or the residue formed during the prodn. of processed tomato foodstuffs contg. carotenoid comprising mainly lycopene to a pH of 7.5-9.0, stirring the mixt. at $<65^{\circ}\text{C}$ in a slight alkaline state for several hrs., and thereby sepg. carotenoid complex from the raw material, (2) filtering and purifying the sepd. liq. using a pulper, shifter or centrifuge to remove unnecessary peel, seeds and fibres, (3) adding an acid to the purified filtrate to such an extent that the filtrate becomes weakly acid and thereby sepg. and depositing carotenoid colour element, and removing the unnecessary upper turbid liq. and (4) controlling the pH of the coagulated deposit, concentrating the deposit, adding an acid to the deposit, and adding appropriate amts. of table salt to the acid deposit.

The carotenoid composite is dispersed smoothly in water-contg. foods in the absence of dispersing agents. The carotenoid composite having a pH of 4-5 and contg. 1% of table salt has water-dispersing property and resists decomposition and can be stored for prolonged periods. 26. 7. 77 as 088850 C09b-61/00 (12. 1. 80) KAGOME KK (3pp) (J5 4024940)

CARL- D13 61268Y/35 =NL-162-546
Mould fastener for continuous chocolate moulding machine - uses spring loaded clamps for automatic changing of moulds

CARLE & MONTANARI 12.07.76-IT-025215
(15.01.80) *BE-854-098 A23g-01/26

Form plates for pouring chocolate are carried on a conveyor comprising two parallel chains between which each form plate is suspended. The plate supports consists of C-profiles with the legs directed towards each other and which interlock with a flange on the lower sides of the form plate. The C-profiles are attached to the chains via spring loaded bushes which enable them to be withdrawn to release the form plate. The arrangement can be incorporated into a prodn. line in which the form plates are automatically lifted from the conveyor. 8.2.77 as 002291 (7pp1370)

GOLD- D13 39922Y/23 =NL-162-547
Expanded cereal esp. maize prod. from extrusion cooker - is reduced in density by adding crushed expanded cereal before extrusion

GOLDEN WONDER LTD 09.02.76-GB-000886
(15.01.80) *BE-851-158 A23I-01/16

Expanded granary prod. is prepd. by grinding the grain and mixing it with water. Previously expanded grain, ground to particles ≥ 1.4 mm is added to the mixt. in amt. slightly less than the degree of wear in the extrusion chamber, but ≥ 13 wt.% of the wet mixt. fed to the extruder. The mixt. is then heated in the extruder at $115-165^{\circ}\text{C}$ under pressure, then extruded into a room at a lower pressure.

Pref. a mixt. of ground maize and expanded and ground maize is used. Additionally ≤ 20 wt.% potato flour may be included. Material of suitable density which does not require excess storage space or packaging material is produced by adjusting the additive amt. according to wear in the extruder. 1.2.77 as 001028 (3pp913)

AMPO- D13 30668R/18 =NL-162-548
Dehydrated potato products

AMERICAN POTATO CO 03.05.66-US-547195
(15.01.80) *GB1190-624 A23I-01/21

Mixt. is formed from a suspension of (on dry basis) 100 pts wt. cooked and finely divided potato and 6-20 pts. wt. raw starch, such that the suspension has a water-content of 70-83 wt.%. Dough is produced by heating the suspension at $>88^{\circ}\text{C}$. This is dried to a water content of 65 wt.% by contacting with air at $\geq 150^{\circ}\text{C}$, and then to a water content of 7% with air at $\geq 100^{\circ}\text{C}$.

Attractive dried potato prod. is obtd. to which flavouring preservative antioxidants etc. can be added as required to control storage ability, flavour and colour. The prod. can be fried or reconstituted with water to form dishes e.g. hash. 3.5.67 as 006253 (3pp913)

KONN

D13

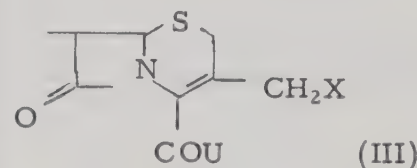
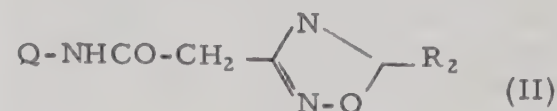
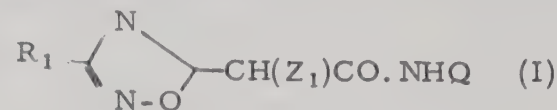
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Oxadiazolylacetic acid antibiotics - penicillin, cephalosporin and other derivs of 1,2,4-oxadiazolylacetic acid

GIST-BROCADES NV 22.12.72-GB-059524

B03 C02 E13 +P34 (B02 D22) (15.01.80) *NL7317-432 A61k-31/54 A61I-13 C07d-501/34

New 7-acyl, aminocephalosporanic acid derivs. are of formula (I) and (II).



In the formulae, Q is (III); U is OH, a non-toxic, pharmaceutically acceptable salt-forming residue or esterified OH; X is acetoxy or S-Q'; Q' is diazoly, tetrazoly, triazoly, or thiadiazoly, opt. substd. by lower alkyl; R₁ is lower alkyl opt. substd. on the prim. or sec. posn. w.r.t. the heterocyclic ring with a substit. from OH, lower alk-

oxy or carboxyl, which are opt. converted to a pharmaceutically acceptable, non-toxic salt or ester; Z₁ is H and lower alkyl; and R₂ is lower alkyl.

Pref. (I) has R₁ (carboxy)methyl and Z₁ as H. (I) are active against Gram positive and negative microorganisms with good activity against penicillin resistant strains. 20.12.73 as 017432 (16pp913)

ROST= ★

D13

10568C/06 ★SU-662-818

Bulk food automatic by weight metering appts. - comprises weight sensors and conveyors and troughs formed by different shape and size sections

ROSTPISHCHEPROMAVTO 18.01.77-SU-445223

R13 (15.05.79) G01g-11/04

Bulk food materials, e.g., caramel, fed continuously into the processing appts. need to be accurately "dosed". High accuracy is ensured by appts. comprising weight-scales with a sensor weighing and receiving hoppers with movable flaps or doors, a vibrating doser, transporter with pushers and guides for packaged goods, and troughs for feeding the product into the receiving hopper, the troughs made from differently sized and cross-sectionally shaped sections.

Kollegov, Yu.A., Popov, A.I., Smolin, S.S., et al. Bul 18/15.5.79. 18.1.77. as 445223 (4pp987)

AAZM= ★

D13

10633C/06 ★SU-663-717

Physiologically active meta-cresotinic acid microbiological prepn. - by oxidising methyl-naphthalene using specified Candida yeast strains, used in food and chemical industries

AS AZERB MICROBIOL 20.01.78-SU-591078

B05 E14 (28.05.79) C12d-13

Meta-cresotinic acid (4-methyl-salicylic acid), is produced by the oxidation of 2-methylnaphthalene by microorganisms in a liquid medium.

Yields are increased by using yeast strains Candida stellatoidea VKMU-923 or Candida guilliermondii VKMU-916. The process is carried out in a phosphate buffer soln. contg. 0.094-0.1 wt.% of 2-methylnaphthalene. The yields are 26.5-32% (1.3% by the known process) Ismailov, N.M., Abdullaeva, E.M. Bul. 19/25.5.79. 20.1.78. as 591078 (2pp70)

TSEL/ ★

D13

10763C/06 ★SU-664-625

Cooling equipment for dried milk - has cold air generator, flow of air being directed to chute connecting drier and mixing chamber

TSELISHCHEV V A 27.04.77-SU-483446

(30.05.79) A23c-01/04

Installation for cooling dried milk, comprises a device for obtaining cold air with inlet and outlet pipes, fan and mixing chamber with feeder, underneath which is a means for checking the quality of the non-standard product, connected to the chute of the drier. Power consumption is reduced by fixing the device for producing the cold air on the chute of the drier, with its inlet pipe connected to the outlet of the fan, and the outlet pipe has two exits, one of

which is fed to the chute of the drier and the other is connected to the mixing chamber.

Tselishchev, V.A., Tolstovskii, A.A. Bul. 20/30.5.79. 27.4.77. as 483446 (3pp029)

MOFO= ★ D13 10764C/06 ★SU-664-626
Ice-cream shaper - comprises concentric inner and outer tubes to form continuous length of ice-cream coated with icing, which is extruded simultaneously

MOSC FOOD IND TECH (MORE=) 19.10.77-SU-535513
(30.05.79) A23g-09/24

Device for shaping ice-cream, comprises a body with a conical exit section. The quality of the product is improved by fitting two concentric tubes coaxially inside the body, plus a screw with a tip, the former being disposed on the outer tube and the latter on the inner. The inner tube is also provided with a heat insulator.

The mass of ice-cream at -4 to -6°C is forced into the inner space of the tube having the heat-insulator so as to shape it in the removable tip. Simultaneously, through an inlet pipe, previously-prepared icing is fed by the screw to the conical section, which where necessary, can be moved in an axial direction by screwing it in or out. This controls the thickness of the icing on the surface of the ice-cream. As a result, a continuous length of ice-cream is formed with an outer covering of icing.

Demidenko, V.P., Malevannyi, S.V., Milyutin, A.A. Bul. 20/30.5.79. 19.10.77. as 535513 (2pp29)

BDAl= ★ D13 10765C/06 ★SU-664-627
Casein continuous prodn. - from skimmed milk, by adding acid coagulant, forming coagulum and filtering it from whey

BELO DAIRY IND RES. 06.10.77-SU-532794
(30.05.79) A23j-01/20

Prodn. method involves mixing of cold skimmed milk with a coagulant, heating of flowing mixture at the coagulation temp. allowing the casein to coagulate, forming the coagulum, removing the whey in a rotating drum and subsequently washing it, pressing, breaking up, and drying the casein.

The process is done in continuous flow with increased yield and quality, by feeding the coagulated material at an angle of 25-60° to the surface of the drum (during the separation of the whey) with a ratio of velocities of coagulum feed and drum rotation equal to 1:1.1 to 1:1.9. The coagulation is done at pH 4.55-4.65.

Peperechko, A.V., Koneva, O.I., Yankunas, V.A. et al. Bul. 20/30.5.79. 6.10.77. as 532794 (3pp29)

CONS= ★ D13 10766C/06 ★SU-664-628
Hydrolysate purification for condiment prodn. - to remove unwanted aromatic aminoacid(s), etc., by active carbon treatment, filtration and ion exchange absorption

CONSERVE FRUIT DRYI 09.08.77-SU-515832
(30.05.79) A23j-03

Method involves treatment with active carbon and subsequent removal of carbon and distilling off the vapours of the hydrochloric acid under vacuum. The content of aromatic amino-acids, sugars, furan aldehydes and sodium chloride in the hydrolysate is reduced, while at the same time increasing the product quality, by diluting with water, prior to distilling off the HCl vapours, in a ratio of 1:3 to 1:6, absorption of the hydrolysate on a cation exchange resin, and washing it with water (using 4-7 volumes of water to each volume of cationite) to separate from the hydrolysate the nitrogen-free compounds. Elution with 4-6 volumes of a 4N solution of hydrochloric acid follows.

The active carbon is used as 10-25% of the volume of hydrolysate and the distilling of the HCl is done in several stages, with the addition of 25-30% of the eluted hydrolysate at each succeeding stage.

Strashnenko, E.S., Gruzdev, L.G., Lyanaya, A.I. et al. Bul. 20/30.5.79. 9.8.77. as 515832 (2pp29)

AZOV= ★ D13 10767C/06 ★SU-664-629
Highly nutritive feed for ruminants - contg. waste from cereal crops, beet and parts of sunflower including wastes from their seed press cake

AZOV BLACK SEA AGRI 04.05.77-SU-483948
C03 (30.05.79) A23k-01

Feed for ruminants contg. wastes from cereal crops, beet or wastes from its processing and non-seed parts of sunflowers is improved by addition of wastes from sunflower seed press cakes (after cleaning and sorting out). Digestibility, and the nutritive value of the compsn. are increased. The feed contains (in wt. %) wastes from cereal cultures 15-20, beet, or wastes from its processing 5-10, non-seed parts of sunflowers 20-55, and wastes from sunflower seed press cakes (contg. 17-20% of oil) 20-55.

Shvechikova, N.N. Bul. 20/30.5.79. 4.5.77. as 483948 (3pp70)

BRAN- ★ D13 10991C/06 ★US 4185-927
Dehydrated potato reconstituting appts. - has mixing chamber including agitator and curved inlet and outlet conduits

BRANDT INC 23.10.78-US-953415
(29.01.80) B01f-07/04 B01f-15/02

Cylindrical mixing chamber has one end wall formed with a flat inner surface. This wall includes both an inlet and an outlet port, the outlet port is positioned entirely below the level of the axis and extends to the bottom of the chamber. The inlet port extends from a level below the top of the chamber to a level below the axis but above the top of the outlet port.

A flat-bladed agitator is coaxially rotatable within the chamber. Water and dehydrated potato are admitted via a curved inlet duct, and the resultant mashed potato is discharged via a second curved conduit

The appts. is made up of standard parts of commercial beverage dispensing machines for ease of repair.
23.10.78 as 953415 (8pp295)

MERl ★ D13 11020C/06 ★US 4186-025
Hetero-polysaccharide-10 used as thickener in aq. compsns. - contains three wt. per cent protein and carbohydrate contg. uronic acid, glucose, galactose and fucose

MERCK & CO INC 27.12.77-US-864298 (04.11.71-US-197941)
A11 C03 F06 (A87 A97) (29.01.80) C08I-05 C09j-03/02

Compsn. comprises an aq. medium contg. as thickening agent about 0.3-3.0 wt. % of heteropolysaccharide-10, which contains about 3% protein and 97% carbohydrate; the carbohydrate is made up of about 19% of a uronic acid, about 39% glucose, about 29% galactose and about 13% fucose.

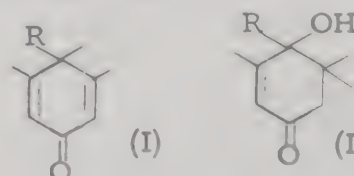
Heteropolysaccharide-10 may be used as an additive to textile printing pastes, in formulating low drift aq. herbicidal compsns., in thickening salad dressings, in forming thickened puddings and as a thickener in adhesives. It is also partic. useful as an additive to aq. paints and can also be used as a fluid loss control agent in drilling muds, completion fluids and similar aq. media from which fluid losses to subterranean strata have to be controlled.
27.12.77 as 864298 Div.ex. 3933788 (+26.6.73; 25.9.75; 14.2.77-US-373724; 616733; 768517) (13pp476)

INFL ★ D13 11070C/06 ★US 4186-149
Prodn. of 4-alkyl-3,4,5-tri:methyl-2,5 cyclohexadien-1-one cpds. - from 4-alkyl-4-hydroxy-3,5,5-tri:methyl-2 cyclohexane-1-one cpd. and dil. mineral acid

INT FLAVORS & FRAGR INC 02.02.79-US-008779 (03.03.77-US-774058)

B05 E15 (B07 D21 D23) (29.01.80) C07c-45

Prodn. of cpds. of formula (I) comprises reacting cpds. of formula (II) with dil. aq. HCl, H₂SO₄ or H₃PO₄, (where R is 1-5C alkyl, esp. n-Bu). Process is pref. in (cyclo)-hexane solvent at 15-70°C. (I) may be isolated by fractional distn.

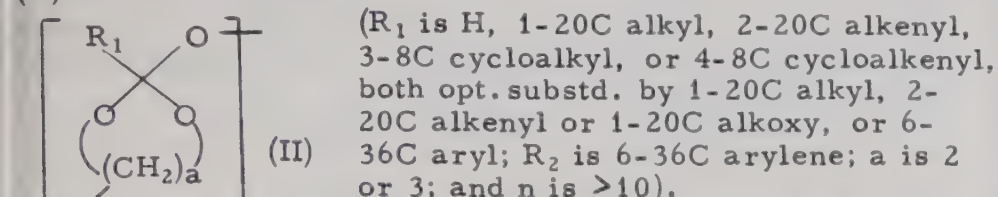


(I) are flavour adjuvants for foodstuffs, beverages, chewing gum, tobacco, medicinal prods. etc. Amts. used may be 0.5-100 ppm. according to need. They may also be used

as aroma additives, e.g. for cosmetics, colognes, space odourants, soaps, detergents, etc. 2.2.79 as 008779 Div. ex. 4154763; 4076854 (+13.12.77-US-860121) (19pp949)

ALZA ★ D13 11086C/06 ★US 4186-185
Controlled release pharmaceutical compsn. - comprising therapeutic agent in polymer from poly:ol and orthoester
ALZA CORP 26.12.78-US-972737 (08.04.76-US-675185)
A25 B07 C03 (A96 A97 B04 D21) (29.01.80) A61k-09/22 A61k-31/74

Controlled release pharmaceutical compsn. comprises 0.01-40% of a therapeutic agent (I) in a polymer of formula (II):



Compsns. ensure controlled, continuous and prolonged release of (I).

The polymers may similarly be used to give controlled release compsns. contg. pesticides, herbicides, germicides, biocides, algicides, rodenticides, fungicides, insecticides, plant growth promoters, or inhibitors, preservatives, disinfectants, plant hormones, fertility inhibitors or promoters, air purifiers, micro-organism attenuators, nutrients, fertilisers, etc. 26.12.78 as 972737 Div.ex. 4136252; C.i.p. 4066747 (+28.9.77-US-837308) (10pp1248)

HOWE/ ★ D13 11100C/06 ★US 4186-212
Animal feed contg. high mol. wt. aliphatic alcohol(s) - having enhanced energy content
HOWELL F M 09.03.78-US-884764
C03 (29.01.80) A61k-31/04

Food compsn. comprises a basal animal diet contg. sufficient protein, salts, vitamins and minerals to support normal growth, and 0.5-20% of a linear even no. 20-32C aliphatic alkanol which is synthetically derived, and is supplied as an unseparated part of hydrolysis product of an ethylene reaction growth product on an aluminium tri-alkyl. The product comprises linear alkanol plus about half the amt. branched alcohols, and one-third of amt. being aliphatic hydrocarbons of 24-40C atoms/mol.

The alkanols enhance the energy content of animal basal feed, partic. the metabolic energy available in a ruminant diet. 9.3.78 as 884764 (6pp957)

IOWA ★ D13 11101C/06 ★US 4186-213
Maximising utilisation of protein by cattle - by feeding rumen-protected protein having negative urea fermentation potential (UFP) with unprotected feed having positive UFP and urea
IOWA STATE UNIV RES INC 13.10.78-US-951169 (12.07.77-US-814976)
C03 (29.01.80) A23k-01

Method of feeding cattle to assure maximised protein utilisation comprises feeding a ration including different naturally-occurring protein-providing feed, ≥ 1 being a source of metabolisable protein having a negative Urea Fermentation Potential (UFP), and which has been treated by heat or with aldehyde or tannin to reduce protein solubility and protect it against rumen destruction. The rest is unprotected feed materials, at least one of which has a positive UFP, and as a group has net positive UFP, the total protected feed comprises 3-45% and urea in an amt. equal to the net positive UFP is also fed.

Feed maintains conditions in the rumen and in the post-rumen digestion for optimised utilisation of protein, and the method is partic. useful for young beef cattle esp. lactating dairy cattle. 13.10.78 as 851169 (9pp957)

GILL ★ D13 11102C/06 ★US 4186-214
Chewing gum with prolonged flavour release - contg. molasses, in synthetic gum base pref. based on styrene-butadiene or isobutylene-isoprene copolymer, PVAC or polyisobutylene
GILLETTE CO 30.05.78-US-910477
A97 (A18) (29.01.80) A23g-03/30

A chewing gum having prolonged flavour release comprises 15-40 wt.% of synthetic polymer-based gum base, 1-20 wt.% molasses, and 0.1-3 wt.% natural or synthetic oil flavour.

The molasses may be used without modification, or in the form of a free-flowing powder obtd. by drying it onto corn syrup solids. The gum base is pref. based on styrene-butadiene or isobutylene-isoprene copolymers, polyvinylacetate or polyisobutylene. It may also contain natural gums e.g. chicle, natural rubber, etc. 30.5.78 as 910477 (4pp955)

PEPS ★ D13 11103C/06 ★US 4186-215
Appts. for producing flavoured carbonated beverage - has immersed pressure chamber with permeable membrane top through which a small amt. of water enters to initiate carbon dioxide generation
PEPSICO INC 02.03.78-US-882750
(29.01.80) A23l-02/40

A beverage is carbonated using a pressure chamber immersible in the liquid base of the beverage for generating CO₂. A carbonating mixture comprising a carbonate and an acid, is located in the pressure chamber.

CO₂ is generated at a constant rate by establishing an equilibrium between the pressure of the CO₂ within the chamber and the quantity of liquid entering the chamber. The top surface of the pressure chamber is formed of a permeable membrane with a pore size of 10-100 u. A flavouring chamber is superimposed on the pressure chamber and is in liquid and gaseous contact with it. The chamber holds a flavouring substance.

The appts. produces a carbonated beverage merely by the addn. of water. It releases a carbonating gas at a constant rate over a prolonged period of time. Also any undesirable salts produced during the mfr. of the CO₂ are not dissolved in the beverage. 2.3.78 as 882750 (7pp295)

AJIN D13 65619B/36 =US 4186-218
Improving the quality of denatured defatted soybean protein - by forming aq. slurry, extruding, pulverising the protein granules and passing through a pipe at a specified temp.
AJINOMOTO KK 10.01.78-JA-001454
(29.01.80) *J54095-761 A23l-01/20 + A23j-01/14

Prepn. of soy protein material, with improved solubility, comprises prepg. an aq. slurry of denatured defatted soybean flake material and ejecting through an orifice into a holding chamber at a pressure drop of ≥ 1 kg.cm.² The wt. ratio of water : flake material is 4-20 : 1. The nitrogen solubility index of soy protein in the material is <70%, and the NSI of soy protein in the resultant pressure ejected slurry is higher by >5%.

The denaturing process is pref. by superheating and/or alcohol extn. Pref., before ejection of aq. slurry, the pH is adjusted to 6.5-9.

The extd. protein has improved colour and flavour. Isolated soy proteins are produced in higher yields. 23.3.78 as 889340 C.i.p. 4113716 (+25.4.77-US-790440) (7pp977)

See Also

D16 J5 4163850	D16 J5 4163881	D16 J8 0001038
D16 SU 663712	D17 DS 2345341	D23 DS 2133107
D23 DT 2929082	D23 EP 7882	

D14: FOODSTUFF MACHINERY

GRAM- ★ D14 C/06 ★DK 7802-452
Freezing cylinder for a continuously operating ice cream freezer
BRODRENE GRAM A/S 01.06.78-DK-002452
(07.01.80) A23g

BRAN/ ★ D14 C/06 ★IT 1036-205
Appts. for forming solns. of chemical cpds. - ensuring maturing and opt. disinfection
BRANCATO D 17.09.75-IT-051365
(30.10.79) A23n

QPPP ★ D14 10486C/06 ★ J8 0001-090
Device for feeding pasteurised material into high pressure tank - contains a sprayer, a feeder and a unit for returning liq. flowing out of tank

Q.P. CORP 16.06.75-JA-073348
J04 (11.01.80) A23I-03 B01j-03 02

Device for feeding a pasteurised material into a high pressure tank, contg. a heating or cooling liquid, or discharging the material, comprises a sprayer for spraying the liquid into cylinders disposed in the tank, feeder for feeding the material through the cylinders, and unit for returning the liquid flowing out through them to the tank.

16.6.75 as 073348 B01j-3/02, A23I-3/00 (11.1.80)

QP CORP (3pp26)(J5 1148819)

APVC D14 60779W/37 = NL-162-549
Rotary autoclave for sterilising particulate foodstuffs - excluding any outside contact, ensuring identical treatment throughout

APV CO LTD 26.02.74-GB-008709
P34 + Q31 (15.01.80) *DT2508-164 A23I-03/16

Solid particles are sterilised in a rotating vessel comprising two conical end portions and a cylindrical section, the centre section being supported by shafts protruding from diametrically opposite sides of its circumference. The shafts are hollow and also serve as feed and discharge connections for the heating medium circulating through the jacket of the vessel and for the controlled atmosphere in the vessel itself.

The vessel is also equipped with a valved tap-off point to which the vessel can be emptied or a cleaning and sterilising medium can be introduced. This additional facility can be used during the rotation of the vessel. 25.2.75 as 002204 (6pp1370)

ODFO= ★ D14 10560C/06 ★ SU-662-367
Control system for worm press for fruit berry pulp - has output from must conductance finder to computing unit connected to residue must content finder for variable structure regulator

ODESS FOOD TECH INS 27.05.77-SU-490287
P71 (18.05.79) B30b-09/18 B30b-15/18

The known worm press control system contains a hydraulic regulator and a residue must-content finder along with transducers and an actuator. In order to improve the quality of the prod. by optimising pressing conditions, a pulp must-content finder and pomace suspension content finder are introduced along with an optimiser and restructurable regulator. The system is useful in processing berry pulp. Quality is improved by keeping the residual must-constant and allowing for the must suspension content.

Galiullin, A.A., Dogozvyag, V.A., Ivanenko, Bul.
18/15.5.79. 27.5.77. as 490287 (5pp840)

LIVE= ★ D14 10575C/06 ★ SU-663-428
Fodder crusher screw conveyor feeder - has return screw conveyor with blade in unloading opening zone

LIVESTOCK FARM MACH 21.02.77-SU-454921
P41 (30.05.79) B02c-13/28

The feeder contains a screw conveyor enclosed in a housing with loading and unloading openings and a drive. In order to ensure even fodder supply, the feeder is provided with return screw conveyor with blade in the unloading opening.

To start the crushing operation, the drive is switched on, and torque is transmitted through transmission to screw conveyor, which supplies the material to crushing chamber. Screw conveyor also rotates return conveyor, which displaces the material, situated under the housing, to the loading opening.

Morozov, M.M., Golovan, V.Ya., Panchenko, A.F. et al
Bul. 19/25.5.79. 21.2.77. as 454921 (2pp110)

NEST D14 26726X/15 #SU-664-580
Lyophilization of solid, fluid or paste prods - in transparent or opaque synthetic sacks, sealed within processing vessel

SOC PROD NESTLE SA 11.09.74-FR-030745 (04.12.75-SU-196955)
Q31 + Q76 (28.05.79) *DT2539-818 F26b-05/06 + B01j-37/32

The solid, liquid and paste prods. lyophilic dryer can be used in medical, pharmaceutical and chemical inds. It contains a drying chamber with vessels for the products, placed on shelves, and gas-tight seal.

To improve servicing, the vessels are made as flexible plastic sacks, and each has gas-tight seal made as a heating clamp. The prod. to be dried is poured into the sacks and these are placed in the drying chamber. At the end of drying the sacks with the dry product are made gas tight by thermo-welding of the plastic.

For, J-K. Bul. 19/25.5.79. 4.12.75. as 196955 (2pp110)

FOOD= ★ D14 10769C/06 ★ SU-664-631
Liquid and puree type food products steriliser - has steam distributors to inject steam into product, turbulising helical guides, and temperature control

FOOD IND EXTRAMURAL 25.05.77-SU-490909
(30.05.79) A23I-03/22

Appts. for the heat-treatment of liquid and puree-type products, by mixing with steam, comprises a cylindrical body with sterilisation zone and pipes to admit the product and the steam, plus inner and outer steam distributors with holes, arranged concentrically. The pipes and the cylinder are so positioned as to leave a space through which the product can pass. There are also helical guides.

Sterilisation quality is improved by adding extra helical guides to the body in the sterilisation zone having the direction of their turns opposite to the original guides, in order to create turbulence in the treated product. The holes in the steam distributors are arranged in pairs at an angle to the line of the intersecting flows of steam.

Lemarine, K.P., Drobny, B.V., Ionov, V.S. Bul.
20/30.5.79. 25.5.77. as 490909 (4pp29)

NTRA= ★ D14 10795C/06 ★ SU-664-686
Mechanism for treating damp vegetable matter - has cylinder with perforated shell around it, with perforations opposite its electrodes

NORTH TRANSURAL AGR 02.11.77-SU-540583
P41 (30.05.79) B03c-07/02

The mechanism comprises a loader, transporter belt, earthed roller and cylinder with corona electrodes on its surface. For constant charging of particles and to simplify the design, the cylinder has perforated cylindrical shell outside it and coaxial with it. The perforations are opposite the corona electrodes.

Chervyakov, D.M., Legotin, A.A. Malygin, Yu.A. Bul.
20/30.5.79. 2.11.77. as 540583 (2pp18)

VITA= ★ D14 10867C/06 ★ SU-664-848
Briquetting press for fodder, etc. - using trapezoidal channelling and controlled final release to avoid surface damage to briquette

VITAMIN FODDER MACH 11.06.73-SU-943622
P64 P71 (30.05.79) B28b-03/18 B30b-11/20

The press comprises a stationary annular die with radial forming channels and contg. rotating rolls together with a mechanism for controlling the channel length.

To decrease the metal work and increase product quality, radial open peripheral hollows on the die are a continuation of the forming channels, while the channel length regulating mechanism is made as a disc moving along the die axis and located above the hollows, and plane bent springs fixed at one end to the die at the transition from the channels to the hollows, with their free ends bearing on the disc.

Podkolzin, Yu.V., Ruzgas, S.E. Bul. 20/30.5.79.
11.6.73. as 943622 (3pp132)

MEIP D14 50037B/27 = US 4185-547
Appts. for easily-wettable granules prodn. from powder - in which powder and steam are uniformly mixed after passing down concentric vertical tubes

MEIJI NYUGYO KK 04.11.77-JA-132939
J04 (29.01.80) *J54066-381 + A23c-09/16 A23c-11 A23f-01

Readily soluble granules, e.g. of coffee or milk, are made from powder in appts. comprising a vertical inner hollow cylinder closed at the top and open at the bottom, and concentrically within a longer outer casing, a tangential compressed air supply to the annular gap, a steam supply to the cylinder and a second steam supply around the casing lower end.

The air is pref. supplied via regularly spaced slits in the casing with a circular manifold around the outside of the casing. The first steam supply is pref. through a conical cap covering the cylinder top. The whirling air stream

in the gap forms a thin ring continuous curtain of powder contacted on both sides by the steam supplies. 14.3.78 as 886577 (7pp1358)

TCHA/ ★ D14 11105C/06 ★ US 4186-217
Apparatus for low fat cooking - using superimposed pair of cooking racks covered with foil sheets, the upper sheet being perforated
TCHACK E 19.05.78-US-907846
(29.01.80) A231-01/31

A pair of cooking racks are superimposed and each comprise an outer frame and interconnecting U-shaped cross-members. In use a first metal foil sheet is placed on the cross members of the upper rack and holes are formed through it. A similar sheet is placed on the lower rack but

this sheet is imperforate.

One rack is mounted above the other, spaced vertically by a distance sufficient to allow collection of grease on the lower imperforate sheet, the grease dripping through the holes of the upper sheet from cooking articles placed on the upper rack.

The appts. is used for oven cooking of food such as roasts or chicken portions. The grease runs from the food through the holes for collection in the lower rack to prevent the article from cooking in a pool or grease.
19.5.78 as 907846 (6pp295)

D15: WATER TREATMENT

TARH/ ★ D15 C/06 ★ CS 7701-988
Excess anionic flocculant treatment - to reduce its activity in recycle water
TARHANIC L 25.03.77-CS-001988
P41 (17.09.79) B01d-39 B03d-03/06

ZEMA/ ★ D15 C/06 ★ CS 7706-460
Tetraazacyclooctane deriv. prepn. mother liquor processing
ZEMAN S 06.10.77-CS-006460
E13 (17.09.79) C02c-05/02 C07d-257/02

SCHI/ D15 70983S/45 = DS 2018-514
Continuous flow analyser
SCHIERJOTT G (SCH /) 17.04.70-DT-018514
J04 R16 (31.01.80) *DT2018-514 G01n-27/52

Process for the continuous analysis of components in a flow system comprises mixing the feed with a flowing standard solution containing suitable reagents; the mixt. is cooled to constant temp. and is led past an indicator electrode so that the change in reactant or reagent can be monitored potentiometrically.

In partic. a standard soln. contg. $(\text{Fe}^{III})_2\text{SO}_4$, $(\text{Fe}^{II})\text{SO}_4$ and $(\text{NH}_4)_2\text{SO}_4$, (such that $\text{Fe}^{2+}/(\text{Fe}^{2+}+\text{Fe}^{3+})=30-70\%$), is passed into a tubular electrode vessel with an inert redox electrode, the potential of which serves as a reference potential; the test soln. is then introduced through a side tube and the components are mixed in a succession of short lengths of alternating capillary and ordinary glass tube, with mixing aids (e.g. glass spheres) on either side of the capillary sections; the mixt. is then passed to a second redox electrode which acts as the indicator electrode.

The assembly is mounted in a thermostatic bath, and the solutions are cooled to constant temp. by passing through cooling coils situated before each electrode.
17.4.70 as 018514(4pp047)

KOPS D15 18336U/13 = DS 2157-365
Coke oven gas desulphurising process - with elimination of noxious effluent
KRUPP-KOPPERS GMBH (KOPP) 19.11.71-DT-157365
H09 (31.01.80) *BE-790-303 C10k-01/12

The formation of waste H_2O contg. harmful materials is avoided during the desulphurisation of coke oven gas by (a) washing out the H_2S with recirculated liq. ammoniacal detergents (I) and then (b) catalytically oxidising the H_2S to give elemental S, in the presence of (I) and using air. One part of (I) is withdrawn before its re-use and replaced by fresh (I) and from the withdrawn part of (I) the volatile cpds. (II) are sep'd. by the addn. of heat.

The sep'd. (II) are added to the coke oven gas before the H_2S wash and the remaining liq. residue, opt. after concn., is added to the coal to be coked. 19.11.71 as 157365(4pp481)

LINM D15 12908W/08 = DS 2337-999
Organically contaminated fluid purificn - using activated sludge tank followed by carbon dioxide stripping scrubber
LINDE AG 26.07.73-DT-337999
(31.01.80) *DT2337-999 C02c-01/06 + C02f-03/12

Effluent with organic contamination is treated in an aeration basin by high oxygen gas and in a second reclarification basin from which sludge is recycled to the former. A

part of the liq. or sludgy contents of the aeration basin is extracted, stripped by an ascending injection of air or high-oxygen gas, and then recycled to either the aeration basin or the reclarification basin.

The result is a system which has a constant purificn. performance in time even at very high BOD_5 requirements.
26.7.73 as 337999(6pp39)

BERG D15 78746W/48 = DS 2436-792
Waste water purifn by adsorption of activated carbon - which is circulated in countercurrent and periodically regenerated by heat
BERGWERKSVERBAND GMBH 31.07.74-DT-436792
(31.01.80) *BE-829-029 C02c-05/02 + C02f-01/28

Waste water is purified by passing the water through a bed of active C adsorbent. The spent adsorbent is then fed directly to a thermal regenerator and recycled. The temp. of the regeneration process is governed by the feed rate. The rate at which the active C is cycled is controlled by the difference in total C analysis on samples from the waste water feed and from a point at 30-70% of the depth of the absorbent bed. 31.7.74 as 436792(5pp047)

SUMO D15 72717W/44 = DS 2459-615
Reducing nitrogen oxides in waste gases - by reaction with ammonia from waste waters after organic cpd. decompsn.
SUMITOMO CHEMICAL KK 11.04.74-JA-041219
E35 J01 (E36) (31.01.80) *DT2459-615 C02c-05 C02f-09

Simultaneous treatment of waste water and waste gases from plant used for NH_3 synthesis is effected by stripping the volatile components, from the waste water and heating these volatiles with a decompsn. catalyst at 120-400°C, (pref. 150-400°C if O_2 present, or 120-250°C if O_2 absent). Decompsn. prods. are mixed with the waste gas stream, ($\text{NH}_3/\text{NO} = 0.3-10$), followed by reaction at 150-700°C with a redn. catalyst to produce N_2+H_2 . Unchanged NH_3 is then treated with an oxidn. catalyst at 150-700°C. 17.12.74 as 459165 (7pp047)

MORT- D15 52761W/32 = DS 2502-501
Municipal or industrial effluents treatment - by removing carbon and nitrogen contg impurities by biooxidation
CENT MORTGAGE HOUS (ONTA) 13.01.75-US-540513 (22.01.74-CA-190908)
(31.01.80) *DT2502-501 C02c-01/17 + C02f-03/30

In a treatment for domestic or municipal sewage or industrial wastes, the oxidn., nitrification and denitrification is carried out in the same tank as the sewage/sludge mixture descends through it. The artificial aeration for the tank makes use solely of recycled sludge which is separated after denitrification and treated during the return with oxygen.

The recycled sludge flow rate and the oxygen introduced by it are so controlled that all the oxygen is used up as the mixt. passes through the bottom tank section. The result is a simple and easy operation, combined with a good cleaning efficiency. 22.1.75 as 502501(10pp39)

NNSH D15 65847W/40 = DS 2505-597
Sterilising activity of silver-impregnated active carbon - restored by steaming pref. counter-currently to flow of contaminated fluid
NIPPON SHINYAKU KK 19.03.74-JA-031655
E36 P34 (31.01.80) *DT2505-597 A611-01 A611-02 C01b-31/12

Process for the re-sterilisation of active charcoal containing silver comprises treatment with steam. In an example, active charcoal, (0.1 wt.% Ag, 5g), is added to water (25 cm³), containing bacteria; after standing at 30° for 3 hr, the charcoal is filtered off and sterilised at 180° for 45 min; the process is repeated ten times, after which the sterilising properties of the charcoal waned and the bacteria multiplied; but sterilisation with steam maintained the activity of the adsorbent.

The product is used in the purification of wine or water and also in the treatment of plant diseases. 11.2.75 as 505597(7pp047)

PAWE/ D15 49983A/28 = DS 2700-049
Flotation nozzle for sewage treatment - produces air bubbles by high pressure water nozzle and venturi injector

PAWELOW 03.01.77-DT-700049

+P41 (31.01.80) *DT2700-049 +B03d-01/26

A flotation plant for use in water and sewage treatment uses in each compartment a mixing nozzle for air or gas and flotation pulp. The conical nozzle for the pulp terminates in a chamber at the end of a parallel air duct. The cylindrical mixing channel is followed by a converging part, another cylindrical antiturbulence section, and a final divergent diffusor. The tank in which these injectors are mounted has in its upper part a restricted zone where inclined froth collecting troughs are mounted.

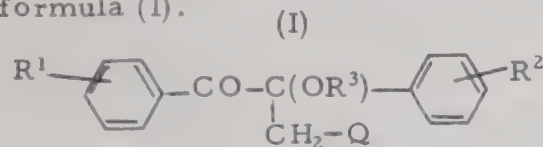
This flotation system results in optimum cleaning efficiency and quiet operation, combined with a minimum of investment costs, operating costs and space requirements. 3.1.77 as 700049(6pp39)

BADI ★ D15 09318C/06 ★DT 2831-263
Quat. ammonium cpds. of benzoin derivs. - prepd. by quaternising Mannich base, are useful as photopolymerisation initiators for olefinic cpds.

BASF AG 15.07.78-DT-831263

A89 E14 G06 (31.01.80) C07c-97/02 C07d-295/10 C08f-02/50

New quat. ammonium cpds. (I) of benzoin derivs. are of formula (I).



In (I), Q is -NR⁴R⁵R⁶X⁸; R¹ and R² are each H, halo, phenyl or 1-6C alkyl(thio) or alko-

xy; R³ is H, 1-6C alkyl, hydroxyalkyl, cycloalkyl or aralkyl; R⁴ and R⁵ are each 1-6C alkyl, phenyl, cycloalkyl or aralkyl or together are -(CH₂)₄-, -(CH₂)₅- or -(CH₂)₂-O-(CH₂)₂-; R⁶ is 1-6C alkyl; and X is Cl, Br, I, CH₃SO₄ or C₂H₅SO₄.

(I) are used partic. as photopolymerisation initiators for olefinically unsatd. cpds., esp. in aq. dispersion or soln. (I) are water-soluble and give high conversions to colourless polymers. They are useful e.g. for photopolymerisation of printing plates based on PVA and in the polymerisation of mono- and di-olefins, 1-12C-alkyl (meth)acrylates, vinyl 2-20C-carboxylates, vinyl(idene) halides and vinyl-aromatic cpds., opt. with various comonomers. The soln. polymers obtd. are useful as flocculants for sewage purification and as auxiliaries in paper mfr., the textile industry and tert. petroleum transfer. 15.7.78 as 831263 (23pp016)

ANDE/ ★ D15 09328C/06 ★DT 2831-365
Waste water fluff filter - with rake in granular filter bed for easy backflushing regeneration

ANDERL L 17.07.78-DT-831365

F07 (31.01.80) B01d-29/08 D06f-39/10

Textile fluff and other particles are removed from waste water in laundries, textile mills and hospitals by a cylindrical vessel with a side inlet on top and a central outlet at the bottom. A filter bed of coarse granules rests on a screen plate and can be stirred by a revolving rake. The latter is driven by a common vertical shaft with a worm conveyor above the bed.

This creates a reliable filtering device for coarse impurities such as textile fluff. The filter material is easily regenerated, simply by reversing the direction of flow. Regeneration can be automated as a function of time or pressure. 17.7.78 as 831365 (8pp39)

BUDE- ★ D15 09332C/06 ★DT 2831-434
Filter for oil separation from water - contains filter material in mesh bags for easy replacement

BUDERUS AG 18.07.78-DT-831434

J01 (31.01.80) C02c-01/38 C02f-01/40

Oil is separated from impure water by passing it through a bed of filter material to which the residual oil forms a bond. The filter material is filled in mesh bags of a shape to suit the contours of the container.

This saves the manual labour of shovelling the filter material out and replacing it by fresh material. This work can now be done by a lifting appliance. Wash-outs of the filter bed surface are also eliminated. 18.7.78 as 831434 (6pp39)

GRAT/ ★ D15 09349C/06 ★DT 2831-614
High grade activated carbon prodn. from crude lignite - by low temp. coking, conversion in presence of reducing agent and activation

GRATZER G 19.07.78-DT-831614

E36 J01 (31.01.80) C01b-31/08

Method involves low temp. carbonisation (at 800-1000, esp 850-950°C.) to lignite coke, conversion to lignite charcoal at 600-800°C. with addn. of a reducing agent (Fe oxide powder), local addn. of N₂ to the carbonising coke and local withdrawal of the distillate from the coke and then activation at 800-1100°C. in gas stream contg. oxygen, pref. steam.

The process uses a few simple and economically favourable stages and uses a cheap and readily available raw material. The prod. is esp. useful for the purification of waste liquors and (drinking) water and generally as high grade adsorbent. 19.7.78 as 831614 (15pp016)

ABEL/ ★ D15 09409C/06 ★DT 2832-277
Sewage treatment - for separate extraction of sinking, floating and suspended particles by aeration and restriction

ABEL G 22.07.78-DT-832277

(31.01.80) C02c-01/28 C02f-01/40

In a basin for the treatment of sewage, a first aeration zone, followed by inclined baffle plates, terminates in a restriction where worm conveyors for the extraction of the sinks are located. The next enlarged section houses a floating steel plate conveyor for the collection and extraction of the floats. A second restriction leads to another aerated zone with a conveyor for the extn. of the particles in suspension.

This results in the separate extraction of sinks, floats, and suspended particles which remains highly efficient even when the flow rate is greatly reduced. 22.7.78 as 832277 (14pp39)

DIDI ★ D15 09412C/06 ★DT 2832-289
Purification of coke oven effluent water - by driving off volatiles with heat, followed by biological clarification

DIDIER ENGINEERING 22.07.78-DT-832289

H09 (31.01.80) C02c-05 C02f-03/12 C10b-39 C10b-53/08

Effluent water from coke ovens is purified by (1) thermal treatment in a stripper zone to remove volatiles (NH₃, H₂S, HCN), followed by (2) biological clarification to remove organic contaminants. The process is economical and efficient, removal of volatiles allowing attachment by bacteria in a largely self-regulating process.

Pref. the incoming water is heated in exchange with water from the stripper stage. NaOH is added to bind the fixed NH₄ salts, and reduce the acidity. Before stage (2) Fe salts and/or phosphoric acid or its salts, and/or MgSO₄ or H₂SO₄ are added to remove traces of H₂S and HCN, and assist flocculation in stage (2), which is pref. a sludge freshening process carried out in two stages. Oxygen is supplied by surface aeration. 22.7.78 as 832289 (10pp195)

FUJF ★ D15 09437C/06 ★DT 2922-281
Continuous water degassing - by injecting saturated steam and standing in degassing tank

FUJI PHOTO FILM KK 21.07.78-JA-089168

(31.01.80) B01d-19

Water for use in coating processes of light-sensitive paper is degassed by injecting saturated steam in it to heat it and to whip the gaseous components by cavitation into froth.

The water is then allowed to be degassed in a tank at atmospheric pressure.

This is an inexpensive method which has a greater output than ultrasonic methods. The energy is used more economically than in conventional processes and the degassing takes very little time. 31.5.79 as 922281 (15pp39)

PETI-★ D15 09440C/06 ★DT 2926-602
Activated carbon prodn. from partially hydrolysed vegetable waste - obtd. by auto-catalytic hydrolysis with organic acid, pyrolysis and activation

PETI NITROGENMUVEK 13.07.78-HU-PE1046

E36 J01 (31.01.80) C01b-31/10

Carbonisation and activation is carried out at elevated temp. with steam, CO₂ and/or flue gas. The vegetable waste used is hydrolysed autocatalytically with an organic acid. It is heated (in) directly from 150-400°C at 10-40 (10-20)°C/min and from 400-600°C at 15-30C/min, held at 500-600 (min. 550)°C for > 30 min and then activated at higher temp. (800-1000°C) for > 30 min.

Carbon with a large specific surface area and controlled pore size is obtd., which is esp. useful for the purification of industrial waste liquors. No chemical carbonising agent is needed and any pore size can be produced. The particle size of the vegetable waste is maintained and the C loss is minimised. 2.7.79 as 926602 (20pp016)

LIND/ D15 18498B/10 #EP ---7-325
Waste liquids purificn. - involves adding particles and treatment with sulphur dioxide and oxygen and metal ions

LINDMAN WE 18.07.75-US-597217 (27.06.78-EP-300083)

J01 (06.02.80) *GB1541-601 + C02f-01/46

D/S: E(BE, CH, DT, FR, LU, NL, SW).

A process is claimed for removing dispersed soluble or resuspended contaminants from a polar liq. such as water, many of the suspended particles being characterised by Van der Waals effect and being a solid under ambient conditions. About 0.1 wt.% randomly moving particulate matter is dispersed in the liq. medium, the particulate matter being added or formed by fractionation of the contaminant when it is initially present in bulk. The dispersed particles have a density of 1.05-2.0 and a size of 30-225 μ with a free surface energy of < 100-500 ergs/cm². Any additional solid matter present is also reduced to this particle size.

An oxidn. medium is provided by acidifying the liq., dispersing gaseous O₂ in it, and providing a supply of free electrons e.g. by acidic dissociation of the polar liq. and by in-situ oxidn. of a heavy metal which is capable of subsequently forming a flocculant ppte. in alkaline media, so that a charge is imparted to the moving particles by random distribution and attachment of the electrons to these. The charge on the moving particles is maintained and coagulation and phase sepn. of the particles and solid contaminants is restrained during successive oxidative reaction periods by agitation effected at least partially by flowing the liq. through electrically insulated flow-connected reaction vessels in intimate mixt. with gaseous O₂, at a variable flow rate defined by dimensionless parameters derived from the internal size and shape of the respective vessels and their connecting leads. The liq. is then made alkaline, agitation is stopped and the liq. is electrically earthed to flocculate the heavy metal and to mutually ppte the charged particles, the metal ions and soluble contaminants, leaving an O₂-contg. supernatant liq.

27.06.78. as 300083 (32pp513)

(E) ISR: US3975257; DT2042017; DT2136035; NL7305238; FR2156636.

ELMQ- D15 15958B/08 =EP ---7-340
Heat exchanger flow elements comprising plastics foils - intermittently joined to form channels for cooling water in sea water distn. operation

ELMQVIST O (ELMQ/) 27.07.77-SW-008597

A88 Q78 (06.02.80) *WP7900-068 F28f-03 + C02f-01/04

D/S: E(FR)

17.7.78 as 900061

FINL/ D15 25900B/13 =EP ---7-356
Elevating nutrient-rich ocean water from aphotic to photic zone - following partial desalination in aphotic zone and dispersing less dense desalinated water

FINLEY WT 07.08.78-US-931675 (16.09.77-US-833939)

(06.02.80) *WP7900-150 B01d-13 B01d-31 + C02f-01/46

D/S: E(FR)

21.8.78 as 900121

BOLI D15 31595B/17 =EP ---7-366
Purificn. of water with magnetic sepn. of pptd. sludge - using aluminium and/or ferrous sulphate-contg. magnetic material as pptn. agent

BOLIDEN AB 24.10.77-SW-011948

(06.02.80) *BE-871-458 B01d-35/06 + C02f-01/52

D/S: E(CH, DT, FR, GB, LU, SW)

23.10.78 as 900176 (WP 7900230)

METG ★ D15 09608C/06 ★EP ---7-653
Liquid additive metering - through manifold with branch pipes for hoses of different length

METALLGESELLSCHAFT AG 28.07.78-DT-833155

E36 J04 R13 (06.02.80) C02f-01/76 G01f-11/28

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

A device for a controlled metering of liquid media, for example sulphuric acid for the drying of gases on the surface of the packing in a tower or the manufacture of hypochlorite from chlorine gas and caustic soda solution, consists of a horizontal manifold in which short branch pipes are welded in the bottom, to protrude inside where they have one or two side holes. Hoses of different length are attached to the branch pipe ends below the manifold.

The different length of the hoses ensures that their outlets end at different depths of a fluid medium so that a uniform distribution is ensured. By letting the fluid in the manifold overflow into the top ends of the branch pipes a greater flow rate for the additive can be achieved.

21.6.79 as 200328 (12pp39).

(G) ISR: DS-545728; DS-723114; GB-339061;

US2523634; US3758276.

ECOL-★ D15 09673C/06 ★EP ---7-783
Excess growth control system for fluidised bed reactor - includes a separator column extending into the bed and an agitator for shearing excess material

ECOLITROL INC 06.07.79-US-055149 (19.07.78-US-926207)

(06.02.80) B01j-08/20 C02f-03

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

A control system for preventing accumulation of excessive cellular material in a fluidised bed reactor includes a separator column within an effluent head above the bed. The column has a draw-off port below the surface of the effluent head. An agitator arrangement is associated with the column to effect shearing of the excess cellular material from the particles of the bed to produce a mixt. of sheared material and partially stripped carrier particles. The sheared material is discharged through the draw-off port.

The process is used in the removal of N cpds., such as nitrate or ammonia, from waste water using a fluidised bed of solid particles serving as carriers for micro-organisms. As the head of effluent is developed above the bed, the clarified effluent is discharged from the reactor through a clear-effluent port. Confinement of the shear growth to the column before drawing off means that no growth material enters the process effluent stream and the use of a clarifier in the output line of the reactor is eliminated.

19.7.79 as 301440 (48pp1044).

(E) ISR: 3855120; US4055490; US3817856; US3956129;

FR2121715.

RHON ★ D15 09708C/06 ★EP ---7-846
Gas-liquid contacting appts. esp. for treating waste water - in which a helical flow of hot gas flows via a venturi throat into a contacting chamber which is fed with liq. to be treated

RHONE-POULENC INDUSTRIES 21.07.78-FR-021658

J04 Q73 (06.02.80) B01j-10 B01j-19/24 C02f-11/06 F23q-07

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

The treating installation comprises a reaction chamber which produces a helical flow of hot gas which is held away from the wall of the reaction chamber. The chamber is designed for the combustion of axially injected fuel, such as methane, supported by air which passes into the chamber via an annular jacket surrounding the combustion space.

The outlet of the reaction chamber converges to speed the helical stream of hot gas through a Venturi throat which leads to the divergent entry of a contacting chamber.

Liq. to be treated is injected into the whirlpool axial depression just inside the contacting chamber. The vol. of gas passing through the Venturi throat should be ≥ 100 times the vol. of axially supplied fuel and ≥ 100 (pref. 1000-10,000) times the vol. of liq. to be treated.

For treating waste water the temp. in the throat is pref. 900-1200°C and the contacting chamber outlet temp. is 350-500°C.

The appts. is used for treatment of waste water (partic. with solids content of 20% to 30%), for concn. of mineral acids (such as phosphoric or sulphuric acid), for evaporative drying of aq. suspensions and emulsions, and for concn. of solutions.

10.7.79 as 400477 (19pp448).

(F) ISR: FR1292258; FR2406610; FR2257326;

FR1154046.

MINE-★ D15 09746C/06 ★FR 2423-451
Purification of metal pickling effluent - using anion and cation exchange resins and opt. with by/production of fertiliser salts
MINEMET RECHERCHE (PROS-) 17.04.78-FR-011268
C04 M12 (21.12.79) C02c-05/08 C05c-03

In the treatment of liq. effluent from metal cleaning (pickling) processes, (a) the water is passed over a cation exchange resin, (b) the water from (a) is passed over an anion exchange resin, (c) the purified water is passed to the washing installation, and (d) the cation exchange resin from stage (a) is regenerated by elution with a strong mineral acid moving in the opposite direction to that of stage (a). The process is simple and economical to carry out. It may be varied in order to comply with changes in effluent regulations.

In opt. further stages (e) the anion exchange resin is eluted with a strong soluble base, such as an alkaline hydroxide or ammonia, (f) the eluate from (e) is passed over a cation exchange resin to regenerate the acid used in the pickling process and (g) the cation exchange resin from stage (f) is regenerated using sulphuric, nitric, or phosphoric acid which is circulated in the opposite direction to that used in stage (e). If this last stage is carried out an effluent is obtd. contg. fertiliser salts such as ammonium and potassium nitrate, ammonium and potassium phosphate and ammonium sulphate. 17.4.78 as 011268 (11pp520)

STAR/★ D15 09761C/06 ★FR 2423-730
Solar energy collector yielding high temps. using lenses - in which simple fluid filled and/or Fresnel lenses concentrate solar radiation onto elongate target contg. fluid

STARK V 20.06.77-US-807513 (30.11.76-US-746065)

J08 L03 Q74 (J01) (21.12.79) F24j-03/02

The target of a solar collector is arranged as a straight line at the focus of a simple lens or lenses of the fluid filled and/or fresnel type concentrating the solar radiation. Pref. the target consists of a tube within which the line of focus falls, and contg. ≥ 1 fluid. The collector may be movable to follow the sun, depending upon the season and time of day, or the individual parts may be relatively movable.

The fluid lenses absorb some energy, and this energy can be recovered for use, e.g. in pre-heating the fluid which circulates through the target. The target pref. contains several different fluids of different b. pt., the focus being arranged in or on the fluid with the highest b. pt. By varying the flow rates of the different fluids, the fluids can be heated to different temps. for different applications. Reflectors can also be used to direct the radiation on to the lenses.

The collector is used in distn. of water, e.g. sea wat-

er, in the prodn. of electricity from photo-voltaic cells, in domestic heating and in steam prodn., and > 1 of these can be achieved in a single collector installation, using the different temp. fluids which can be produced.

29.11.77 as 035841 (+ 15.6.77, 20.6.77 - US - 806291, 807513)(80pp1395)

PERU D15 00305A/01 =GB 1560-315
Water softening plant - having scrubbing column with baffles in top of exchange column for column height reduction (NL 21.12.77)

PERMUTIT GMBH 19.06.76-DT-627592

(06.02.80) *DT2627-592 + B01j-47/02 C02f-01/42

Liquid treatment appts., e.g. for softening water, comprises an exchange or loading column connected to a regenerating column and rinsing column for regenerating the exchange material. The rinsing column extends into the exchange column top via a baffle slowing the descent of material.

The columns are interconnected for counterflow in each column by pipes. At least the exchange column has a material discharge pipe with a backpressure chamber and a regulator for material flow. The baffle pref. comprises discs with openings arranged so that the material travels a zigzag path through the rinsing column. The arrangement permits use of smaller amounts of material without reducing its retention time. 20.6.77 as 025619 (4pp1358).

NALC D15 49691A/28 =GB 1560-327
Eliminating or preventing biological sludge in cooling systems - using a copolymer of propylene oxide and ethylene oxide

NALCO CHEMICAL CO 21.10.77-US-844167 (06.01.77-US-757407)

A97 Q78 (A17 A25) (06.02.80) *BE-862-655 C02f-01/50

Biological slime is removed and prevented from building-up on the surfaces of cooling systems etc. by treating the water used in the systems with ≥ 0.5 ppm of a propylene oxide-ethylene oxide copolymer. The copolymer comprises a polyoxypropylene glycol polymer having a mol. wt. of 1500-2000 (1750) which has been reacted with 4-30 (10-20) wt. % ethylene oxide.

Pref. the polymer is reacted with the ethylene oxide and a biocidally active amt. of water-soluble oxidising biocide, esp. Cl_2 . The copolymers improve the dispersancy of existing biological deposits and also allow the biocide to exert its full effectiveness. 6.12.77 as 050768 (12pp924).

CANT- D15 88614X/47 =GB 1560-412
Aerobic treatment of liquid wastes - with oxygen conc. measured and used to control pump speed used to force liquid through venturis

CANTON TEXTILE MILL 06.08.75-US-602403

(06.02.80) *US3990-974 B01d-21/02 + B01f-05 C02f-03/12

Appts. for separating solids suspended in liquid, e.g. in effluent treatment, includes a reservoir delivering suspension horizontally to a settler with open-ended parallel vertical tubes through which the liquid moves upwardly in a ricocheting path contacting the tube walls.

Suspension is pref. withdrawn from the reservoir by a pump and forced through an ejector before reaching the settler. The ejector pref. has a venturi with an atmospheric air feed to the throat to aerate the suspension, and delivers suspension at below the level of the tube lower ends. There is pref. a reservoir suspension dissolved oxygen sensor to control the delivery rate through the ejector. 4.8.76 as 032382 (7pp1358).

MANC/ D15 28632A/15 #GB 1560-467
Treating waste sludges with calcium oxide - to produce friable solid suitable for landfill or agricultural purposes

MANCHAK F 01.06.76-US-691855 (16.02.78-GB-006171)

+ P35 (06.02.80) *US4079-003 + C02f-11/14

Aq. sludge is mixed with CaO at a rate such that the exothermic reaction produces steam and a friable odour-free solid with a pH of ≥ 12 . Bacteria and viruses are deactivated and initially soluble toxic substances are transformed to water-insoluble compounds.

The mixing takes place concurrently in an elongate confined space from which the steam is removed, sterilisation and conversion being completed before the material is discharged. The sludge is e.g. sewage, oil waste, or

marine silt. It may be thickened by adding fly ash, and may be finally used agriculturally or as land fill or road bed. 16.2.78 as 006171 (6pp1358).

DEGM D15 04212A/03 = GB 1560-520
Packaged plant for physicochemical purification of waste water - with gravity evacuation of sludge from flocculating and decanting zones

DEGREMONT SA 17.09.76-FR-027958
(06.02.80) *BE-858-720 + C02f-01/52

Appts. for effluent purification by physico-chemical treatment comprises a single integral tank with its lower part being of downwardly decreasing volume and having at least two opposed walls inclined inwardly towards each other. The tank is divided into three series-connected compartments, the first and second connected at the bottom, and the second and third at the top.

Inclined plates define upwardly inclined flow passages in the second compartment with deflectors extending into each passage, and there are inclined tubes in the third component. Plates and tubes are pref. at 55-60° and of plastics while the tank is of metal. 16.9.77 as 038817 (7pp1358).

OREN/ D15 22194Y/13 = GB 1560-581
Air suction-type submerged water conditioner for aquarium - with good biological filter action for freshwater or saltwater

ORENSTEN H E 16.04.76-US-677697 (15.09.75-US-613327)
P14 + Q46 Q56 (06.02.80) *DT2641-023 + A01k-63/04 C02f-03/06 F04f-01/18

Submersible air-induction water filter for an aquarium includes a base to lie on the aquarium floor and having air inlets each passing an air stream upwardly through a diffuser breaking up the air into bubbles and located below a vertical filter element held at its lower end and having a hollow core open at upper and lower ends.

Each element pref. contains a filtration medium consisting of organic polymer fibres coaxially in layers around the core and providing an average pore size of 20-500 μ . The core pref. contains a mass of particulate carbon. Each element is pref. held by a positioner removably attached to the base and the diffuser is of porous plastics retained by the positioner lower end. 15.9.76 as 038179 (10pp1358).

NIDE D15 13286Y/08 = GB 1560-644
Treatment of effluent contg. difficultly soluble ingredients - by adding specific quantities of iron cpds. and alkali in the absence of air to ppte. ferrites contg. the impurity as inclusions (NL100277)

NIPPON ELECTRIC KK 08.08.75-JA-096521
L02 (06.02.80) *DT2635-672 + C02f-01/52

Treatment of waste water contg. solid inorganic cpds. of heavy metals other than Fe, of low water solubility, by adding ferrous ions at 2-100 times the molar amt. of the heavy metals, adjusting the amt. of alkaline substances in the waste water to approx. 0.9-1.2 equivs. of acid radicals present in the waste water, and stirring without aeration at > 40 (60-80) °C, to ppte. ferrite crystals incorporating the heavy metals other than Fe.

The waste water comes from washing the residues of furnaces, incinerators, electrostatic precipitators, and the process produces ferrite materials useful in magnets, electromagnetic wave absorbing materials etc.. 5.8.76 as 032690 (4pp997).

AIRP D15 19956Y/12 = GB 1560-655
Aeration tank for activated sludge treatment of waste water - is smaller and requires less power for a given treatment capacity

AIR PRODUCTS & CHEM INC 24.09.75-US-616459
(06.02.80) *BE-846-290 + B01f-03/04 C02f-01/74

Aeration basin for mixed liquor in an activated sludge system is rectangular with waste water and recycled sludge feed to the inlet end, aerators spaced along the basin length, and staggered partitions extending from alternate sides transversely of the flow to form passes with a length-width ratio of 0.59-1.70.

The partitions provide open liquid paths between passes of 30-80% of basin cross-sectional area. Each aerator provides a mixing factor of 20-450, so that the basin gives effective liquid staging greater than one effective

stage per actual pass. Ratio is pref. 0.60-1.00 and mixing factor 50-250. 15.9.76 as 038177 (7pp1358).

DEGU/ D15 20335Y/12 = GB 1560-674
Water defluorination by aluminium fluoride formation and ppn. - by adding aluminium sulphate or aluminium chloride and sodium aluminate

DEGUCHIK 06.12.75-JA-146151 (10.09.75-JA-110174)
E33 (06.02.80) *DT2637-048 + C02f-01/58

Fluoride ions are removed from water by treating the water with a source of aluminium ions to produce aluminium fluoride, which is removed by adsorption onto flocs of aluminium hydroxide formed in situ in the water.

Pref. the fluoridated water is first electrolysed using an aluminium anode and an iron or copper cathode, then treated with sodium aluminate and either aluminium sulphate or chloride. The treated water is then stirred and its pH adjusted to 6.0-7.0 to form the flocs.

The process is esp. used to produce drinking water contg. a fluoride concn. of < 0.5 ppm. 3.9.76 as 036635 (+ 17.9.75 - JA - 113058) (8pp931).

EINH- D15 05655Y/04 = GB 1560-730
Electrolysis cell for water purificn. - has grid over supply and discharge openings to retain particles

EINHELL H GMBH 26.02.76-DT-607906 (16.07.75-DT-531850)
J03 (06.02.80) *BE-844-038 + C02f-01/46

Water is continuously purified and sterilised by flowing upwardly past electrodes in a cell containing freely movable particles of greater density than water, with water flow rate such as to form a fluidised bed of the particles which continuously wipes the electrodes clean.

The particles are e.g. of hard plastics, rubber, porcelain, glass or concrete and a closed anode compartment may be formed by a diaphragm of porous porcelain, microporous polyolefin, PVC or cellulose nitrate, or ion-exchange resin. The electrodes are pref. radially located and there may be a propeller in an open-ended pipe in the cell terminating short of top and bottom grids. 29.6.76 as 027000 (8pp1358).

WESE ★ D15 09789C/06 ★ GB 1560-732
Electrolytic flocculation of waste water solids - using alternating current and turbulent flow

WESTINGHOUSE ELEC CORP 21.07.76-GB-021029
J03 (06.02.80) C02f-01/46

Suspended solids in waste water are agglomerated by passing the soln. between ≥ 2 electrodes having spaced facing areas between which is applied an AC voltage at 0.2-800 Hz, which is controlled in relation to the electrode area and soln. conductivity to give a current density of 0.08-6.0 amps. per sq. inch, and agitating the liq. to create turbulence between the electrodes.

The process is continuous, and frequent breaks for electrode cleaning or replacement due to erosion or scaling are not required. 21.7.76 as 021029 (13pp955).

BRSY- ★ D15 09790C/06 ★ GB 1560-753
Carbonating vessel for drinks dispenser - with cooling coil beneath perforated baffle and carbonated water outlet beneath baffle

BRIT SYPHON IND LTD 12.03.76-GB-010072
(06.02.80) B01f-03/04 C02d-01/04

A carbonator comprises a sealed vessel supplied with gas to carbonate water passing through the vessel. A coil supplied with a refrigerant is located within the lower portion of the vessel to cool the water.

Pref. a perforated baffle is located above the coil to prevent incoming water from disturbing cool water beneath the baffle. Carbonated water is withdrawn from beneath the baffle. The coil may be cooled or cold water or a refrigerant from an external heat exchanging tank.

The appts. carbonates and cools water and is used e.g. for dispersing soft drinks. 8.3.77 (5pp295).

WESS- ★ D15 09812C/06 ★ GB 2026-461
Sewage treatment by activated sludge process - with gas used to strip carbon dioxide from returned activated sludge

WESSEX WATER AUTHOR 19.07.78-GB-030315
(06.02.80) C02f-03/12

A sewage treatment process includes a stage in which sett-

led sewage is mixed with oxygen and returned activated sludge. A gas is used to strip CO_2 from the returned activated sludge. The gas may be either air, nitrogen or a nitrogen containing gas and in a preferred embodiment is the exhaust gas from a pressure swing absorption unit used to provide the oxygen.

The process uses an oxygen activated sludge process for treating sewage. By stripping CO_2 from the activated sludge, its pH is caused to rise which leads to an increase in nitrification in the reactor. 19.7.78 as 030315 (5pp295).

KURE ★ D15 09973C/06 ★ J5 4161-584
Heat treating furnace column - using induced downward turning flow of heating medium to prevent solids deposition on column sides

KUREHA CHEM IND KK 12.06.78-JA-069920

J09 Q77 (21.12.79) F27b-15

Device for heat-treating a material such as combustible grains, glass fibre, asbestos, pulp sludge, waste water sludge etc. is claimed. A heating fluid flows upward in a vertical column through the material charged to it. The object is to avoid deposition of solid residues of the material onto the wall of the column.

A heating fluid inlet is formed at a lower posn. of the column. A material throw-in port is formed at a middle posn. of the column. Blow nozzles 1 are disposed at an upper inner wall posn. to form a downward turning flow of the heating fluid in an upper space of the column. A conical wall is formed in a lower space of the column and has a port 6 at the lower end. This port is for collecting solid residues of the material. 12.6.78 as 069920(4pp26).

SANR- ★ D15 10046C/06 ★ J5 4161-746
Treating waste oils and fats - comprises dewatering solidification treatment by adding calcium oxide, calcium silicate, aluminium silicate and ultramarine blue powders

SANRITSU SHORI KOGY 13.06.78-JA-070394

H07 J01 (21.12.79) B01j-01 C02c-03

Waste oil, oil-contg. waste water, viscous waste oil, oily sludge, wasted oil sand etc. are subjected to dewatering solidification treatment to be converted to assisting fuel having low water content without causing sec. contamination method comprises mixing with powdered treating compsn. comprising 85.4-91.4 wt. % powdered CaO , 7.2-10.5 wt. % Ca silicate, 1.2-3.9 wt. % Al silicate 0.2 wt. % of ultramarine blue.

When a portion of the waste oil is added to the powdered treating compsn., the mixture becomes instantaneously exothermic, the remaining portion of the wasted oil being added in succession and portion-wise, so that temp. of the mixture reaches $< 150^\circ\text{C}$ and is maintained for 180-220 sec., The temp. of the mixt. is gradually lowered to 110°C . so that dewatered solidified prod. obtd. is almost uniform powdered material and has water content of < 4 wt. %. 13.6.78 as 070394(8pp34).

AGEN ★ D15 10047C/06 ★ J5 4161-749
Coagulation-sedimentation treatment of oil-contg. waste water - by adding alkaline earth metal (hydr)oxide to decompose surfactant present, followed by addn. of coagulant and filtration

AGENCY OF IND SCI TECH 09.06.78-JA-070243

H07 J01 (21.12.79) B01d-17/04 C02c-05/02

An emulsified waste water contg. oily matter, e.g. mineral oil, plant and animal oils cutting oil, spindle oil etc. and surfactant, esp. organic acid ester-type nonionic surfactant or anionic surfactant, e.g. discharged from rolling or cutting factory etc. is subjected to coagulation sedimentation treatment to remove effectively and easily the oily matter and the surfactant.

The process is effected by adding alkaline earth metal oxide or hydroxide, e.g. $\text{Mg}(\text{OH})_2$, $\text{Ca}(\text{OH})_2$, $\text{Ba}(\text{OH})_2$, MgO , CaO and BaO etc. at pH 10, pref. 10-13, and temp. of $> 30^\circ\text{C}$, pref. $30-60^\circ\text{C}$ to decompose rapidly by hydrolysis the ester-type surfactant to insoluble fatty acid Ca -salt and polyethyleneglycol and to make insoluble the anionic surfactant on reaction with the alkaline earth metal cpd., then pref. adding coagulant, e.g. iron salt etc. to carry-out coagulation sedimentation of the oily matter, followed by filtration to remove the surfactant and the oily matter in the form of sludge. 9.6.78 as 070243(3pp34).

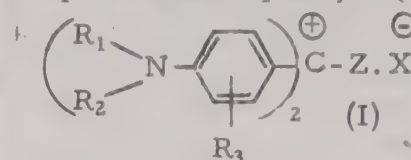
KANZ ★ D15 10124C/06 ★ J5 4162-673
Cyanide-contg. waste water treatment - by neutralisation, reaction with an aromatic amine and filtration

KANZAKI PAPER MFG KK 13.06.78-JA-071819

E19 (24.12.79) C01c-03 C02c-05/02

The pH of a waste soln. contg. cyanide is brought to 7.9, and an equiv. molecular amt. w.r.t. cyanide of a cpd. of formula (I) is added.

R_1 or R_2 is H, 1-18C alkyl opt. substit. by cyano or halogen, 2-8C alkoxy, benzyl or phenyl. R_3 is H, nitro, 1-4C alkyl or 1-4C alkoxy. Z is 1-8C alkyl $\geq$ 18C alkenyl a opt. substit. phenyl- (1-4C)-alkyl, or an opt. substit.



heterocyclic gp. X is an halogen, phosphate, sulfonate or citrate, anion.

In an example, 100ml of an aq. soln. contg. 1.6% of (II) was stirred

with 100 ml. of waste water of pH 7 contg. 0.1% of cyanide ion for 2 hours. The stirred soln. was filtered to obtain a soln. contg. no cyanide ion.



13.6.78 as 071819(3pp51).

JAOR ★ D15 10129C/06 ★ J5 4162-680
Regeneration of complex bed-type ion exchange appts. - used for purifying water, by passing regenerating agent from bottom to top of ion-exchange resin bed, then from top to bottom

JAPAN ORGANO KK 15.06.78-JA-071462

J01 (24.12.79) B01j-01/09

The method comprises positioning two distributors at upper and lower ends of an ion exchanging tower and a collector at a central portion of it. Appts. has a strongly electrolytic ion exchanging resin bed as a lower bed, a weakly electrolytic ion exchanging resin bed as a central bed, and a weakly electrolytic ion exchanging bed as an upper bed.

The improvement comprises passing a regenerating agent through a distributor from the lower bed to the upper bed to remove it from the collector and regenerate the bed below the collector, and passing a regenerating agent through another distributor from the upper bed to the lower bed to remove it from the collector and regenerate the bed higher than the collector. A siphon tube is connected to the collector and the water surface of the tower is supported at the same level as the siphon head by opening a valve of the siphon tube. 15.6.78 as 071462(7pp51).

EBAI ★ D15 10131C/06 ★ J5 4162-683
Desalination of water contg. silica - involves using specified permeable membrane, treating with alkali and passing through second membrane

EBARA INFILCO KK 14.06.78-JA-070954

A88 J01 (24.12.79) B01d-13

An aq. soln. contg. 20-60 mg/l of SiO_2 , such as sea water, river water, underground water, or waste water is treated with a permeable membrane to obtain desalted water and conc. water. The aq. soln. is passed through the permeable membrane to obtain a conc. soln. contg. a nearly satd. conc. of SiO_2 and a desalted soln.. The pH of the conc. soln. is adjusted > 9.0 , and the soln. is then passed through an another permeable membrane to obtain a desalted soln. contg. no SiO_2 .

The membrane is made from acetylcellulose, aromatic polyamide, polysulphone, acrylonitrile, polyolefine, graphite, or inorganic hydroxide or oxide.

In concentrating an aq. soln. contg. SiO_2 by using a permeable membrane up to a high concn., there is the disadvantage that SiO_2 is deposited on the surface of the membrane. In the present method, since alkali is added to the concn. soln. obtd. in the first process to convert SiO_2 into a soluble form, SiO_2 is not deposited on the membrane in the second process. 14.6.78 as 070954(2pp51).

NISN ★ D15 10221C/06 ★ J5 4162-845
Effluent treatment to remove oils or suspended matter - by adding a water soluble metal salt, adjusting to weakly alkaline pH and passing through a polymeric membrane

NISSHIN SPINNING KK 15.06.78-JA-071484

A97 (24.12.79) B01d-13 B01d-31 C02c-05/02

Emulsified oil-contg. effluent or suspended effluent contg. organic or inorganic solids is effectively purified by adding a water-soluble metal salt, followed by adding alkali to adjust the pH to weakly alkaline pref. to about 9 and to form a metal hydroxide which is flocculated with the solids or the organic matter contained in the effluent opt. in the presence of polymeric coagulant, and passing it through fine porous membrane of pore dia. $< 5 \mu\text{m}$. to remove flocs resulted. This process is pref. carried-out even the size and density of the flocs are uneven.

The salt is e.g. FeCl_3 , $\text{Fe}_2(\text{SO}_4)_3$, AlCl_3 or Al sulphate. The alkali is e.g. NaOH or $\text{Ca}(\text{OH})_2$. The membrane is e.g. made of cellulose acetate, nitrocellulose, polyamide, polyacrylonitrile, polyvinylchloride, polyethylene, polystyrene or polymethylmethacrylate. 15.6.78 as 071484 (3pp34).

HAYA/ ★ D15 10222C/06 ★ J5 4162-847
Treating polluted water without using special deodorising appts. - by adding aq. sodium carbonate contg. an oxygen donor e.g. percarbonate, and an acid

HAYATA C 14.06.78-JA-071602

(24.12.79) C02c-05/04

Polluted water is purified, decolourised and deodorised without using any deodorising appts. by adding an aq. soln. of Na_2CO_3 contg. an oxygen-donor, e.g. sodium percarbonate etc. together with acid, e.g. HNO_3 and H_2SO_4 etc., if necessary in combination with dichlorobenzene.

In the case of esp. treating polluted water contg. cattle excrement or stored in pit vessel in dust-incinerating station, the addition of the acid is effected before addn. of the aq. soln. contg. Na_2CO_3 and the oxygen donor, otherwise deodorisation becomes impossible. Organic matters contained in the polluted water are pptd. by flocculation in combination with dye-stuff, thereby BOD value of water to be outflowed is maintained always < 5.0 , and contamination of underground water is effectively prevented. 14.6.78 as 071602(9pp34).

HITA ★ D15 10316C/06 ★ J5 4163-734
Reusing copper plating process washing water - involves adjusting pH to at least 3 and passing in turn through cation and anion exchange resin

HITACHI KK 16.06.78-JA-072144

M13 (26.12.79) C02c-05/08 C23c-03 C25d-21/22

Process comprises first adjusting the pH of the washing water to a pH of ≥ 3.0 and passing in turn through a cation and an anion exchange resin so that the water is regenerated. Water is used until the concn. of heavy metal ions becomes too great. The metal ions adsorbed on the cation exchange resin are extracted by an inorganic acid to regenerate the resin and the pH level of the extracted liq. is adjusted. The Cu complex ions adsorbed on the anion exchange resin are extracted by an alkaline soln. to regenerate the resin. Finally the extracted liq. produced is utilised as a chemical Cu plating liq.

The Cu and the complexing agent contained in the anion exchange resin regeneration liq. can be easily recovered and reutilised. 16.6.78 as 072144(4pp7).

ASAH ★ D15 10366C/06 ★ J5 4163-904
Treating oil emulsion opt. contg. surfactant - by passing through porous resin membrane to give permeated liq. of high oil conc.

ASAHI CHEMICAL IND KK 13.06.78-JA-070306

A88 H07 J01 (27.12.79) C02c-05 C10g-33

An emulsion consisting of x pt. vol. oil and y pts. vol. other than oil, and opt. contg. z mol/l surfactant is used as the liquid to be treated. Compsn. of the emulsion is defined by the following equations; (1) $z = 0$, when $0.02 \leq \alpha < 0.5$; (2) $0 \leq z \leq 1.78 \times 10^{-3} \alpha - 8.9 \times 10^{-4}$, when $0.5 \leq \alpha < 0.8$; and (3) $0 \leq z \leq 1 \times 10^{-1}$, when $0.8 \leq \alpha < 1.0$, (where $\alpha = x/(x+y)$).

The liq. is passed through a porous membrane prepd. from a resin having $< 35 \text{ dyn/cm}$ critical surface tension at the surface of the raw material and a combination of

such resins, and having an average pore radius $r(\mu\text{m})$ satisfying the inequality $2 < r/r_E \leq 100$ (where in r_E is the average particle radius of the emulsion), and a thickness $d(\mu\text{m})$ satisfying the following inequality: $5 \leq d/\beta \leq 5 \times 10^2$, (where $\beta = r^2/r_E$). Thus, permeated liq. contg. $> x$ pt. by vol. oil is obtd.

Pref. the distribution of the pore size of the porous membrane $\bar{r}_4/\bar{r}_3$ is < 1.5 in which $\bar{r}_3 = \int r^3 N(r) dr / \int r^2 N(r) dr$, and $\bar{r}_4 = \int r^4 N(r) dr / \int r^3 N(r) dr$, $N(r)$ is a distribution function of the pore radius, and the number of the pore having $r-(r+dr)$ pore radius is given by $N(r)dr$; r and $N(r)$ are determined from the result of the electron microscopic analysis.

An emulsion consisting of an oil and a liq. other than oil is allowed to pass through a porous membrane to obtain a permeated liq. having high concn. of the oil.

Pref. resin for the porous membrane fluorine contg. resin, polyethylene, polypropylene, polystyrene, natural rubber, butyl rubber, neoprene, synthetic rubber such as nitrile rubber, polymethyl siloxane, polymethyl methacrylate, etc., or combinations of such resins such as butadiene-styrene copolymer, silicone-polycarbonate copolymer etc. 13.6.78 as 070306(9pp126).

MIYA/ ★ D15 10455C/06 ★ J5 4164-343
Treating waste water sludge - by coagulation and filtration dewatering, with addn. of hydrogen peroxide prior to coagulation

MIYANO K 16.06.78-JA-072961

(27.12.79) C02c-03

In the treatment of organic sludge resulting from the treatment of waste water e.g. sewage by coagulation and filtration dewatering, the improvement comprises adding H_2O_2 prior to coagulation so that generation of unpleasant odours, from the sludge and dewatered filter cake is effectively prevented.

Pref. 10-15% aq. H_2O_2 soln. is added to the sludge in amt. of a few hundred ppm prior to addn. of polymer coagulant to the sludge in a flocculating tank, followed by reacting together for a certain period, so that the odour of the sludge is almost completely extinguished and simultaneously sterilisation of colon bacilli etc. is accelerated. 16.6.78 as 072961(3pp34).

NISH- ★ D15 10456C/06 ★ J5 4164-344
Treatment of sewage sludge, waste water etc. - by adding calcium hydroxide and hydrogen peroxide

NISHIHARA KANKYO EI 16.06.78-JA-073509

(27.12.79) C02c-03

A sludge resulting from treatment of sewage, high soil and industrial waste waters, etc. is effectively dewatered by adding a mixt. of $\text{Ca}(\text{OH})_2$ and H_2O_2 , followed by thorough agitation, and subsequently subjecting to dewatering, e.g. vacuum filtration, centrifugation etc.

Granules of the sludge are in contact with nascent oxygen formed by decompsn. of H_2O_2 and $\text{Ca}(\text{OH})_2$ etc. and oxidised to granules easily separable from aq. phase. The oxidising strength of H_2O_2 is increased because the system becomes alkaline due to $\text{Ca}(\text{OH})_2$.

Further $\text{Ca}(\text{OH})_2$ exhibits coagulation effect, thereby the sludge granules are easily flocculated. In a modification an iron salt, e.g. Fe chloride and Fe sulphate etc. may be used in combination with the mixt. comprising $\text{Ca}(\text{OH})_2$ and H_2O_2 to further accelerate the oxidn. of the sludge by its catalytic activity. 16.6.78 as 073509(3pp34).

TAKE D15 62038Z/00 = J8 0001-039
Citric acid prodn. by fermentation - of candida, pebaromyces, torulopsis, saccharomyces, hansenula, pichia, endomycopsis, or trichosporon strains

TAKEDA CHEMICAL IND KK 07.06.67-JA-036391 (00.00.72-JA-023281)

E17 (11.01.80) *BE-716-247 +C12p-07/42

Method comprises aerobically culturing bacteria belonging to Candida, Debaryomyces, Torulopsis, Saccharomyces, Trichosporon, Hansenula or Pichia at pH 2.5 to 10 in a culture medium contg. alcohols as C source, and recovering citric acid accumulated in the medium.

The alcohols used include methanol, ethanol, propanol, butanol, amyl alcohol, glycerin, propylene glycol, etc. Examples of bacteria used are Candida guilliermondii,

-intermedia, Debaryomyces hansenii, -kloeckeri, Hansenula miso, -saturnus, Pichia farinosa, -halophila, Saccharomyces willianus, Torulopsis candida, Trichosporon capitatum, etc. The culture medium contains various nutrients selected according to the type of bacteria, and neutralising agent such as sodium acetate, calcium carbonate, etc, to control pH pref. within 5 to 6.5.

The method gives citric acid at nearly stoichiometric yield. 7.6.67 as 23281/72 Div. ex. 36391/67 C12p-7/42 (11.1.80) TAKEDA CHEMICAL IND KK (6pp83)

OSAK- D15 35405A/20 = J8 0001-081
Cooling a waste soln. to ppte. solute - using a coolant which is liquefied without using a compressor

OSAKA HITACHI REIKI 16.09.76-JA-112122

J01 (11.01.80) *J53035-679 B01d-09/02

A device is claimed for cooling a solute in a soln. until precipitated therein, thus sepg. from the soln. contained in a closed vessel having an inlet and outlet for the soln. while a coolant is fed into the vessel through a pipe and sucked through a pipe connected to a condenser. The object is to liquefy the coolant evapd. in the vessel, without using a compressor. The vessel contains a gas and liq. phases.

The novelty is that the pipes are opened in the gas and liq. phases and connected to an inlet and outlet of the condenser to form a coolant cycle path, respectively. The condenser has a heat exchanger, through which both the coolant passing through the vessel and a separate coolant pass. Used for pptn. of harmful substances in waste liquors. 16.9.76 as 112122 B01d-9/02 (11.1.80) OSAKA HITACHI REIKI (4pp26)(J5 3035679)

MITB D15 00806B/01 = J8 0001-083
Waste water treatment column - used to treat sea-water from cleaning tanker holds

MITSUBI SHIPBUILDING ENGG 26.04.77-JA-047343

(11.01.80) *J53132-471 B01d-11/04

A closed column is partitioned by horizontal plates into vertically arranged cells, which are communicated with each other through passages each defined by a vertical wall erected at one end of the horizontal plate and side wall of the column.

The passages are thus formed at the one side of the horizontal plates, every two plates, and the remainders are fixed to the side wall of the column thus forming a zigzag waste water flow passage on the whole, component having a smaller specific wt. is quickly extracted. 26.4.77 as 047343 B01d-11/04 (11.1.80) MITSUBI SHIPBUILDING ENGG (3pp)(J5 3132471)

SAFI-★ D15 10483C/06 ★ J8 0001-085
Filter for treating animal excreta - comprises endless filtering cloth belt passing over two rollers, and a feed rate control

SARL SAFITE 02.07.75-JA-081735

J01 (11.01.80) B01d-33/38

Filter for sepg. excreta from animals, into liquid and solid wastes, is for treating excreta from domestic animals. The filter comprises an endless filtering cloth belt passing over two rollers and level detector disposed on the belt to detect the level of excreta in a tank, thus controlling the feed rate of the excreta to the belt. 2.7.75 as 081735 B01d-33/38 (11.1.80) SOC SAFITE (4pp26) (J5 2006172)

KUBI D15 54827X/29 = J8 0001-119
Treatment of waste water contg organic nitrogen - by nitrification, absorption on ion exchanger and desorption of nitrogen gas

KUBOTA KK 26.11.74-JA-137338

J01 (11.01.80) *J51062-560 + C02f-03/34 C02f-09

Method comprises introducing waste water (sewage, or feces and urine) through an adjusting tank into a nitrifying tank to nitrify the organic nitrogen of the waste water to NO₂ or NO₃, and adsorbing them with an ion exchange resin, whereafter a regenerating liq. is introduced into the used ion exchanging resin, and the waste regenerating liq. is recycled to the adjusting tank to reduce the NO₂ or NO₃ desorbed from the resin to N₂ gas. Organic carbon source contd. in a sludge of the waste water or a sludge storing tank can be used instead of prior organic carbon source, such as, methanol. A denitrifying tank is not nec

-essary. Organic nitrogen can be changed to harmless N₂ gas. 26.11.74 as 137338 C02f-3/34, 9/00 (11.1.80) KUBOTA KK (3pp)(J5 1062560)

KURS ★ D15 10496C/06 ★ J8 0001-12
Burying heavy metal-contg. waste in the ground - by applying aq. soln. of water-soluble polymer, e.g. PVA, polyacrylamide starch, etc., to the soil-waste interface

KURARAY KK 13.12.72-JA-125590

A81 P44 (11.01.80) B09b-03 C02f-11

When burying heavy metal-contg. waste in the ground, the improvement comprises applying an aq. soln. of water-soluble polymer (I) to the interface between soil and waste. (I) forms a chelate cpd. with the heavy metals, preventing their diffusion into the soil. 13.12.72 as 125590 C02f-11/00; B09b-3/00 (11.1.80) KURARAY KK (3pp83)(J4 908127)

RUHR D15 78856W/48 = NL-162-61
Polymer plasticisers prodn. effluent treatment - in a simple process allowing the organic material to be recovered/recycled

RUHRCHEMIE AG 31.05.74-DT-426448

A60 E19 (15.01.80) *DS2426-448 C02f-01/58 C07c-67/60

Process is described for purifying the effluent from the prodn. of ester plasticisers and recovering and recycling the organic components. The esters are prepd. by reacting polybasic aliphatic or aromatic carboxylic acids with aliphatic alcohols using H₂SO₄ as catalyst. The prod. is neutralised with aq. alkali metal hydroxide and/or carbonate and the water layer which contains starting material and prod., salts of monoalkylsulphuric acids and the dialkylsulphate esters of the alcohols, ethers derived from the alcohols by H₂O-cleavage and, if aromatic carboxylic acids are used, their mono-esters with the alcohols. The effluent is heated under pressure to > 200°C, whereby the reaction prods. separate into layers and the starting materials and prod. are recovered.

Pref. the effluent is heated to 210-250°C. If a high alkali metal bicarbonate content exists, a stoichiometric amt. of alkali metal hydroxide is added. After thermal treatment, the water layer is acidified (before or after sepn. of the organic layer) with mineral acid to pH 3-3.5. All organic constituents are recycled to the ester prepn. stage. 16.5.75 as 005820 (5pp913)

PASE D15 81523R/44 = NL-162-61
Effluent aerating device

PASSAVANTW MICHELbacher 08.01.68-DT-708603

(15.01.80) *FR1596-432 + B01f-07/18 C02f-01/74

Gases such as air are introduced into effluent by means of straight, narrow aeration elements directed outward and downward into the liq. and mounted to a vertical, rotating shaft.

The blades are hollow and perforated along the trailing face to permit the gas to enter the liq. in the turbulent, low pressure eddies at the back of the blade. The blade faces are inclined at an angle, pref. adjustable, of between 95 and 120° to their direction of motion. This arrangement yields the max. quantity of dissolved air for a given energy consumption. 7.1.69 as 000234 (8pp1370)

NIKK- D15 33593R/19 = NL-162-72
Pump arrangement for treatment of waste liquids

NIKKISO CO LTD (NIK-) 08.10.68-JA-072850

Q56 (15.01.80) *DT1950-741 F04b-43/06 + F04b-15/02

Pumping system comprises a vertical flow pipe in which 2 non-return valves are installed, one above the other, a horizontal branch from the pipe section between the two valves leading to a vertical chamber in which there is a vertical pumping membrane and a discharge pipe leading from the pump back into the vertical flow pipe.

A throttling valve is installed in the discharge from the pump. The system can be used for pumping pastes which may contain varying proportions of entrained gas. The throttling valve enables the resistance in the pump line to be adjusted in accordance with the gas content of the paste. 8.10.69 as 015203 (4pp1370)

STEM ★ D15 10555C/06 ★NL 7905-489
Desalination of solutions by reverse osmosis - includes dividing supply into two streams at different pressure using flow work exchangers

STEINMULLER L & C GMBH 21.06.79-DT-924971 (14.07.78-DT-830987)

J01 (16.01.80) B01d-13 C02f-01/44

The concentrate under pressure leaving a plant for the sepn. of salts from a soln. by reverse osmosis, is fed to a chamber or into one end of a double reservoir assembly; the reservoirs being spheroid, ellipsoid or double-conical rotation bodies. These have geometrically similar sepg. membranes or are membraneless pressure vessels, with or without fillings or inbuilt structures. At the same time a vol. of soln. from the other end of the double reservoir goes to a pump. This compresses the vol. of soln. to the input pressure by overcoming a relatively small difference between its pressure and that of the reverse osmosis plant.

Parallel to this operation, the salt soln. to be sepd. flows into a corresp. chamber section of a second or further similar membrane double reservoir, so that from its other side practically pressureless concentrate is drained. This is the concentrate which is fed into this other chamber in the previous one of the corresp. operational phases under pressure and with the corresp. transporting energy.

Used for the prodn. of drinking and/or industrial water from brackish or seawater. The process, using conventional pumps without detenting machines for the concentrate, makes considerable savings of energy possible. 13.7.79 as 005489 (22pp1014)

STEM ★ D15 10556C/06 ★NL 7905-490
Double reservoir for energy recovery in water technology - has membranes dimensioned and secured to prevent their damage

STEINMULLER L & C GMBH 21.06.79-DT-925025 (14.07.78-DT-830982)

J08 (16.01.80) B01d-13

Vessels which are symmetrical to an axis of rotation are used for the storage separately of two volumes of fluid, which are functionally dependent upon each other. The vessels are pref. divided across the middle by membranes fixed to the container walls, so that each container has two similar chambers which are variable in volume. The geometrical layout of the vessels and the membranes are such that in the outermost position, the membranes lie closely against the container wall, whilst in all intermediate positions they float freely.

Used for the recovery of energy from concentrates obtained under high pressure in reverse osmosis plants and wet oxidn. installations for the treatment of sewage. The double reservoirs are operated cyclically in parallel and the part flow of soln. is fed into the reverse osmosis installation backed up by the highly pressurised concentrate, and using a high pressure pump to make up the slight difference in pressure. 13.7.79 as 005490 (18pp1014)

VOTE= ★ D15 10635C/06 ★SU -663-719
Restoring activity of carbon used for purification of alcohol - includes treatment with steam and mixt. of air with ozone

VORON TECHNOL INST (MOLI=) 13.04.78-SU-597001

E36 (30.05.79) B01d-15/06 C12h-01/04

The activity of carbon used for purification of alcohol-water mixts. can be restored by first extracting from it alcohol and impurities by passing satd. steam through it, cooling with a compressed air stream; heating with steam; and cooling again.

This method is improved by blowing, after the first cooling, a mixt. of 99.8-99.9 wt. % of air and 0.1-0.2 wt. % of ozone at 20-30°C for 40-50 min. Then the carbon is heated with steam at 350-400°C for 40-50 min.

By this method, the sorptional and catalytic activity of the carbon is increased; the consumption of carbon is reduced; its service life is extended from 1-3 to 5-6 years. The loss of alcohol is reduced.

Perelygin, V.M., Bachurin, P.Ya., Solitsev, V.I. et al. Bul. 19/25.5.79. 13.4.78. as 597001 (2pp70)

ATOM= ★ D15 10778C/06 ★SU -664-664
Uniform regeneration of cation exchanger - by treating part with acid soln. and remainder with sodium chloride soln. before washing with water and stirring by compressed air

ATOM POWER ENG INST 13.12.76-SU-428615

J01 (30.05.79) B01d-15/04

Regeneration of cationic exchanger at compatible H-Na and NH₄-Na-cationisation of water is based on sepg. the cation exchanger into 2 parts (ratio 1:1-5). The first part is treated with 2-5% aq. acid soln. The second part is treated with 4-8% aq. NaCl soln. After washing with water the layers are mixed by compressed air.

In an example, water contg. (in mg. eq./l): overall hardness 2.4; carbonate 1.7; Na 0.3; is passed through sulphonated coal SK-1 at 15 m/hr.

For regeneration, the cation exchanger is split into 2 equal pts. by volume. One part is treated with 5% HCl (expenditure 36.6 g/g. eq.) and the second by 8% NaCl (expenditure 110 g/g. eq.). The regeneration rate is 5 m/hr. After washing with ionised water, the layers are mixed by compressed air. This gives filtrate of compsn. (mg. eq/l): hardness 10; alkalinity 0.5.

Mamet, A.P., Bum, I.B., Pivkina, I.V. Bul.

20/30.5.79. 13.12.76. as 428615 (2pp114)

BIOL= ★ D15 10793C/06 ★SU -664-683
Sorbent for removal of sulphur-contg. cpds. from aq. waste - comprises polymeric quinone cpds. which simplify the process without reducing purificn. degree

BIOLOGY RES INST (UYIR=) 01.03.78-SU-584070

A97 E36 (30.05.79) B01j-01/22 C02c-05/02

S-contg. cpds. can be removed from aq. waste obtd. in the prodn. of paper, petroleum products and gas by absorption on a polymeric quinone. The process gives as good results as the use of activated carbon or alumina. The method is simpler, since the quinones are non-toxic and insoluble in water, and the process can be operated continuously or in batches by a normal filtration method. Polymer with an oxidn. redn. capacity of 8-9 mg. eq/g. is washed with distilled water before the waste is passed through it, and the redn. in the content of SH groups is followed by amperometry. The disulphide groups present are reduced by addn. of satd. Na₂SO₃ soln. to the waste before treatment, so that only SH groups are left in soln.

Stom, D.I., Suslov, S.N., Kurochkin, V.N. et al. Bul.

20/30.5.79. 1.3.78. as 584070 (2pp815)

BRES= ★ D15 10879C/06 ★SU -664-929
Aerator for water purificn. system - with perforated ejector feeding sec. air into foam-forming chambers provided by blades compensating pump torque

BREST ENG CONS INST 16.01.78-SU-569117

(30.05.79) C02c-01/10

The aerator comprises a guide tube with an annular diffuser and housing a screw pump.

To increase output and reduce power consumption at the diffuser output, there are in series an annular ejector and chambers formed by blades bent contrary to the direction of rotation of the pump.

The ejector wall is perforated. The electric motor, via the pump, drives the liquid through the diffuser with radial outflow, the secondary air from the holes in the ejector wall being dispersed in the individual chambers through collision of the gas-liquid mixture on the blades. The resulting emulsion issues on to the surface of the liquid, and also entrains air from the atmos. With the blades also compensating the pump torque, efficiency is increased by a factor of 1.5-2.

Dmukhailo, E.I., Ovsyanikov, V.G., Yakubovskii, E.P. Bul. 20/30.5.79. 16.1.78. as 569117 (2pp132)

ROVO= ★ D15 10880C/06 ★SU -664-930
Consolidated sludge remover for flotation unit - using density setting and gauging beyond regulator adjusting layer removing blade

ROST VODOKANALPROEK 25.01.78-SU-572012

R26 (30.05.79) C02c-01/26 G05d-27/02

The remover comprises a rotating scraper mechanism with a moving blade.

To stabilise the sludge humidity and reduce transport and drying costs, a density setter followed by a density

This soln. is then passed directly to and through a 2nd. cation exchange bed in H form from the bottom to produce at the top of this bed a conc. soln. of chromic acid. Displacement water is then passed through the 2nd. exchange bed in the same flow path as, but in a direction opposite to that in which the conc. soln. of Cr-contg. anions and

the alkali metal hydroxide soln. passed through the beds, to displace the liqs. remaining in the beds and connecting conduits into the reservoir for the alkali metal hydroxide soln.

The consumption of chemicals is minimised. 13.9.77 as 832861 (+4.12.75-US-637605) (9pp393)
See Also

D13 DT 2831351
D22 NL 162685

D16 J5 4163881
D23 DS 1617012

D22 GB 1560427

D16: FERMENTATION INDUSTRY

KOZI/ ★ D16 C/06 ★ CS 7504-217
Pad for collecting material for microbiological investigation
KOZIAK I 16.06.75-CS-004217
B04 P32 (17.09.79) A61f-13 20 C08g-18*02 C12k-01/10

LEOP/ ★ D16 C/06 ★ CS 7606-750
Molasses substrate for citrate fermentation - prepared by controlling concn. of hexacyanoferrate in soln. and ppte.
LEOPOLD J 20.10.76-CS-006750
E17 (17.09.79) C12b-03

WELW/ ★ D16 C/06 ★ CS 7607-495
Cephalosporin C prepn. by fermentation
WELWARD L 22.11.76-CS-007495
B02 (17.09.79) C12d-09/22

IZBI/ ★ D16 C/06 ★ CS 7705-988
Dog kidney cell culture prepn. - for parotitis virus cultivation
IZBICKY A 14.09.77-CS-005988
B04 (17.09.79) C12k-09

HORA/ ★ D16 C/06 ★ CS 7707-071
Complex hops additive
HORA A 31.10.77-CS-007071
(17.09.79) C12c-03

ZAMO/ ★ D16 C/06 ★ CS 7707-768
One-stage prepn. of polyethyleneimine-isothiocyanate - for use as enzyme support
ZAMOCKY J 24.11.77-CS-007768
A96 B04 (A26) (17.09.79) A61k-37/48

KORI/ ★ D16 C/06 ★ CS 7708-161
Diagnostic serum for hepatitis B antigen and antibody prodn.
KORINEK J 07.12.77-CS-008161
B04 (17.09.79) C12k-01/10

SNIR/ ★ D16 C/06 ★ CS 7708-738
Inactive inoculant against atrophic disease of kidney in pigs
SNIRC J 23.12.77-CS-008738
B04 C03 (17.09.79) A61k-39/40 C12k-03

MILL- D16 24437R/15 = DS 1907-157
Granular free flowing complexes of ammonia and - hop acids
MILLER BREWING CO (MIL-) 13.03.68-US-712617
(31.01.80) *GB1188-484 C07c-49/58 + C12c-09/02

Prepn. of 1:1-complexes of humulone, catalytically reduced humulone or corresp. isohumulones, or isohumulones reduced with metallic boranates, comprises treating these cpds. or extracts contg. these cpds. with NH_3 in an organic solvent having $\epsilon_r < 2.1$; the complexes separate and are collected. The prods. are used as additives in the brewing of beer. 13.2.69 as 907157(6pp047)

BECT D16 42877T/27 = DS 2144-245
Flexible petri dish - with inwardly convex base having improved sealing channel
BECTON DICKINSON CO 09.12.70-US-096306
(31.01.80) *D12144-245 C12k-01/10 + C12m-01/22

A test dish for a nutrient medium is so designed that surfaces such as walls, floors and ceilings of hospital rooms, laboratories and sterile production rooms can be tested for the presence of microorganisms. The dish is made of a flexible plastics and has a convex upward bottom. The perimeter rim is inclined inwards and is surrounded by a groove in which finally a cover can be clipped. The groove is surrounded by a downward cylindrical extension by which it can be gripped with the fingers and pressed against the wall.

Any shrinkage of the nutrient medium does not cause it

to become loose and detached; it clings more firmly to the bottom instead. 3.9.71 as 144245(4pp39)

BEHW D16 52202Y/30 = DS 2602-478
Vaccine against feline panleukopenia or infectious gastroenteritis - prepd. by passage of virus through cat kidney cells and through permanent cells and proliferating in foetal cells

BEHRINGWERKE AG 23.01.76-DT-602478
B04 C03 (31.01.80) *BE-850-696 A61k-39/12 C12k-09

Vaccine against feline panleukopenia contains a panleukopenia virus with pathogenic activity to renal cells in cats. The virus has been attenuated by ≥ 80 passages through cat renal cells and ≥ 18 passages through permanent tissue cells of cats.

In the prepn. of the vaccine the attenuated virus is multiplied on cat foetal cells and worked up to a vaccine. The cultures used for multiplication of the attenuated virus are opt. collected several times. 23.1.76 as 602478(8pp997)

PERU D16 44203A/25 = DS 2655-765
Anion exchanger for (alcoholic) beverages - reduces their sulphur di: oxide content without affecting their organoleptic properties
PERMUTIT GMBH 09.12.76-DT-655765
A91 (A13 A14 A97) (31.01.80) *DT2655-765 + C12g-01/04

Process for reducing the SO_2 content in drinks comprises treatment with an anion exchange resin, (esp. aminated divinylbenzene copolymers with a divinylbenzene content of at least 15-30%), previously charged with a weak inorganic or organic acid anion. In partic., the resin is washed with aq. H_3PO_4 , malic acid, lactic acid or tartaric acid before use. 9.12.76 as 655765(4pp047)

SULZ D16 73792B/41 = DS 2815-199
Activated sludge preservation - by flushing with gas containing carbon di:oxide and less oxygen than air (OE 15.7.79)
GEBRUDER SULZER AG 03.04.78-CH-003530
(31.01.80) *DT2815-199 C02c-01/06 + C02f-03/12

In a system for the preservation of an activated sludge for re-use in biological sewage cleaning systems, the part to be preserved is stored and swept by gas. The gas, used for the sweeping operation, contains $\geq 10\%$ CO_2 , and ≤ 10 vol. % of oxygen. The remainder can be nitrogen or rare gases.

This saves the necessity to add nutrient media to the sludge to keep the biomass active. 7.4.73 as 815199(3pp39)

INSP ★ D16 09443C/06 ★ DT 2927-309
Antibiotic sensitivity determination - by measuring radiation intensity penetrating barrier rings on bacteria cultures
INST PASTEUR 07.07.78-FR-020391
B04 (31.01.80) C12k-01/04 C12q-01/06

The sensitivity of bacteria and fungi for antibiotic products is determined by measuring the diameter of the barrier halo, using penetrating radiation. The intensity of the radiation, reaching a receiver, when the beam passes through the centre of the barrier halo, is determined and the barrier halo diameter is calculated from this radiation intensity.

A numerical value for the sensitivity is thus obtained automatically very quickly and at reduced cost. 6.7.79 as 927309 (18pp39)

TOXN ★ D16 09484C/06 ★DT 2929-277
Enzyme l-alpha-glycerophosphate oxidase prodn. - by cultivation of *Aerococcus* strains, e.g. *A. viridans*; used as analytical and diagnostic reagent

TOYO JOZO KK 20.07.78-JA-088637

B04 (31.01.80) C12d-13/10 C12p-09

In the prodn. of L- α -glycerophosphate oxidase (L- α -glycero-3-phosphate; O₂-oxidoreductase) (I) a microorganism of the genus *Aerococcus* is cultivated in a nutrient culture medium.

(I) is a known enzyme which catalyses the reaction of L- α -glycero-3-phosphate with oxygen to form dihydroxyacetone 3-phosphate and H₂O₂. It can be used for the quantitative determ. of L- α -glycerophosphate, glycerol, glycerides, and phosphatidic acids and other phospholipids, and in the measurement of the enzyme activity of glycerokinase and similar enzymes. (I) is also suitable for use in research reagents and diagnostic reagents.

Prof. *Aerococcus* strains are *Aerococcus viridans* IFO-12219 and IFO-12317. The cultivation is pref. carried out under submerged aerobic conditions using a conventional medium at 25-37°C, usually for 10-48 hrs. 19.7.79 as 929277 (11pp280)

GRAC D16 87867A/49 =EP ---7-341
Tetra:cyclic antitumour agent quadrone - obtd. by culturing *Aspergillus terreus* strain

GRACE W R CO 24.04.78-US-899616 (02.08.77-US-821087)

B02 (06.02.80) *BE-869-439 A61k-31/36 C07d-311/94 + C12p-17/02

D/S: E(CH, DT, FR, GB, SW)

28.7.78 as 900072 (WP 7900081)

NATR D16 18088B/10 =EP ---7-372
Enzymatic analysis using nitro-styrene derivs. - e.g. determination of N-acetyl-beta-D glucosaminidase to detect renal troubles is simple and gives visual signal

NATIONAL RES DEV CORP 01.11.77-GB-045390

B04 J04 R16 (06.02.80) *BE-871-717 C07f-09/12 C07h-15/20 C12q-01

D/S: E(FR)

31.10.78 as 900219 (WP 7900255)

BEHW D16 07676C/05 =EP ---7-461
Hepatitis A virus recovery from monkey stools - for use in diagnosis, and vaccine and antibody prodn.

BEHRINGWERKE AG 06.07.78-DT-829741

B04 + R16 (06.02.80) *DT2829-741 A61k-39/29 + C12n-07/02 G01n-33/54

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Recovery of hepatitis A virus (HAV) comprises infecting monkeys (pref. of the Callithricidae family, esp. *Callithrix jacchus*) with HAV and recovering the HAV from the stools of the monkeys. The monkeys are pref. treated with immunosuppressants.

The isolated HAV is used as diagnostic reagent for detecting anti-HAV antibodies in patients with hepatic disorders, in the prodn. of vaccines and for recovery of hepatitis A antibodies against HAV. Sufficient HAV for 5,000 tests can be recovered from the stools of a single monkey. The process does not require operations, as in the prior art recovery of HAV from the liver of infected monkeys.

29.6.79 as 102187 (7pp941).

(G) ISR: FR2398504; 5 Journal references.

SMIK ★ D16 09521C/06 ★EP ---7-467
Anti-influenza live vaccine administered by nasal route or inoculation - by recombining A/PR/8/34 and A/Alaska/5/77 strains, cloning with A/PR/8/34 antiserum, without serum and in normal serum, and cultivating

SMITH KLINE 12.07.78-US-923846

B04 (06.02.80) A61k-39/14

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE).

(A) Preparation of anti-influenza live vaccine, administrable by the nasal route, comprises (a) recombining the influenza viral strains A/PR/8/34 and A/Alaska/5/77 (CNCM I-063 at Inst. Pasteur); (b) cloning the obtained virus by passage in successively limiting dilutions in the

presence of A/PR/8/34 antiserum, without serum and in the presence of normal serum; (c) isolating the new influenza virus strain CNCM I-062 (or RIT 4199); (d) cultivating this strain of the allantoic cavity of embryonic chicken eggs for a sufficient time to produce a significant quantity of the virus; (e) harvesting the virus; and (f) if desired, adding stabilisers and lyophilising the mixture. (B) Vaccine containing influenza virus strain CNCM I-062 and a pharmaceutical diluent, for nasal administration, is new.

The influenza vaccine is effective against A/Texas/1/77 influenza virus strains. I-062 is non-pathogenic and is used in unit doses of at least 107 IDE₅₀ (infectious dose in eggs) by intranasal application or to give optimum response by inoculation in two unit doses, the second a week after the first.

2.7.79 as 102214 (15pp395).

(F) ISR: FR2354778; BE-843093; 1 Journal Reference.

BOEF ★ D16 09528C/06 ★EP ---7-476
Determn. of nicotinamide-adenine dinucleotide or its phosphate - by oxidn. of alcohol to aldehyde and measurement of bio:luminescence

BOEHRINGER MANNHEIM GMBH 01.08.78-DT-833723

B04 R16 (06.02.80) C12q-01/66 G01n-21/76

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, SW).

Quantitative determ. of an oxidised pyridine coenzyme (I), i.e. nicotinamide-adenine dinucleotide (NAD) or its phosphate (NADP), is carried out by (a) reacting (I) with an 8-16C aliphatic alcohol in the presence of a specific alcohol dehydrogenase (ADH); (b) oxidising the resulting aldehyde with reduced flavin mononucleotide (FMNH₂) and O₂ in the presence of luciferase, a (I)-independent FMN reductase and the reduced substrate coenzyme of the FMN reductase (i.e. NADPH if (I) is NAD, or NADH if (I) is NADP); and (c) measuring the light emitted by the oxidn. reaction.

The method allows direct determ. of (I) without prior conversion into reduced form, and it can be used for monitoring (I)-forming reactions (e.g. for pyruvate, α -ketoglutarate or oxalacetate determ.). The light emission is directly proportional to the (I) concn., e.g., over a range of 10⁻⁷ - 10⁻⁴ mole/l.

3.7.79. as 102245 (22pp367).

(G) ISR: DT2722381; DT2602961; US4097338; 1 Journal Reference.

BLEN/ D16 07687C/05 =EP ---7-489
Chemical and biochemical reactor - with first loop and second tube characteristic sections

BLENKE H 08.07.78-DT-830126

A13 J04 (06.02.80) *DT2830-126 B01j-10 C08f-12 + B01j-14 C08f-02 C12m-01/08

D/S: E(DT, FR, GB, OE).

A process for chemical and biochemical reactions in the liquid or gas/liquid phase takes place in a first section of a reactor which has a loop characteristics of adjustable recirculation, and with large heat transmission surfaces, and then in a second reaction section which has a tube characteristic.

In the case of styrene polymerisation, good mixing in the loop part is followed by low reaction rate without back mixing in the tube part, resulting in a uniform high-polymer product. In a gas-liquid system for the production of biomass (single cell protein), it combines the recirculation of the liquid phase in the loop part with the better recirculation of the gas in the tube part.

5.7.79 as 102291 (29pp39).

(G) ISR: DS-736284; US3458467; FR1213967; FR2156376; EP---3548; US3439807; FR-522041; FR1529536; SU-171366; FR1220538.

LINM ★ D16 09540C/06 ★EP ---7-507
Wort fermenting system - using oxygen or high oxygen air through aerators in fermenting vat

LINDE AG 20.07.78-DT-831979

(06.02.80) C12c-11/04

D/S: E(BE, FR, NL, OE).

Charges of wort undergo fermentation in beer brewing by

adding yeast to the wort and by aerating it to set the required oxygen content using pure oxygen or high-oxygen air, pref. at a rate of 1 to $1.6 \cdot 10^{-3} \text{ m}^3$ of pure oxygen per litre of wort.

This greatly reduces the formation of froth so that more space is usefully available in the fermenting vats.

9.7.79 as 102345 (11pp39)

(G)ISR: FR1284957; GB1518261; FR1307047; OE-255352; FR2139915; DS-502900; FR-381291.

TATL ★ D16 09629C/06 ★EP ---7-690
Microbiological prodn. of alginate polysaccharide(s) - by culture of non-pathogenic, antibiotic tolerant, *Pseudomonas* spp
TATE & LYLE LTD (TALR-) 07.02.79-GB-004215 (06.06.78-GB-026413)

A11 B04 C03 (D16) (06.02.80) C12p-19/04

D/S: E(BE, CH, DT, FR, IT, LU, NL, OE, SW).

Polysaccharide (I) consisting of a partially acetylated variable block copolymer of D-mannuronic and L-guluronic acid residues is prepd. by culturing a non-pathogenic strain (II) of *Pseudomonas* on a suitable medium.

(II) is prepd. by treating a non-mucoid sp. of *Pseudomonas* which is non-pathogenic for humans with a β -lactam or aminoglycoside antibiotic (III).

The process is safe in that it uses non-pathogenic bacterial strains and gives high yields of (I). (I) (i.e. alginates) are useful as emulsifiers, stabilizers, and thickeners in the food, pharmaceutical, and paper and textile industries, and in agriculture.

1.6.79 as 301032 (10pp478).

(E) ISR: 6 Journal references.

PFIZ ★ D16 09659C/06 ★EP ---7-751
Destruction of 2-keto:gluconate in presence of 2 keto:gulonate - by fermenting with *Pseudomonas fluorescens*, leaving prod. suitable for hydrolysis to ascorbic acid

PFIZER INC 20.07.78-US-926262

B05 (06.02.80) C07h-07/02 C12r-01/89

D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Process for destroying 2-ketogluconate (I) in its mixt. with 2-ketogulonate (II) comprises fermentation in aq. nutrient medium with *Pseudomonas fluorescens*, esp. NRRL B10 and ATCC 13430.

Obtd. (II) is hydrolysed to ascorbic acid, the recovery and purificn. of which is thus simplified.

13.7.79. as 301384 (14pp949).

(E) ISR: US 2277716; J44008074; J38007725; 10 Journal References.

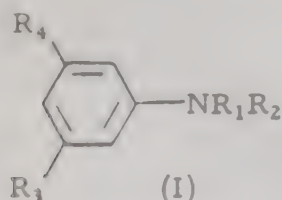
KYOW ★ D16 09676C/06 ★EP ---7-787
Reagent for hydrogen peroxide assay - contains N,N-di:subst. aniline as hydrogen donor in colour forming reaction, e.g. for cholesterol assay

KYOWA HAKKO KOGYO 01.08.78-JA-093835

B04 E36 J04 R16 (06.02.80) C12q-01/26 G01n-21/31 G01n-31/22 G01n-33/52

D/S: E(DT, FR, GB).

A colorimetric reagent for assaying H_2O_2 in samples contains a peroxidase, H-donor (A) and an electron- or radical-acceptor (B), (A) and (B) reacting in presence of H_2O_2 and peroxidase to form a pigment. The new feature is than a subst. aniline of formula (I) is used as (A):



($\text{R}_1 = \text{CH}_3, \text{C}_2\text{H}_5, \text{CH}_2\text{OH}, \text{CH}_2\text{CH}_2\text{OH}, \text{CH}_2\text{CH}_2\text{NH}_2$ or COCH_3 ;

$\text{R}_2 = (\text{CH}_2)_n\text{Z}, \text{CH}_2\text{CH}_2\text{NH}_2$ or COCH_3 ;

$\text{Z} = \text{OH}$ or acetyl amino;

$n = 1$ or 2 ;

R_3 and $\text{R}_4 = \text{H}$ or CH_3 ; R_3

can also be C_2H_5 or OCH_3).

Suitable (B) are 4-aminoantipyrine, 2-thiophene carboxylic acid hydrazide, benzidine or 3-methyl-2-benzothiazolinone hydrazone. The mixt. may also include an oxidase (esp. cholesterol, choline or glucose oxidases or uricase) to generate H_2O_2 quantitatively in situ from a precursor.

The reagent is used in clinical assay of cholesterol, phospholipids, glucose and uric acid. Pigments formed have higher absorbance and stability and are less subject to interference by bilirubin or vitamin C than those from known chromogens such as phenol or dimethylaniline.

23.7.79 as 301457 (24pp1251).

(E) ISR: DT2506115; US3979262; DT2749991; DT2744812; DT2603158; US4119405; US--29498.

CNRS ★ D16 09721C/06 ★EP ---7-879
3-Keto-steroid-5-ene isomerase enzymatic markers - allow determination of low concentrations of hypophysial-hormones, plasmatic steroid etc., e.g. placental lactogenic hormone, progesterone

INST NAT SANTE RECH MED 02.08.78-FR-022867

B04 (06.02.80) C12q-01

D/S: E(BE, CH, DT, GB, IT, LU, NL, OE, SW).

Use of Δ^5 -3-keto-steroid isomerase (I) as an enzymatic marker in immunoenzymatic determination is new. The enzymatic activity, which is proportional to the concentration of the substance to be determined, is determined by measuring the absorption in UV light at 248nm.

The immunoenzymatic determination does not have the restrictions which must be exercised with radio-immunological determinations and may be used to determine substances present in very low concentrations in body fluids. The analysis may be automated using existing apparatus, e.g. that used for radio-immunological determinations. The enzyme (I) reacts with the antigen or antibody in a selective manner with high yields, and it is not necessary to insolubilise the antigen or antibody prior to determination. Typical determinations are those of hypophysial hormones, plasmatic steroids and other protein-type cpds. e.g. determination of placental lactogenic hormone (PLH) and progesterone.

31.7.79 as 400542 (42pp395).

(F) ISR: US4067774; FR2382695; NL-7802451

MINA D16 61546B/33 =EP ---7-917
Affinity chromatography media for protein binding - prepn. from matrix linked to chloro-triazinyl gp. in presence of alkali

UK SEC FOR DEFENCE 27.01.78-GB-003505 (24.01.78-GB-002878)

A97 B04 J01 (06.02.80) *WP7900-541 B01d-15/08 C07g-07 C08b-37/12

D/S: E (CH, DT, FR, GB, LU, SW)

22.1.79 as 900153

ANVR ★ D16 09734C/06 ★FR 2423-217
Administration of myxomatosis vaccine - by inhalation of aerosol or nasal instillation

AGENCE NAT VALORISATION 10.03.78-FR-007556 (05.08.76-FR-024243)

B07 C03 P32 (21.12.79) A61d-07 A61k-09 A61k-39/12

Rabbits are vaccinated against myxomatosis by administration to the respiratory passages of the vaccine described in the parent patent. The vaccine may be applied by non-specialists, it is a very rapid process, it may be given simultaneously to a large number, and it may be given to wild rabbits without the need to catch them.

The vaccine may be sprayed as an aerosol so that each millilitre of air contains 1-100 times the 50% infectious dose (ID_{50}). The culture is used as an aqueous suspension contg. 10^4 - 10^7 times the ID_{50} per ml. The vaccine may also be given by nasal instillation, each animal receiving at least 20,000 times the ID_{50} , usually using an aqueous suspension contg. 10^5 - 10^7 times the ID_{50} per ml. 10.3.78 as 007556 Add to 5.8.76 - 024243 (10pp520)

INSP ★ D16 09752C/06 ★FR 2423-541
Sorting of microorganisms, esp. bacteria - by lysis of individuals in colonies and detection of specific intracellular components

INST PASTEUR (ANVR) 18.04.78-FR-011403

B04 (21.12.79) C12k-01

A population of microorganisms, partic. bacteria, which are capable of growth on a nutrient medium, and some of which produce an intracellular component which is detectable by a probe or specific reagent, are sorted by changing the culture conditions of the colonies of microorganisms in order to effect lysis of the individuals in the colonies and transferring the intracellular component, by contact

with a distinct support on which it may be identified in situ with the probe or specific reagent, to an area which is then adjusted to the initial culture conditions of the micro-organisms which produced the intracellular component.

The intracellular component may be a specific protein liberated by a specific nucleic acid fragment, in genetic recombination methods. 18.4.78 as 011403 (16pp520)

KERJ D16 48957Y/28 =GB 1560-300
Living cells prodn. for absorbing metals from liqs. - by exposure to an electric field to modify cell membrane

KERNFORSCHUNGS JULICH 24.12.75-DT-558750

K05 M25 (06.02.80) *DT2558-750 C12n-01/36

The modification of biological cells for the take-up of metal ions from a physiological soln.. Cells which are suspended in a physiological soln. at a concn. of ≤ 20 wt. % are exposed to an electric field to modify the membrane of the cells such that the materials present within the cells and having a dia. of 2-50Å can pass from the interior of the cells into the surrounding soln.. The strength of electrical field and duration of application is limited so that the membrane of the cells can be restored by regeneration of the cells. Pref. the field strength is 1-20 kV/cm.

The cells have high absorption capacity for Li and U. 23.12.76 as 053930 (3pp964).

BEHW D16 74168Y/42 =GB 1560-344
Agent for gastro-enteritis treatment and prevention - contains Nebraska calf diarrhoea virus and/or rotavirus antibodies pref. as immunoglobulin type secretion antibodies

BEHRINGWERKE AG 14.04.76-DT-616406

B04 (06.02.80) *BE-853-603 A61k-39/15

Pharmaceutical prepn. for the prophylaxis and therapy of gastroenteritis in primates, comprises antibodies against Nebraska Calf Diarrhoea Virus (NCDV) and/or a serologically related virus or viruses, in admixture or conjunction with a suitable carrier.

Pref. the antibodies are secretory antibodies isolated from the milk or colostrum of a female mammal which has been immunised with NCDV and/or serologically related viruses. Specifically the mammal is a ruminant. Pref. the viruses-neutralising titre of the prepn. is 1:100-1:1000 per ml. Pref. unit dose comprises 0.1-10 g of antibody protein. 14.4.77 as 015618 (5pp924).

RHON D16 19910A/11 =GB 1560-448
Streptomyces caligosus NRRL 8195 - used for prodn. of proteolytic enzyme (24199 RP) which depilates animal skins (NL 28.2.78)

RHONE-POULENC INDUSTRIES 24.08.76-FR-025631

(D18) (06.02.80) *DT2737-711 C14c-01/06 + C12n-09/50

Novel enzyme 24, 199 RP is prepd. by aerobic culture of streptomyces caligosus DS 14, 486 (NRRL 8195) in a medium contg. assimilable carbon and nitrogen and mineral elements. It exerts proteolytic activity on many proteinaceous substrates such as casein, haemoglobin, fibrin (lysis of clots) or milk (coagulation).

The enzyme is partic. useful in the tanning industry for the depilation of animal skins to prepare leather. Its use reduces pollution and allows the hair removed to be recovered. The skin can be kept in tact and the leather produced has high quality. 23.8.77 as 035314 (18pp945).

KONN D16 36713Y/21 =GB 1560-478
Compactable yeast mass, esp. for baking - contains a water absorbing agent to aid flow and dispersibility (NL 12.3.77)

GIST-BROCADES NV 10.11.75-GB-046397

(D11) (06.02.80) *DT2651-349 + A23b-07/02 C12n-01/14

Yeast compsn. comprises 75-99.5% compressed yeast (I) having a dry matter content of 28-55%, and 0.5-25% compatible solid highly water-absorbing agent (II). The compsn. is in pulverous or fine granular form.

(I) is pref. baker's yeast. (II) is SiO₂, Al silicate or water-absorbing modified starch or cellulose.

The compsn. has higher consistency, may be easily handled, is easily dispersed in water or is smoothly distributed in flour when preparing a dough. 1.10.76 (3pp).

JOHO D16 06123Y/04 =GB 1560-481
Complexes of osmium tetroxide with heterocyclic contg. tert. nitrogen - are safest to handle and used esp. to prepare biological specimens for electron microscope examination

JOHNSON MATTHEY LTD 09.07.75-GB-028877

E12 J04 + R16 (E17) (06.02.80) *DT2630-823 C07d-217 C07d-221/02 C07d-237/30 G01n-01/30

A complex (I) of osmium tetroxide and one of an aromatic tert. amine, cycloaliphatic tert. amine, and a cpd. having a heterocyclic ring contg. 1 or 2 tert. N atoms, is novel.

Also claimed are (1) a method of fixing or staining cells in the prepn. of specimens for electron microscopic examination, in which the cells are treated with (I); (2) the cis-hydroxylation of olefins using (I) as catalyst; and (3) the formation of Os blacks in electron microscopic cytochemistry, in which there is used (I) as replacement for osmium tetroxide.

(I) are more convenient sources of osmium tetroxide than the use of osmium tetroxide itself. 29.6.76 (6pp393).

MEDI- D16 02388Y/02 =GB 1560-492
Agar and silica gel nutrient media cultivation flask - has inclined partition with cross ribs and top lip forming tray for nutrient medium when tipped NL221276)

MEDICAL PLAS PTY LT (GLEE/) 29.08.75-AU-002972 (20.06.75-AU-002060)

+ Q32 Q34 (06.02.80) *DT2627-245 + B65d-01/04 C01m-01/24

Culture bottle has a base on which it can stand upright, and an internal partition extending from the base towards a top opening to form two compartments to hold liquid. When the bottle is laid onto its flat side the uppermost compartment can still hold liquid which can be transferred to the lower compartment by tipping the bottle.

The bottle sides are pref. vertical in the first position while the partition is inclined to the vertical and horizontal in the two positions, and has a turned back end lip to retain liquid. The partition pref. ends below the opening so that there is access to both compartments. 16.6.76 as 024832 (5pp1358).

FISH- D16 54082Y/31 =GB 1560-570
Extracting membrane or surface antigens - esp. from Neisseria gonorrhoeae, useful as vaccines and in diagnoses

FISHER SCIENTIFIC C (AMCY) 29.01.76-US-653673 (29.01.76-US-653672)

B04 R16 (06.02.80) *BE-850-847 A61k-39/09 G01n-33/54

A membrane associated and/or surface antigen of Neisseria gonorrhoeae is obtd. by (a) growing Neisseria gonorrhoeae whole cells in a medium; (b) sepg. the cells from the medium; and (c) recovering Neisseria gonorrhoeae antigen which consists of a membrane associated and/or surface antigen. Steps (a), (b) and (c) are conducted while maintaining the structural integrity of the Neisseria gonorrhoeae cells with only minimal leakage of the cytoplasmic components.

A kit for carrying out an agglutination test for detection of infection with Neisseria gonorrhoeae comprises ≥ 1 test card having a test spot, adapted to receive the test serum and antigen reagent; a container of an antigen reagent; a container of reactive control serum; and a container of non-reactive control serum. 23.12.76 as 053987 (9pp982).

KYOW D16 13245Y/08 =GB 1560-691
Microporous enzyme membrane for immobilising enzymes - used as chemical or electrochemical transducer in enzyme electrodes

KYOWA HAKKO KOGYO K 01.08.75-JA-093180

A89 J04 R16 (J03) (06.02.80) *DT2634-562 + C12n-11/02

Enzyme membrane useful as an (electro)chemical transducer comprises enzyme immobilised in a permeable microporous organic high polymer membrane (I) comprising polypropylene or acrylonitrile-methyl acrylate copolymer and having pore dia. 10-10000 (50-5000)Å.

(I) pref. has pores distributed over its entire surface and/or has an open-cell pore structure. Enzyme pref. comprises a glucose oxidase, aminoacid, oxidase, alcohol oxidase, uricase and cholesterol oxidase, aminoacid decarboxylase, urease, glutaminase, β -glucosidase, penicillinase, choline esterase, cholesterol esterase, catalase, invertase, asparaginase or mutarotase.

Enzymatic activity is combined with an electrochemical procedure for analysis. 30.7.76 as 031957 (11pp936).

HAYB ★ D16 09888C/06 ★ J5 4118-297
Determn. of alpha-amylase activity - by reacting gamma-cyclodextrin, sample contg. alpha-amylase and beta-amylase, and measuring reaction prod.

HAYASHIBARA BIOCHEM 04.03.78-JA-024620

A96 B04 R16 (A11) (13.09.79) G01n-31/22 G01n-33/16

Determining α -amylase comprises reacting (a) α -cyclodextrin as the substrate, (b) sample contg. α -amylase and (c) β -amylase and then measuring the reaction prod.

The sample includes body fluid, excreta, etc. of man, animals, etc. and the substrate is usually used in a concn. of 0.01-5 wt.%. the amt. of activity of (c) is 10 times as much as that of α -amylase. (c) are of soy bean, wheat, microorganisms of Streptomyces or Bacillus. (c) contains a slight amt. of α -amylase or has the same of near optimal pH to that of α -amylase in a sample. The reaction is carried out at a pH 4-9 at 20-50°C.

The activity of α -amylase is easily determined since the hydrolysis of (a) is increased in the presence of (c). 4.3.78 as 024620(3pp80).

SUNC ★ D16 10292C/06 ★ J5 4163-575
Tri:deca-peptide - useful for distinguishing different type of yeast cells

SUN CHEMICAL CORP 14.06.78-JA-072430

B04 (26.12.79) A61k-37/02 C07c-103/52

Novel peptide comprises 13 amino acids comprising L-tryptophane, L-histidine, L-tryptophane, L-leucine, L-glutamine, L-leucine, L-lysine, L-proline, L-glycine, L-glutamine, L-proline, L-norleucine and L-tyrosine arranged in that order.

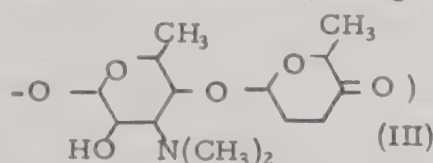
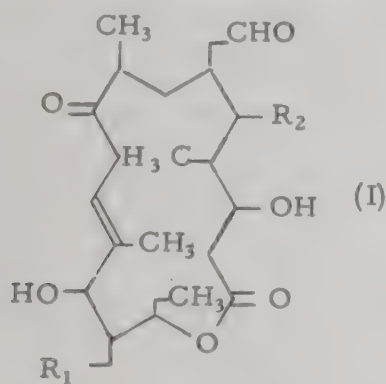
The peptide has novel physiological activity which may be useful in the judgement of a type cell and α type cell in yeast. 14.6.78 as 072430(6pp69).

SAOC ★ D16 10295C/06 ★ J5 4163-588
16-Membered cyclic macrolide derivs. - obtd. by treating appropriate macrolide antibiotics in culture liquor under inert gas atmos.

SANRAKU OCEAN 12.06.78-JA-070604

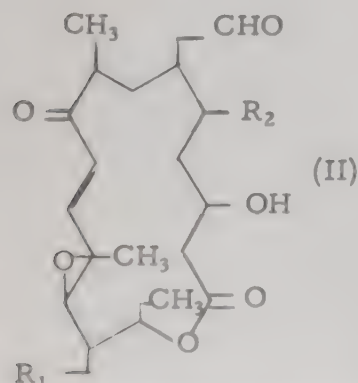
B03 (26.12.79) A61k-31/71 C07h-17/08

16-Membered cyclic macrolide derivs. of formula (I) are new. In (I) when R_1 is mycinose; R_2 is mycarocyl-angolosa-



samine; when R_1 is H, R_2 is mycaminose, 4'-hydroxy mycaminose or of formula (III)

(I) is nontoxic acid adduct are prepd. by chemically treating 16-membered cyclic macrolide antibiotics of formula (II) in culture liquor of microves of ray fungus and bacteria its fungi body or treated substance in aq. medium at pH 4-10, in atmos. subs. of N_2 , Ar or He at 15-45°C on stationary or shaken culture. 12.6.78 as 070604(10pp69).



OSAK- ★ D16 10358C/06 ★ J5 4163-850
Protein prodn. from poly:cellular algae - by treatment with solvent, acid or alkali and opt. mechanical grinding

OSAKA SEIKEN YG 13.06.78-JA-071650

(D13) (26.12.79) A23j-01

Method comprises (1) treating green algae (II) such as Hydrotectyon reticulatum, Spirogyra setiformis or seed plant (III) such as Egeria, Elodea nuttallii, with a suitable reagent such as alkali, acid, with or without grinding me-

chanically in ball mill or other machine, for extraction of amino acids (I).

(II) and (III) contain a large amt. of (I), such as leucine, isoleucine, lysine, phenylalanine, tyrosine, methionine, etc., which are extracted by the present method.

In an example (II) was soaked in 50-70 wt.% of ethanol at 40°C for a night and filtered with a fine screen. Thus washed (II) was then soaked in 0.05-0.2 wt.% of NaOH soln. for a night with stirring and then filtered with a cloth. The pH of the filtrate was adjusted to 4.0 with addition of HCl and then crude (I) was obtd. by centrifugation of the liquid. The addition of 0.05-0.2 wt.% NaOH soln. and neutralisation with HCl were repeated several times and the solid was washed with acetic acid soln. of pH 4.0 one or two times, to obtain (I). 13.6.78 as 071650(3pp42).

FURU/ ★ D16 10361C/06 ★ J5 4163-881
Microorganism mixt. prodn. - by mixing rice bran with nitrate-contg. material adding sawdust and chlorella, incubating and drying

FURUSAWAE 13.06.78-JA-071336

C03 (C04 D13 D15) (26.12.79) C12b-01 C12k-01

Method, comprises (1) mixing rice bran with a small amt. of nitrate-type nitrogen, (2) mixing with saw dust in a ratio 3-1, (3) adding high-temp.-resistant chlorella to the mixt. in the ratio 1:8, (4) incubating the mixt. at 40-50°C for 1-2 days with feeding of O, (5) stand at room temp., after logarithmic breeding of the microorganisms, and (6) drying the mixt. at about 50°C.

The microorganism mixt. is used as additive for anti-freeze agent, feed domestic animals, organic fertiliser, deodorant for ammonia, and in sewage treatment. 13.6.78 as 071336(2pp41).

MITU ★ D16 10362C/06 ★ J5 4163-883
Introduction of mitochondria gene into yeast - involves treatment of Saccharomyces microorganism yeast, mixing with mitochondria and treatment with polyethylene glycol

MITSUBISHI CHEM IND KK 13.06.78-JA-071044

(26.12.79) C12c-11/18

A method for improvement of yeast (I) comprises (1) protoplast- or spheroplast-treatment of (I) produced by a microorganism (II) belonging to Saccharomyces, (2) mixing of mitochondria (III) with the treated (I), (3) treatment of the mixt. with polyethylene glycol (IV) and then (4) regeneration of (I). By this process, the gene of mitochondria can be introduced into (I).

Examples of (II) are Saccharomyces cerevisiae, and Saccheelipsoideus. The protoplast- and spheroplast-treatments are carried out by treating (I) with cell-wall degrading enzymes until degree of protoplast reaches 60-100%. As (III), those produced from microorganisms belonging to Candida and Shizosaccharomyces are used, after homogenization of cells and collection of ppt. by centrifugation.

In step (3), the mixt. of (I) and (III) is soaked in 20-40 wt.% aq. (IV)-soln. for 1-120mins. The ave. mol. wt. of (IV) should be 3000-9000, e.g. (4000-6000). In step (4), (I) is regenerated by incubation in a culture medium contg. sorbitol. 13.6.78 as 071044(4pp42).

CHOK/ ★ D16 10363C/06 ★ J5 4163-898
Culturing film-forming yeast on rice liquor surface - involves adjusting the compsn. of rice liquor before introducing yeast to produce sherry-like substance

CHOKAN K 14.06.78-JA-070999

(26.12.79) C12g-03/02

Method is used for formation of film on surface of rice liquor (I) by cultivating a film-forming yeast (II). The process comprises (1) adjusting the compsn. of (I) to that contg. < 1% sugar, 10-14.5% alcohol, > 3 gamma/ml. of biotin and < 300 gamma/ml. of pantothenic acid and pH to 3.2-3.6 and (2) inoculating (II) in (I). A sherry-like liquor is produced by this method.

Examples of (II) are Saccharomyces bayanus, Sacch. oviformis, Sacch. fermentati and Torulopsis colliculosa. (I) usually contains 1.0-4.0% sugar, < 2 gamma/ml. of biotin, < 200 gamma/ml. of pantothenic acid and 10-14% of alcohol, and pH of (I) is usually 4.2-4.5. When these components in (I) are adjusted to the above-mentioned values, (II) begins to breed well in the liquid, and to form a film of the surface and produce a sherry-like liquor. 14.6.78 as 070999(2pp42).

AMCY D16 31285T/20 = J8 0001-025
Animal feed additive contg an antibiotic av 290 syntan complex - obtained by adding syntan to a culture liquor of streptomyces canid
AMERICAN CYANAMID CO 03.11.70-US-086601
A96 B04 C03 (A21 A91) (11.01.80) *DT2154-633 A23k-01/17
+A61k-35/74 C12p-01/06 C12r-01/51

Feed additive for increasing the rate of growth consists of a synthetic tanning agent (Syntan) complex of the antibiotic AV 290 contd. in the fermentation liquor from the culture of Streptomyces canidus NRRL 3218. The syntan is obtd. by the condensation of naphthalene sulphonic acid or sulphonated phenol with formaldehyde. Addition of the syntan to the (un)-filtered culture fluid results in pptn. of the complex, which is washed, dried and mixed with a carrier for incorporation in a dry animal or poultry feed.

The complex thus prepd has about 30% of the activity of the pure antibiotic. Tests show an 8% increase in grow-th in 28 days over controls. 4.11.71 as 087969 (clg. 3.11.70-US-086601) A23k-1/17; A61k-35/74; C12p-1/06; C12r-1/51 (11.1.80) AMERICAN CYANAMID CO (7pp) (J4 7009711)

HAYA/★ D16 10481C/06 ★J8 0001-035
Alcoholic beverage, e.g. Japanese sake, in solid form - obtd. by adding di:benzal sorbitol and hydroxypropyl cellulose
HAYAKAWA N 14.01.72-JA-006507
A97 (11.01.80) A23g-03 C12g-03/08

To Japanese sake or other alcoholic beverage is added di-benzal sorbitol and the mixt. is heated to dissolve it. Then 2-5 times the volume of hydroxypropyl cellulose is dissolved in the prod., followed by cooling. Through this process a clear solid alcoholic beverage is obtd. 14.1.72 as 006507 C12g-3/08, A23g-3/00 (11.1.80) HAYAKAWA N (2pp22)(J4 8075796)

ICIL D16 40494T/25 = J8 0001-038
Protein prodn - by fermentation of pseudomonas methylotropa or rosea, microcycylus polymorphum or hyphomicrobium variable with meth

IMPERIAL CHEM INDS LTD 19.08.71-GB-038938 (09.12.70-GB-058466)
B04 C03 (D13) (11.01.80) *BE-776-317 A23k-01 + C12n-01/32
The title microorganisms are cultivated aerobically on media contg. MeOH to give protein compsns. and other fermentation products including amino acids. The microorganisms NCIB 10508, 10517 and 10592-10612 are new. Thus; NCIB 10508 incubated at 37°C for 48 hrs. using a media contg. 5% MeOH gave dried cells contg. 65% crude protein (NX 6125). 9.12.71 as 099794 (clg. 9.12.70; 19.8.71; 26.11.71-GB-058466; 038938; 058466) C12n-1/32; A23k-1/00 (11.1.80) IMPERIAL CHEMICAL INDS. LTD. (14pp)(J4 7014389)

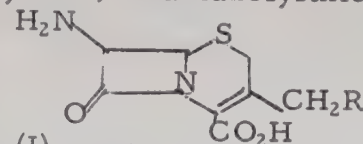
AJIN D16 61502U/41 = J8 0001-040
L-lysine prodn - by fermentation of brevibacterium and coryne bacterium strains

AJINOMOTO KK 30.11.72-JA-120247
B05 E16 (11.01.80) *BE-798-890 + C12p-13/08 C12r-01/13
In the title process the microorganism yielding lysine is not inhibited by lysine or its analogues (esp. by S-(2-aminoethyl)-L-cysteine) but requires serine, proline, adanine, micotenamide, pantothenic acid, thiamine, guanine, hypoxanthine or Vit B₁₂ for growth.
In an example, Brevibacterium lactofermentum Y 108 (ATCC 21798) cultivated in a medium contg. glucose, (NH₄)₂SO₄, MgSO₄, Fe⁺⁺ and Mn⁺⁺ ions, thiamine and biotin gave L-lysine (I) at rates of 4.1g/dl. 30.11.72 as 120247 C12p-13/08, C12r-1/13 (11.1.80) AJINOMOTO CO. INC. (5pp)(J4 9080289)

FUJI D16 21812V/12 = J8 0001-271
3-Substd methyl 7 amino 3 cephem 4 carboxylic acids - by treating cephalo-sporin fermentation soln with azolythiol deriv and hydrolyzing

FUJISAWA PHARM KK 24.04.72-JA-041810
B02 (12.01.80) *J49000-295 + C07d-501/04
A fermentation soln. contg. cephalosporin, C and N was treated with (thio)carbamyloylating agent, then treated with thiazolythiol, oxadiazolythiol, thiadiazolythio, or tetra-zolythiol, silylated, iminohalogenated, iminoetherated,

and hydrolyzed to give the title cpds. (I) (where R = thiazolythio, oxadiazolythio, thiadiazolythio, or tetrazolythio)



(I) In an example 500 l. filtrate of a culture soln. of Cephalosporium IMI was stirred for 80 hr. at 30° in starch and corn steep liquor with 7.5 l. Ph isocyanate then heated with 0.42 kg 5-methyl-1,3,4-thiadiazol-2-thiol, refluxed with 4.3 l. chlorotrimethylsilane and 3.78 l. dimethylaniline, stirred with 1.63 kg PCl₅, then with MeOH and hydrolysed by adjusting to pH 3.5 to give 0.47 kg (I) (R = 5-methyl-1,3,4-thiadiazol-2-ylthio). 24.4.72 as 041810 C07d-501/04 (12.1.80) FUJISAWA PHARM CO (8pp)(J4 9000295)

PIME/★ D16 10561C/06 ★SU-662-579
Microorganism cultivation control in live vaccine production - by regulating redox potential according to living organism concentration increment and concentration ratio
PIMENOV B I 04.02.77-SU-452162
(25.05.79) C12b-01/08

Earlier microorganism cultivation control system measured the dissolved oxygen and regulated the pH of the medium, mixer r.p.m., nutrient medium feed rates and aeration. Now, for greater accuracy, these factors and also the redox potential are regulated with regard to any increment of the living organism concentration and the ratio of this concentration to the biomass concentration. The method is useful esp. in producing live vaccines, and also in e.g. the foodstuffs ind.

Pimenov, B.I., Artyushin, S.K., Tarakanov, Yu.I. Bul. 18/15.5.79. 4.2.77. as 452162 (3pp840)

KIAU=★ D16 10562C/06 ★SU-662-580
Microorganism cultivation control in nutrient yeast prodn. - by correcting food supply to equipment according to ratio of change in substrate utilisation factor to change in feed rate
KIEV AUTOMATION INS 19.12.77-SU-557369
(25.05.79) C12b-01/08

Known microorganism cultivation control in a system with several parallel-operation equipments varies the supply of the food substances. In order to increase the end-product yield, the food supply to each equipment is corrected, according to the ratio of the change of a substrate utilisation factor to the change in the food supply rate for each equipment.

The proposed method is useful in controlled continuous cultivation e.g., of nutrient yeast in the microbiological industry.

Boboshko, V.I., Kozanevich, Z.Ya., Fedorov, A.S. et al. Bul. 18/15.5.79. 19.12.77. as 557369 (3pp840)

HYDR=★ D16 10628C/06 ★SU-663-712
Nutrient medium for cultivation of microorganisms, e.g. fodder yeasts - contg. mono:saccharide, organic acids, inorganic cpds. and yeast autolysate for increased yields

HYDROLYSIS IND ASSO 22.12.77-SU-558437
C03 (D13) (28.05.79) C12b-03/12

Nutrient medium for cultivation of microorganisms, esp. fodder yeasts, contg. a monosaccharide, acetic acid, ammonia, H₃PO₄, KCl and MgSO₄ is improved by addn. of formic acid, succinic acid and a yeast autolysate, whereby the yield of the biomass is increased, and the process is accelerated.

The compsn. contains (in vol. %) a monosaccharide 0.5-1.0, CH₃COOH 0.2-0.3, HCOOH 0.1-0.2, C₄H₆O₄ 0.2-0.3, H₃PO₄ 0.02-0.04, KCl 0.02-0.04, MgSO₄ 0.01-0.02, NH₃ 0.25-0.35, yeast autolysate 0.2-0.3; the balance is water.

The above additives facilitate assimilation of various organic substances, e.g. pentose, present in industrial liquids used as nutrient media for yeasts. In examples, the yield of Candida Scottii was 4.5g/l. over 4.5h. (control 4.2 g/l over 5h); the yield of Trichosporan cuteneum was 5.8 g/l. over 5h. (control 5.0 g/l. over 515 h.). Stakhorskaya, L.K., Giterman, V.F., Maksimova, L.S. et al. Bul. 19/25.5.79. 22.12.77. as 558437 (3pp70)

ASMI= ★ D16 10629C/06 ★SU-663-713

Continuous cultivation of yeasts *Saccharomyces cerevisiae* - in two stages with partial utilisation of metabolism products in second stage to increase yield and reduce contamination of effluents

AS USSR MICROB PHYS 11.01.77-SU-445059

(28.05.79) C12c-11/18

Yeasts are cultivated continuously, by a two-stage process, in a nutrient medium contg. sources of carbon and nitrogen, mineral salts and biostimulators, with aeration; using in the first stage glucose as a carbon source, and in the second stage the culture liquid from the first stage.

This method is improved by using in both stages yeasts *Saccharomyces cerevisiae*, and directing the first stage in such a manner that the flow rate is 0.05-0.4 h⁻¹ and its ratio to the second stage flow rate is 4:1 to 7:1. In this way the biomass yield is increased and the concn. of the metabolism products in the aq. effluents is lowered (as they are partly utilised in the second stage).

Rytkin, S.S., Shkidchenko, A.N., Orlova, V.I. Bul. 19/25.5.79. 11.1.77. as 445059 (2pp70)

PRVA= ★ D16 10630C/06 ★SU-663-714

Microbiological prepn. - by cultivating *Clostridium perfringens* in casein pancreatin based medium for high activity

PERM VACCINE SERUM 05.01.78-SU-574683

B04 (30.05.79) C12d-07

Anatoxin is produced by cultivating *Clostridium perfringens* in a nutrient medium; sepg. the biomass; sterilising the filtrate; precipitating anatoxin; eluting it; purifying; rendering harmless by treatment with formalin in presence of L-lysine and adsorption on Al(OH)₃.

The immunogenic activity of anatoxin is improved by growing *Clostridium perfringens* in a casein-pancreatin medium; performing the precipitation of anatoxin with NaCl and ZnCl₂; and using 0.075-0.125% formalin soln. in presence of 0.0125-0.005 M soln. of L-lysine, at pH adjusted to 7.2-7.3, and 37°C for 20-25 days.

The activity of anatoxin produced by the above method exceeds 2-3 times the activity of the known preparation. Efimova, N.P., Nikolaeva, A.M. Bul. 19/25.5.79. 5.1.78. as 574683 (2pp70)

MEDI= ★ D16 10631C/06 ★SU-663-715

Proteolytic enzyme hygrolytin for use in medicine - produced by cultivating *Actinomyces hygroscopicus* in nutrient medium

MEDICAL ENZYME ANTI 02.08.76-SU-389331

B04 (30.05.79) C12d-09/14 C12d-13/10

Proteolytic enzyme hygrolytin, for use in medicine, is produced by cultivating e.g. *Actinomyces hygroscopicus* in a nutrient medium; sepg. the mycelium and calcium ions; effecting adsorption of the simultaneously produced enzyme hygrolycin on a carboxylic cationite; salting out the hygrolytin with (NH₄)₂SO₄; reprecipitating the hygrolytin; treating it with activated carbon and drying.

This method is improved by carrying out the cultivation of *Actinomyces hygroscopicus* at 31-33°C for 72-108h; performing the salting out of the enzyme (pref. in presence of 0.5-1 vol. % of CaCl₂) after the sepn. of the mycelium; removing the impurities with the equivalent quantity of cellulose and NH₄Al(SO₄)₂ at pH 4.8-5.0; and removing the hygrolycin immediately before the lyophilic drying of the preparation.

By this method the biosynthesis in this system is directed in such a manner that the process is accelerated and the yield and quality of the product is improved. The yield of hygrolytin is 30% w.r.t. the culture liquid; the activity of the preparation is 3-5 units/ml.

Momot, N.N., Vasileva, E.V., Dolatovskaya, O.G. et al Bul. 19/25.5.79. 2.8.76. as 389331 (2pp70)

ROAN= ★ D16 10632C/06 ★SU-663-716

Strain vibrio eltor 9183 - producing melanin pigment used as anti-cancer agent

ROST ANTI-PLAGUE 25.01.78-SU-573626

B04 (28.05.79) C12d-13

Strain *Vibrio eltor* 9183 produces in relatively large quantities pigment melanin, which can be used as an anti-cancer agent.

The strain was found in excrements of a cholera-infected person.

The vibrio eltor 9183 appears in the form of mobile cells possessing one flagellum polarly situated. The cell size is 1.5-2.0 x 0.2-0.4 mm. Spores and capsules are not formed. The strain is gram-negative. The strain can be cultivated in Marten's alkaline agar with tyrosine. Optimal temp. is 36-37°C. The strain is agglutinated by cholera-diagnostic vaccines '0'.

Galtseva, G.V., Sayamov, R.M., Linnikova, L.V. et al Bul. 19/25.5.79. 25.1.78. as 573626 (2pp70)

FOOD= ★ D16 10634C/06 ★SU-663-718

Changing colour and flavour of wine - by passing wine through layer of oak or beach shavings activated by successive treatment with alkali and acid

FOOD IND CORR COLL 27.01.78-SU-574383

(30.05.79) C12g-01/02

Colour of wine can be changed e.g., from rosy to pale straw, and flavour improved by passing the wine through a layer of wood shavings (oak or beach) having a width of 5-40 mm. and a thickness of 0.5-3.0 mm.

The wood shavings are preliminarily activated by a treatment with 0.5% soln. of calcined soda at 85-86°C, repeated 3-4 times over 24-25h. This is followed by rinsing with hot water. Then the shavings are treated with a 2% H₂SO₄ soln. for 24-25h; the treatment is followed by washing with cold water.

The above treatment results in reduction of the optical density of wine (to 0.14 at 434 mμ) and of the phenols content (to 210 mg/l). The type and aroma of the wine is unchanged. The taste is improved.

Avakyants, S.P., Belousova, I.D., Sarishvili, N.G. et al. Bul. 19/25.5.79. 27.1.78. as 574383 (2pp70)

KTUB= ★ D16 10636C/06 ★SU-663-721

Reagent for exposure of cells or tissues structure - contg. fluorescent dye mixt. in aq. sodium chloride soln., useful in medical diagnosis

KAZA TUBERCULOSIS 15.08.77-SU-523468

B04 (25.05.79) C12k-01

Reagent for exposure of cells or tissue structures, contg. auromine 00, rhodamine C and water is improved by addition of primuline, acridine orange and NaCl, whereby cells of macroorganisms and their reactions with microorganisms are visualised.

The compsn. contains (in g/l.) auromine 00 0.15-0.20, rhodamine C 0.015-0.02, primuline 0.025-0.05, acridine orange 0.005-0.01, and NaCl 4.0-7.0. This method can be used for determin. of i.a. tuberculosis.

Autenshlyus, A.I., Isengeldina, B.B., and Kazenas, E.L. Bul. 19/25.5.79. 15.8.77 as 523468 (2pp70)

MOFO= ★ D16 10637C/06 ★SU-663-722

High-quality sherry prodn. - using specified alcohol-resistant *Saccharomyces oviformis* yeast strain *cheresiensis* b41

MOSC FOOD IND TECHN 23.12.77-SU-574674

(28.05.79) C12g-01/02 C12k-01/02

Yeast strain *Saccharomyces oviformis* var *cheresiensis* B41 is used for the prodn. of sherry. It has good resistance to attack by alcohol and high biochemical activity. It produces high quality sherry contg. optimal quantities of aldehydes, acetals and volatile ethers. The product has very good organoleptic properties; it has honey scent and nutty taste.

Kishkovskii, Z.N., Sakharova, T.A. and Palamarchuk, L.F. Bul. 19/25.5.79. 23.12.77. as 574674 (2pp70)

BIOL= ★ D16 10638C/06 ★SU-663-723

Nutrient medium for cultivation of photoautotrophic micro-algae - contains potassium oxide-magnesium oxide, ferric chloride and water, with addition of specified fertiliser for increased yields

BIOLOG ENG RES 02.11.76-SU-416804

(28.05.79) C12k-01/06

Known nutrient medium for cultivation of photoautotrophic microalgae, esp. *Chlorella*, contains potassium oxide-magnesium oxide, FeCl₃ and water. This medium is improved by addition of nitroammophoska, whereby biomass loss is reduced, and the cost is lowered. The compsn. contains (in g/l) potassium oxide-magnesium oxide 0.4-0.9, FeCl₃ 0.017-0.087, nitroammophoska 1.0-3.0, and water to 1l.

Albitskaya, O.N., Andreeva, R.A., and Goronkova, O.N. Bul. 19/25.5.79. 2.11.76. as 416804 (2pp70)

JENP ★ D16 10639C/06 ★SU-663-724
Antibiotic effective against viruses and tumours - is produced by cultivating *Streptomyces violaceus* strain on nutrient medium with aeration

JENAPHARM VEB 06.10.72-SU-835325

B04 (28.05.79) C12k-09/14

Antibiotics can be produced by cultivating *Streptomyces violaceus* in a liquid nutrient medium contg. sources of carbon and nitrogen, and mineral salts, with aeration. The product is then isolated from the culture liquid, purified and sepd. chromatographically. A new antibiotic, named 'biolamycin', can be obtained by cultivating strain *Streptomyces violaceus* 1 MET JA 6844 at 25-37°C for 2-6 days. 'Biolamycin' is effective against viruses and tumors.

Fleck, W., Strauss, D., Cox, W. et al. Bul. 19/25.5.79. 6.10.72. as 835325 (6pp70)

CRCH D16 81408Y/46 #SU-664-531
Bacillus thuringiensis insecticide prodn. - without premature cell lysis by maintaining pH of 6.3 to 7 and/or applying anaerobic conditions during cultivation

CIA DI RICERCHE CHIM SA 07.05.76-DT-620317

C03 (25.05.79) *DT2620-317 A01n-15

Bacterial insecticide is produced by the submerged cultivation of *Bacillus thuringiensis* and carrying out a part of the cultivation process under anaerobic conditions, and purifying the preparation by dialysis, whereby a premature lysis of the bacilli is prevented.

The aeration of the nutrient medium is stopped 12h. after the beginning of the cultivation, and the anaerobic conditions are maintained for 4-6 h. The cultivation is carried out at pH 6.3-7 until spores are formed. The water-soluble exotoxins are removed by dialysis through a semipermeable membrane, e.g. a colloidal membrane. The product freed from exotoxins is dried by mixing the spores and crystals with bentonite and heating at 40-45°C or spray-drying.

The preparation has high activity, and large concn. of spores and endotoxin; β -exotoxin is absent.

Branimir, Z., Franio, K. Bul. 19/25.5.79. 20.5.76. as 362353 (2pp70)

ASKO- ★ D16 C/06 ★SW 7905-078
Composting device for organic household waste - has interior subdivisions to ensure thorough ventilation

ASKO-UPO OY (AGAA) 12.06.78-SF-001871

(21.01.80) C05f-03/06

Composting device, opt. used in conjunction with dry biological waste facility, for converting organic household waste into a soil-improving agent, comprises a container shell, an input for waste and steps onto which the waste is fed.

The steps comprise a number of pref. outwardly and downwardly-tilted platforms with ventilation slits, between them. The interior is divided into ≥ 2 similar parts which are fed in turn via a distribution gate. 11.6.79 as 005078 (-pp1429)

BOEF D16 10543A/06 =US 4186-052
Streptococcus faecalis ATCC 8043 NADH peroxidase - for enzymatic determination of hydrogen peroxide NL 31.1.78)

BOEHRINGER MANNHEIM GMBH 27.07.76-DT-633728

B04 R16 (29.01.80) *DT2633-728 C07g-07/02 C12d-13/10 G01n-31/14

Prodn. of peroxidase for NADH comprises liberating the enzyme from *Streptomyces faecalis* ATCC 8043 by digestion or by treatment with surfactant and isolating the peroxidase from the enzyme soln. obtd. The peroxidase has a Michaelis constant K_m to H_2O_2 of 2.8×10^{-5} M and to NADH of 1.7×10^{-5} M (measured at 25°C. in 0.2 M tris buffer of pH 6.0, contg. 0.1 M K acetate).

Pref. surfactant treatment is utilised, and carried out at 25-60 (45-55)°C. and pH 4.5-6.0.

Prod. is used for H_2O_2 determ. 29.6.77 as 811422

(6pp)

GIVA D16 63478V/36 =US 4186-053
1,3-Phenylenediamine/glutaraldehyde condensation product - useful as substrate for immobilizing proteins, esp. enzymes

GIVAUDAN L & CIE CORP 22.02.73-CH-002603

A96 B04 (A21) (29.01.80) *DT2407-840 C07g-07/02

An insolubilised enzyme comprises an enzyme bonded to the condensn. product (I) of 1,3-phenylene diamine and glutaraldehyde. The resulting enzyme is insol. in water and water-immiscible solvents and is in the form of spherical, homogeneous particles capable of good filtration.

(I) is esp. suitable for fixing proteins of the most diverse type and origin. It can be used immediately and has high activity. (I) is very inexpensive. 3.8.77 as 821662 (+7.2.74; 24.4.75; 19.8.75-US-440438; 571187; 605965) (4pp393)

RESE ★ D16 11083C/06 ★US 4186-182
Serological test for *Neisseria gonorrhoeae* antibodies - by diluting serum sample, heating and incubating with antigen and detecting conjugate

RESEARCH CORP 07.09.77-US-831128 (31.08.72-US-285128)

B04 R16 (29.01.80) A61k-43 G01n-33/16

Neisseria gonorrhoeae antibodies are detected in human serum by diluting the serum 2-1000 times with physiological saline, heating at 56-65°C. for 15 to 30 mins., incubating with a heat labile, species specific antigen to form a detectable antigen-antibody conjugate.

Antigen is obtd. from a growth culture of *Neisseria gonorrhoeae* and is a protein with the following characteristics: (1) partially inactivated by heating at 56°C. for 30 minutes and completely inactivated by boiling for one hour; (2) stable in aq. medium at pH 3 to 11; (3) stable when incubated with deoxynucleic acidase, ribonucleic acidase, dextranase, neuraminidase or lysozyme; (4) inactivated by trypsin; (5) isoelectric point of 4 ± 0.2 ; (6) molecular wt. of active subunits of 37,000-40,000 as determined by SDS-polyacrylamide gel; (6) contains 1-10% carbohydrate and 2-3% organic phosphorus and (7) soluble in aqueous surfactant soln. but insoluble in methanol, chloroform and acetone.

Method is quicker than direct cultivation of the micro-organism which does not keep well anyway. If the individual is not presently infected, a previous infection is also indicated. Those giving positive indication, may be further investigated by bacteriological method. 7.9.77 as 831128 (+6.8.73; 28.2.75; 7.4.76-US-385863; 554061; 674628) (9pp916)

MILE D16 53797V/30 =US 4186-251
Colorimetric determination of total and free cholesterol - in liquid samples using cholesterol-oxydase and cholesterol-ester-hydrolase and a redox indicator

MILES LABORATORIES INC 01.03.73-US-337189

B04 P31 R16 (29.01.80) *BE-811-728 G01n-31/14

Test device for determining total cholesterol in a biological fluid sample comprises a test compsn. including a chemical system having cholesterol ester hydrolase activity, a chemical system having cholesterol oxidase activity, and means for determining ≥ 1 of the reaction prods. from the cholesterol oxidase system; and a carrier for the compsn., the carrier pref. being absorbent relative to the fluid sample.

Used for diagnosing hepatocellular diseases, thyroid metabolism disorders, biliary obstruction, atherosclerosis and vascular troubles. 1.3.73 as 337189 (8pp997)

VYSO- D16 55268A/31 #US 4186-252
Vitamin/B1 prodn. in alcoholic fermentation - using *Saccharomyces*, esp. *cerevisiae*, yeast mutants

VYSOKA SKOLA CHEM T 24.01.77-DT-702700 (02.05.77-US-792704)

B03 E13 (29.01.80) *DT2702-700 C12d-05/02

Prepn. of vitamin B₁ comprises fermenting a mutant of yeast which synthesises and excretes vitamin B₁ selected from *Saccharomyces cerevisiae* Hansen DBM 159 and *S. uvarum* Beijerinck DBM 189 in a growth medium.

Pref. the growth medium comprises a C source (molasses), a N source) mixt. of ammonium phosphate and ammonium sulphate), a P source (ammonium phosphate), trace elements and organic growth factors.

Method may be carried out either independently or during the prodn. of ethanol fermented beverages on fermented foodstuffs. 2.5.77 as 792704 (3pp393)

See Also

D13 J8 0001028

D25 NL 162690

D17: SUGAR; STARCH

SALZ D17 45584V/25 =DS 2260-379
Liq spray-type air deduster - for removal of sugar dust from air leaving sugar driers, etc.

SALZGITTER MASCHINE 09.12.72-DT-260379

J01 (31.01.80) *DT2260-379 B01d-47

A device for the wet dedusting of a mixt. of air and sugar dust consists of a vertical tank with a liq. spray nozzle on top and an inlet for the ascending air/dust mixt. at the bottom. A first baffle is a hollow cone which is mounted centrally above the inlet. The second baffle above it is a downward inclined ring on the tank wall which extends inward to beyond the base perimeter of the cone. The annular overlapping area of these two baffles is straddled by a ring of conical cross-section which acts as a distribution for the liq. spray.

This reduces the constructional effort because no grating or packing-filled column is required. The deduster has a high functional reliability and can be operated continuously. 9.12.72 as 260379(5pp39)

NATT D17 23349V/13 =DS 2345-341
Double inhibited starches - contg two types of cross links, one more labile than the other

NAT STARCH & CHEM CORP 11.09.72-US-287887

A11 E19(D13) (31.01.80) *DT2345-341 A231-01/10 C08b-31

Starch is cross-linked with (i)epichlorohydrin, POCl_3 , $(\text{CH}_2=\text{CH})_2\text{SO}_2$, $\text{ClCH}_2\text{CH}=\text{CHCH}_2\text{Cl}$, cyanuric chloride or Na trimetaphosphate; and/or (ii)bis (O-ethylcarbonic)adipic- or fumaric anhydride, linear polymeric adipic anhydride, succinyl- or adipyl-guanidine, COCl_2 , carbonyl-1,1'-diimidazole, Cl_2 and glycine, adipic- or succinic-bis(imidazolide), divinyl adipate or mixts. of adipic acid and Ac_2O .

The crosslinks obtd. using reagents (i) are broken with difficulty, those with reagents (ii) are cleaved more easily. A 5% aq. soln. of these derivs. after boiling with maleic acid buffer (pH 6.1), exhibits a Brookfield viscosity 40-20,000 mPa.s. Prepn. of these derivs. comprises treatment of starch with reagents (i), followed by further cross-linking with reagents (ii). The prods. are used as thickening agents, esp. in foods and nutrients. 7.9.73 as 345341 (10pp047)

SELW- D17 87781B/49 =EP ---7-419
Preliminary liming plant for raw sugar beet juice - stands vertically and recirculates part flow to ensure uniform alkalinity

SELWIG & LANGE MASC 29.07.78-DT-833348

(06.02.80) *DS2833-348 C13d-03/02 + B01f-07/18

D/S: E(BE, FR, GB, IT, NL).

A vertical liming tank for sugarbeet juice is subdivided by horizontal plates into eight chambers through which the juice ascends in a zigzag flow while the milk of lime is added at the top. L-shaped tubes which link successive pairs of chambers have an adjustable top inlet at the higher and an outlet at the horizontal leg at the bottom of the lower of the pair of chambers so that a side stream can circulate.

The adjustable side stream circulation results in more efficient mixing of the juice in the pairs of chambers and in the achievement of more exact pH-values in them.

13.6.79 as 101919.(15pp39).

(G) ISR: FR2123566; DS1230397; 1 Journal Reference.

SUCR- ★ D17 09715C/06 ★EP ---7-859
Horizontal drum for countercurrent contacting of liq. and solid - esp. for sugar extn. has passages for improved liq. distribution

SOC SUCRIERE CONSEI (FIVE) 18.07.78-FR-021221

(06.02.80) B01d-11/02 C13d-01/10

D/S: E(BE, CH, DT, GB, IT, NL, OE).

The drum is partitioned into a number of compartments. In each compartment, drum rotation first mixes the solid and liq. phases and then separates the liq. for transfer to

the next compartment. Sepn. is effected by perforated buckets which raise solids to move them axially in one direction while liq. drains to be moved in the opposite direction.

Liq. entering each compartment first encounters a plate which has an opening by which the liq. enters an elongated pocket fixed to the edges of the opening. Each pocket is perforated and carries liq. right into the solid phase in the compartment, following a path roughly parallel to the axis of the drum. The sheet and pocket can be perforated over the whole or part only of their surface areas. Deflector baffles can be fitted in each compartment to intensify contacting.

The drum is used in industrial contacting of solid and liq. phases for washing, extn. etc., esp. for refinery sugar extn. Increased homogeneity of contacting and improved prod. yield are obtd.

16.7.79 as 400504 (13pp448).

(F) ISR: FR2103665; FR2002508; FR2334395; US3930801; DS-332708.

ICIL D17 09749T/06 =J8 0001-247
Producing an aluminium complex - of a polyhydroxy cpd
ATLAS CHEM INDS INC (ATLA) 24.04.70-US-031749
B05 E12 (12.01.80) *J46007-168 + A61k-31/04 B01j-31/02
C07c-31/32 C07f-05/06

Process comprises (A) reacting aluminium, alkoxide with a polyhydroxy cpd. in the presence of water in an amount equal to about 6 to 18 times the gram atomic number of the aluminium divided by the hydroxyl equivalent number of the polyhydroxy cpd. expressed in terms of a mol. number per gram atom of Al, (B) drying the prod. obtd. in (A) and (C) treating the prod. formed in (B) at about 55 to 90°C at <1 mm Hg. 24.4.71. as 027137 (clg. 24.4.70-US-031749) C07c-31/32; A61k-31/045; B01j-31/02; C07f-5/06 (12.1.80) ATLAS CHEMICAL INDS. INC. (6pp) (J4 6007168)

HAYB D17 09944R/07 =NL-162-691
Alpha-1,6-glucosidases enzymes for hydrolysing - alpha-1,6-glucosidic linkages

HAYASHIBARA CO 01.04.68-JA-021364

B04 (15.01.80) *FR2005-304 + C12n-01/44

1,6- α -Glucosidases are prepd. by culturing Lactobacillus bacteria in a culture medium. They have improved thermal stability and have an optimal activity at high temp. than glucosidases of other bacteria. They are useful in the degradation of starch, dextrans, dextrins, pullulans and glycogens.

In an example, lactobacillus bacteria was cultured at 30°C for 3-4 days in a medium contg. (in wt. %) peptone 1.0%, yeast extract 0.5%, K_2HPO_4 0.1%, NaCl 0.05%, $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ 0.05%, $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ 0.05%, flowable starch 0.7%, maltose 0.5%. The prod. was purified by autolysis, pptn. with $(\text{NH}_4)_2\text{SO}_4$ and then hydrolysis of the pte. 31.3.69 as 004916 (5pp913)

EICK/ D17 62775Z/00 =NL-162-692
Cellulosic materials decomposing percolator - having annular filter spaced within upright vessel

EICKMEYER R 17.10.67-DT-567335

A11 F09 (A71) (15.01.80) *BE-722-397 C13k-01/02 + D21c-03/04

Cellulose material is chemically digested in a percolator whose bottom portion is conical in shape and has inside a conical sieve plate of the same angle spaced from the wall forming a cavity sealed at the top and bottom by rings. The cavity is connected to the exterior by inlet and outlet pipes ending in cylindrical portions which are cap-sealed. A filler head and sealable conduits are provided, together with a steam release valve, for simultaneous feeding of liq. and steam to the cellulosic material.

Before the percolator is charged with cellulosic material, the required amt. of reactant liq. of desired chemical concn. and at < b.pt. is fed in above the conical portion in which the pressure is atomospheric or slightly above. Simultaneously high pressure steam is fed in under the sieve plate in amt. that the mixing temp. of the liq. above the sieve plate is raised to >b.pt. so that air or other non-condensable gases in the percolator are flushed out via the steam valve in the cap. Thereafter steam is fed in through the cap at ca. 1 atmos., and the liq. not absorbed by the cellulosic material is forced through the sieve plate into the bottom portion of the cone. The cellulosic material is maintained at a fixed temp. by steam passed through the sieve plate, by regulating the steam feed from beneath during the reaction period. 17.10.68 as 014849 (8pp913)

MOFO= ★ D17 10640C/06 ★SU-663-725
Sugar beet juice extractor - sets cossette feed by auger speed change with correction on sugar content in pulp
MOSC FOOD IND TECH (SUGA=) 26.01.78-SU-574358
(28.05.79) C13d-01/10

The loss of sugar with the pulp of cossettes, is reduced and the quality of the diffusion juice is improved by setting the feed rate of cossettes to match the speed of conveying

augers. The correction is carried out by taking into consideration the sugar content in the pulp, and taking into account the specific load. The latter is determined from the current of motors driving the top augers.

Mikhailov, V.I., Shirokov, L.A., Feldman, R.Z. Bul. 19/25.5.79. 26.1.78. as 574358 (3pp89)

UYOD= ★ D17 10758C/06 ★SU-664-611
Protecting sugar beet roots stored in mounds against decay - by spraying with aq. suspension of calcium sorbate to reduce sugar loss
ODESS UNIV 13.07.77-SU-509172
P12 (30.05.79) A01f-25

Sugar beet roots stored in mounds are protected against decay by spraying a chemical antimicrobial preparation onto consecutive layers of the beet roots being laid to form the mound. This method is improved by spraying the beet roots with an aq. suspension of calcium sorbate in an amt. of 0.01-0.008 wt.% (w.r.t. the beet roots). Using this method, the sugar loss is reduced.

Stepanova, O.S., Mazurenko, C.A., Prudnik, N.Z. et al. Bul. 20/30.5.79. 13.7.77. as 509172 (2pp70)

D18: SKINS; HIDES; LEATHER; TOBACCO

FRIM/ ★ D18 C/06 ★CS 7703-175
Synthetic tannins prepn.
FRIML Z 16.05.77-CS-003175
(17.09.79) C14c-03/24

FARB D18 05919X/04 =DS 2504-081
Tanning process using hydrophilic oligo-urethanes - opt methylolated, and opt formaldehyde, for leather and hide
BAYER AG 31.01.75-DT-504081
A82 (A25) (31.01.80) *FR2266-743 C14c-03/08

Process for tanning bare wood or leather comprises treatment in a vat containing (a) oligourethanes (M_n 300-20,000) having hydrophilic groups or segments, esp. methylol groups and/or ionic groups, such that the dispersed oligomer has a mean particle size < 200 nm (pref. < 50 nm); and opt. (b) HCHO or substances which generate HCHO.

Pref. cpds. (a) have polyether segments, with ≥ 50 wt.% ethylene oxide units. 31.1.75 as 504081 (6pp047)

FASS/ ★ D18 09337C/06 ★DT 2831-475
Chrome leather for calcium chloride-resistant protective clothing - retains max. air- and water vapour-permeability after fixing after-tanning agents
FASSBENDER H 18.07.78-DT-831475
A97 (31.01.80) C14c-03/06

After-treated CaCl₂-resistant chrome leather (a) contains 6-11 wt.%, w.r.t. pared wt., of after-treatment and impregnating agents fixed, in thin film layers, to the individual fibres through the whole leather structure and (b) retains ≥ 85% air- and water vapour-permeability w.r.t. untreated Cr leather.

A multi-step process is also claimed in which the film layers are applied (i) by after-tanning with 30-50 wt.% of standard after-tanning quantity of basic Cr salts opt. combined with basic Al chloride, then (ii) by standard dubbing in second layer and (iii) by a combined vegetable-synthetic after-tanning in third layer, pref. using mimosa rind- and/or quebracho extract as vegetable tanning agent and phenoplasts as synthetic tanning agents.

The prod. is used in work-protective clothing mfr., e.g. shoes, gloves and trouser-seats, partic. for mine-workers. Wettability and water-absorption are reduced without unduly lowering permeability. 18.7.78 as 831475 (25pp200)

AREN ★ D18 09350C/06 ★DT 2831-617
Wet-tanning hides and pelts - comprises charging chemicals of at least one step to hide by inoculation pref. under pressure
ARENCO-BMD MASCH 19.07.78-DT-831617
(31.01.80) C14c-03
In tanning hides and pelts by wet process steps compris-

ing (a) soaking, (b) liming with an alkali medium, (c) deliming, or neutralising, with an acid medium, (d) drenching with proteolytic enzyme, (e) pickling with acids and salts, (f) tanning, e.g. with Cr (III)-salts, (g) after-tanning (h) dubbing and opt. (i) dyeing, the chemicals and liqs. of ≥ 1 step are introduced into the hide by inoculation.

Working conditions for personnel can be improved and the labour force can be reduced. Large baths and vats are no longer needed. The use of excess baths and chemicals is obviated. Water consumption and waste water generation are reduced. The hide can be treated differentially over its width. The hairs can be recovered from brush and felt prodn. or for use as agricultural fertilisers. 19.7.78 as 831617 (9pp200)

HENK ★ D18 09554C/06 ★EP ---7-555
Water insoluble aluminium silicate for leather tanning - is combined with carboxylic acid contg. ester, urethane or amide gps.
HENKEL KG AUF AKTIEN 20.07.78-DT-831846
E33 (06.02.80) C01b-33/26 C14c-03
D/S: E(DT, FR, GB, IT).

The use in leather tanning of (1) water-insoluble, pref. hydrated Al silicates having formula (I):



(where Cat is an alkali metal ion and/or a divalent and/or a trivalent cation; n is integer 1-3; x is 0.5-8; y is 0.8-50 esp. 1.3-20) having particle size 0.1 μ to 50 mm and Ca bonding capacity 0-200 mg CaO/g anhydrous active substance, in combination with (2) ester, urethane and/or amide gp.-contg. carboxylic acids (II), is new.

The examples describe the Cr tanning of furniture leather and cowhide. Cr tanning agent consumption can be reduced and Cr exhaustion of tanning liquors is increased, whereby waste waters contain less Cr. Tanning material penetration is improved. Leather quality is enhanced.

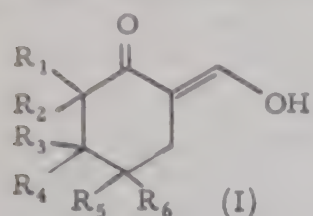
17.7.79 as 162490 (53pp200).

(G) ISR: US2395472; SU-215393; FR2354383; FR2271290; 1 Journal Reference.

GIVA D18 07166C/04 =EP ---7-582
2-Hydroxy methylene-cyclohexan-1-one(s) - as additives for improving and enhancing tobacco organoleptic properties
GIVAUDAN L & CIE SA 25.07.78-US-927800
E15 P15 (06.02.80) *US4183-363 +A24b-15/28 C07c-49/74
D/S:- E(CH, DT, FR, GB, NL).

Compsn. for increasing, modifying or improving the taste-

of tobacco prods. contains a 2-hydroxymethylenecyclohexanone cpd. of formula (I)



(R₁ is H, methyl, ethyl, propyl, allyl or butyl; R₂, R₃, R₄, R₅, R₆ are H, methyl or ethyl; the total number of C atoms in R₁ + R₂ + R₃ + R₄ + R₅ + R₆ is ≥ 5), opt. in conjunction with one or more other

aroma or flavour components.

Pref. cpds. (I) are 2-hydroxymethylene-4,4,6-hydroxymethylene-2-methylcyclohexanone and 2-ethyl-6-hydroxymethylene-2-methylcyclohexanone.

(I) are added e.g. at 0.01-1000 ppm, esp. 0.1-100 ppm to cigarette tobacco, pipe tobacco, synthetic tobacco etc. to modify, build or improve the flavour and aroma.

19.07.79, as 102546 (14pp513).

(G) ISR: —

DAIL D18 22221Y/13 =GB 1560-418

Cigarette filters contg. cellulose acetate fibres - produced by contacting fibrous cellulose with gaseous or liq. acetylating agent

DAICEL KK 12.12.75-JA-148299 (19.09.75-JA-113222)

A88 F06 P15 (A11) (06.02.80) *DT2641-719 + A24d-03/08

Tobacco smoke filter comprises a mass of cellulose acetate fibres prepd. by contacting cellulose fibres with gaseous or liq. acetylating agent to acatylate the fibres to degree of acatylation 10-50%, while maintaining the fibres in a solid fibrous state.

Pref. fibres are cellulosic pulp fibres, cotton, jute, viscose rayon fibres or copper-ammonia rayon fibres and they are acylated to a degree of 25-45%. Suitably the acetylating agent is liq. acetic anhydride, and reaction is effected in the presence of a catalyst, e.g. H₂SO₄, ZnCl₂ or NaOAc, and an inert organic reaction medium which is a nonsolvent for the fibres, e.g. trichloroethylene, benzene or kerosene.

The filter is cheap to produce and even when the cellulose acetate fibres are present in only a small quantity they provide excellent filtering characteristics. The flavour and taste of the tobacco smoke are unimpaired. 17.9.76 as 038549 (8pp945).

TFIN- D18 90136Y/51 =GB 1560-588

Conveyor belts of ultra high mol. wt. polyethylene film - for non toxic support of cigar skin

T & F INDS INC 23.08.76-US-716377

A88 P15 Q35 + Q31 Q36 (A17 A97) (06.02.80) *BE-858-029 A24b-03

Flexible film for carrying a flexible material comprises ultra high mol. wt. high density polyethylene of mol. wt.

> 3000000. One surface is roughened, and perforations are formed in the film. Pref. the polyethylene has mol. wt. 3000000-5000000; the perforations are arranged in columns; and the film is 0.001-0.01 inch.

The film is esp. for transporting tobacco leaves to be used as cigar wrappings. The leaves are held to the film by a vacuum source applied at the perforations. The film is inert w.r.t. the tobacco leaves, imparts no taste to them, and is nontoxic if ingested by the smoker. The leaves are readily released and the film can be re-used. 16.6.77 as 025145 (5pp945).

TFIN- D18 90136Y/51 =GB 1560-589

Conveyor belts of ultra high mol. wt. polyethylene film - for non toxic support of cigar skin

T & F INDS INC 23.08.76-US-716377

A88 P15 Q35 + Q31 Q36 (A17 A97) (06.02.80) *BE-858-029 A24b-03/18 + B65g-35

Method of handling tobacco leaves comprises placing them in face to face contact with a carrier film composed of polyethylene of mol. wt. > 3000000; storing them on the film for a period of time; then removing them. Before removal, the leaves may be carried past an adhesive sprav.

The leaves are pref. elongated strips to be used to form a cigar wrapper. The film carrying the leaves can be wound onto a hub for storage. The film is nonadhesive, is nontoxic and can be released. 16.6.77 as 36395/78 Div. ex. 1560588 (5pp945).

BRTA D18 15463T/10 =NL-162-550
Cigarette cover - consisting of cellulose fibres mixed with other particles or fibres

BRIT AMER TOBACCO LTD 18.08.70-GB-039750

A97 P15 (A18) (15.01.80) *NL7111-255 A24d-01/02

Cigarette paper is made out of cellulose fibres and a thermoplastic material which disappears at the high temp. of the approaching burning zone, leaving openings through which air passes to mix with the smoke. The paper is made from material in which 1-50 wt. % small fibres or particles of thermoplastic material is dispersed or suspended. The thermoplastic fibres are 0.1-5 mm long and of 0.2-100 μ m dia., and the thermoplastic particles are of 0.2-60 μ m dia.

Pref. 5-30 wt. % thermoplastic material is used, of fibres 1-3 mm long and 1-60 μ m dia. The materials used are (a) polypropylene or cellulose acetate, (b) ABS-terpolymer, polyethylene-ethylenevinyl acetate copolymer or nylon. The cellulose fibres are flax. Additional CaCO₃ may be included in the paper. The thermoplastic is quickly removed at high temp. without forming toxic material. The increased air passing into the cigarette reduces the amt. of smoke produced. 16.8.71 as 011255 (4pp913)

GLAT- D18 29872B/16 =US 4185-643
Cigarette filter covering strip with cork appearance - has pores accentuated by embossing and given gloss finish with lacquer which gives matt finish to strip

GLATZ J GMBH 30.09.77-DT-743986

A97 F09 P15 P78 (29.01.80) *DT2743-986 + A24d-01/04

Mouthpiece paper for cigarettes which has the appearance and properties of cork, include a dyed paper base layer having a matt lustre and randomly stamped depressions on the dyed layer simulating the surface of a layer of cork. A lacquer layer is coated over the entire surface of the dyed layer which increases the lustre of the stamped depressions whereas the areas surrounding the depressions remain a matt lustre to further simulate the properties of cork.

Pref. the lacquer is shellac; ethyl cellulose lacquer or polyethylene wax-styrene acrylate. The amt. of lacquer applied is 0.5-15 g./m.² 19.12.77 as 861970 (4pp393)

BURR- D18 25317Y/15 =US 4185-645
Continuously producing cigarette filter tips - with filling of filter chamber under reduced press.

BURRUS F J & CIE (BAUM-) 26.11.76-CH-014907 (08.12.75-CH-015905)

P15 (29.01.80) *BE-849-111 A24c-05/50

Cigarette filter rod with alternate sections of fibrous and pourable filter material is made by attaching fibrous parts at spaced intervals to a sheathing strip of width equal to 75-93% of rod circumference, wrapping the strip around the parts, extracting air from the intervening empty spaces and passing through a chamber of pourable material so that this is sucked in to fill the spaces.

Excess filter material is brushed off the rod and a sealing strip is adhered over the opening, the strip being only slightly wider than the slot. Both sheathing and sealing strips are pref. transparent, as is the adhesive. The pourable material may be activated carbon or a filter material containing an oxidation catalyst for CO conversion to CO₂ or an acid-base indicator, or a composition discoloured by smoke constituents. 21.7.78 as 926797 (+8.12.76-US-748500) (10pp1358)

See Also

D16 GB 1560448

D2: DISINFECTANTS; DETERGENTS

D21: DENTAL; TOILET PREPARATIONS

OREA ★ D21 09208C/06 ★BE-877-632
Determn. of the ionic state of human hair - by treating a sample with a soln. contg. a basic or acid dye and observing the colour change

L'OREAL SA 08.06.79-FR-014791 (13.07.78-FR-020975)
E24 R16 (11.01.80) G01n

A process is claimed for the determn. of the ionic state (-), the ionic state (+) and the neutral ionic state of the surface of keratin fibres, esp. human hair. The neutral state is defined as the condition of natural hair which has not been subjected to any treatment to modify the ionic charge. A sample of the hair to be examined is treated with a soln. at an acid pH contg. an acid or basic dye, and any change in colour of the soln. is determined.

The test is simple and can be carried out rapidly by non-technical personnel. The test is useful in beauty counselling for determining the state of the hair prior to recommendation of suitable cosmetic treatment. 11.7.79 as 877632 (27pp513)

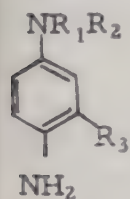
STRA/ ★ D21 C/06 ★CS 7601-022
Fluorine-contg. resin for coating teeth

STRAKA L 00.00.76-CS-001022
A96 B04 (17.09.79) A61k-05 C01b-07/19

BRIM D21 20809U/15 =DS 2240-495
Hair dye - contg a para diamino cpd and a coupler reacting - by oxidation of good fastness

BRISTOL MYERS CO 04.10.71-US-186475
E24 (31.01.80) *BE-786-710 A61k-07/13

Hair tinting compsn. comprises (a) a phenol, phenylene-1, 3-diamine or 3-amino-phenol, or mixts. of such cpds; (b) an alkaline reagent; (c) an N-substd. phenylene-1, 4-diamine of formula I or its salts; (d) opt. phenylene-1, 4-diamine and/or toluylene-1, 4-diamine; and (e) the usual additives.



In I, R_1 is 2-6C hydroxyalkyl; R_2 is H, 1-6C alkyl or 2-6C hydroxyalkyl; and R_3 is H, 1-6C alkyl, 2-6C hydroxyalkyl or halogen; such that when R_3 is H, R_1 and R_2 are not both $\text{CH}_2\text{CH}_2\text{OH}$ and Et, and $R_2 \neq \text{H}$. Pref. coupling agents (a) are resorcinol and resorcinol/2, 4-diaminoanisole mixts. Process for hair tinting comprises mixing these components with an oxidant and application of the mixt. followed by rinsing and drying. 17.8.72 as 240495(8pp047)

WEIP- D21 65147X/35 =DS 2504-961
Stabilising mink fat by heating with sulphur iodine - giving a completely homogeneous oil for cosmetic and pharmaceutical use
WEIPERT & CO NACHF 06.02.75-DT-504961
B07 E36 (D23) (31.01.80) *DT2504-961 A61k-07/48 A61k-31/23 C11b-03/02

Method for working-up inhomogeneous or conventionally pretreated mink fats for pharmaceutical or cosmetic use comprises heat treating the fats with sulphur and opt. iodine at up to 100 °C. Amt. of the additive(s) used is e.g. 0.1-1%.

Method yields a storage-stable clear oil free from turbidity. Prod. is golden yellow when sulphur is used and dark brown when sulphur and iodine are used. It rapidly soaks into the skin or hair and is useful in toilet preps., massage oils, etc. 6.2.75 as 504961(2pp927)

RIED D21 00487B/01 =DS 2728-266
Fluorescent pigments for artificial teeth - comprise mixed yttrium, gadolinium and or lanthanum silicate with cerium, terbium and manganese activators

RIEDEL DE HAEN AG 23.06.77-DT-728266
E33 G01 L02 +P32 (31.01.80) *GB2000-174 A61c-13/08 C09k-11/46 +C09c-01/28

Fluorescing inorganic pigment is of compsn. $(\text{X}.\text{SE}+\text{A}.\text{Ce}+\text{B}.\text{Tb}+\text{C}.\text{Mn})_2\text{O}_3.\text{SiO}_2$ in which SE is Yt, Gd, and/or La, A=

2-10 mol.%, B=2-10 mol.%, C=0.5-2.5 mol.% and X=100-(A+B+C) mol.%. The pigment is useful in the mfr. of artificial teeth which match the colour of natural teeth in both the visible spectrum and the ultraviolet spectrum.

The pigment is made by initially annealing a mixt. of X mol.% SE cpds. with A mol.% Ce cpds. and 100 mol.% SiO_2 at $>1000^\circ\text{C}$. The prod. is ground and mixed with B mol.% Tb cpds. and C mol.% Mn cpds. and annealed at $>1000^\circ\text{C}$ in a reducing atmos. After cooling the prod. is ground up. 23.6.77 as 728266(3pp926)

SCHM/ D21 29907B/16 =DS 2744-754
Determining contact points on artificial teeth - in which tooth is coated with carrier in volatile solvent and the solvent evaporated to leave film which is removed at contact points

SCHMIDT H H 05.10.77-DT-744754
P32 (31.01.80) *DT2744-754 A61c-11

Process for detecting contact positions in teeth or dentures, comprises application of a liquid contact agent which deposits an opaque, multilayer fine film, which is broken by contact. The contact agent comprises a soln. of dried sap from the Palaquim tree, MgO or MgSiO_3 , and a volatile solvent such as CHCl_3 or $\text{CHCl}_3/\text{EtOH}$ mixts; additives such as aromatics and/or terpene extracts may be present; in proportions such that about 70 wt.% solvent and about 30 wt.% solids are present. 5.10.77 as 744754(3pp047)

KASI/ ★ D21 09269C/06 ★DS 2918-422
Depilatory compsn. which does not cause allergic reactions - contains sugar, gum arabic, weak acid, e.g. citric or tartaric, and water

KASIDECIOGLU E 08.05.79-DT-918422
E17 (31.01.80) A61k-07/15

The compsn. comprises (pts.wt.) sugar 100; H_2O 18-20; gum arabic 4-6; citric, tartaric or other physiologically acceptable acid 0.2-0.4. It does not cause allergic reactions as can occur with waxes and resins used in other depilatory compsns.

Prepn. comprises adding the acid to water and heating to 60-80°, then adding sugar and heating to 105-120°. The gum arabic is dissolved in a portion of water and added to the acid/sugar soln. The prod. is allowed to cool to 70° and put into tubes or other containers. 8.5.79 as 918422 (2pp903)

SIEB/ ★ D21 09321C/06 ★DT 2831-275
Insect repellent tissue - is impregnated with soln. of insect repelling agent in alcohol, esp. isopropyl alcohol

SIEBLER W 17.07.78-DT-831275
B07 P28 (31.01.80) A47k-10/16

Insect-repellent tissue is impregnated with a soln. of the insect repelling agent (I) in an alcohol, pref. isopropyl alcohol. Pref. ratio (I) alcohol is 1:10.

The tissue is sealed in a plastic, metal or coated paper package which may have a tear strip across the middle. 17.7.78 as 831275 (6pp903)

CHAR- ★ D21 09477C/06 ★DT 2929-101
Sun-tan compsn. esp. water-in-oil emulsion - contg. low mol. wt., low-density polyethylene or EVA copolymer, UV-absorber plasticiser and emulsifier

CHARLES OF THE RITZ 19.07.78-US-925915
A96 E14 (A14 A17) (31.01.80) A61k-07/42

Sun-protective compsn. contains, by wt., 3-15% UV. absorber, pref. comprising 0.5-10% of ≥ 1 UV -A absorbent and 3-10% of > 1 UV -B absorbent, and also 2-15% polyethylene, 40-65% water, 15-30% plasticiser, 3-10% emulsifiers, $< 1\%$ combined preservatives and anti-oxidants and $< 1\%$ combined perfumes and dyes.

The polyethylene may be a C_2H_4 homopolymer having mol. wt. 1100-2200 and density 0.88-0.92 g/ml, or EVA copolymer having mol. wt. 2000-3500 and density 0.91-0.93 g/ml. Pref. UV -A absorbers are 2-OH-4-methoxyben

-zophenone (Ia) opt. combined with 2, 2'-dihydroxy-4-methoxybenzophenone (Ib). Pref. UV-B absorber is ethylhexyl 4-(dimethylamino)-benzoate (II).

The compsns. are used to achieve increased UV absorption and gradual tanning, without erythema. Polyethylene addn. increases moisture retention and resistance to washing-off. Sun protective factors exceed 15.18.7.79 as 929101 (28pp200)

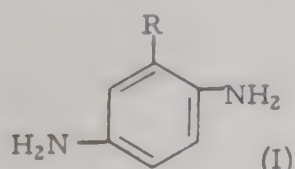
WELA ★ D21 09551C/06 ★EP---7-537
Storage stable oxidn. hair dye compsns. - contain water-soluble 1-hydroxyalkyl-2,5-diamino benzene developer and opt. coupler and direct dye

WELLA AG 20.07.78-DT-831847

E24 (06.02.80) A61k-07/13

D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

Compsn. contains as developer a 1-hydroxyalkyl-2,5-diaminobenzene having formula (I)



(where R is 1-4C hydroxyalkyl),
pref. 1-hydroxymethyl-2,5-diaminobenzene (Ia) or its salt with inorganic- or organic acids, alone or with standard couplers.

The compsns. can be used as solns., creams, gels or emulsions. Strong blonde to brown, violet, blue and black shades are obtd. (I) are water-soluble and stable. The shades obtd. are fast to light, washing and rubbing, and can be removed with reducing agents. The hydroxyalkyl substituent reduces lipid solubility. Grey, chemically undamaged hair is dyed without difficulty.

16. 7.79. as 102443 (15pp200).

(G) ISR: US2273564; DT2215303; DT2155390; US3893803; US3820948.

BEEC ★ D21 09635C/06 ★EP---7-704
Prepn. of hair conditioning compsns. - by incorporating pyridine-thione salts in cationic conditioning agents

BEECHAM GROUP LTD 28.07.78-GB-031462

A96 E12 (06.02.80) A61k-07/06

D/S: E(BE, DT, FR, GB, IT, NL, OE, SW).

Prepn. of a compsn. for treating human hair consists of incorporating an aq. suspension of a metal salt (I) of pyridinethione in a cationic conditioning agent (II) as liq. vehicle. (I) is maintained in suspension with a cationic suspending agent (III).

Method allows the incorporation of (I) (known antidandruff agents) into conditioning compsns. which are applied to hair after shampooing and rinsing.

22.6.79 as 301208 (6pp478).

(E) ISR: BE-702495; US3580853.

UNIL ★ D21 09675C/06 ★EP---7-785
Skin treatment compsn. - contg. hydroxy-carboxylic acid and vehicle other than water

UNILEVER LTD 24.07.78-GB-030871

E17 (06.02.80) A61k-07/48

D/S: E(BE, CH, DT, FR, GB, IT, NL, SW).

Compsn. for topical applcn. consists of a 4-12C hydroxylated carboxylic acid (I) together with a non-toxic vehicle other than water.

The compsn. is partic. useful for the treatment of dry, flaky and relatively inflexible skin.

20.7.79 as 301447 (29pp478).

(E) ISR: FR1190002; US3984566; DT2401752; GB1471679.

MINN D21 57996B/31 =EP---7-913
Dentifrice contg. membrane forming material - e.g. polyacrylic acid, to inhibit cariogenic bacteria and plaque formation

MINNESOTA MINING CO 29.12.77-US-865681

A96 E19 (06.02.80) *WP7900-456 A61k-07/16

D/S: E(CH, DT, GB, SW)

28.12.78 as 79900094

PROT- ★ D21 09748C/06 ★FR 2423-499
Acrylic resin stable in absence of air - obtd. by dissolving methacrylic polymer in (meth acrylic monomers, cooling, adding polymerisation inhibitor and adding accelerator

PROTEOR ETABS 20.03.78-FR-008021

A14 P32 (A96) (21.12.79) A61f-01 C08f-265/06

A new, ready-for-use acrylic resin is prepd. by (a) dissolving a methacrylic polymer in a mixt. of acrylic and methacrylic monomers at 25-40°C (pref. 35°C) with slow, regular stirring until the polymer particles are completely dissolved (i.e. after 1-2 h), (b) cooling the soln. to room temp., (c) adding a polymerisation inhibitor, and (d) adding an accelerator.

The resin is used in dental treatments where work has to be carried out in a short time in the presence of the patient. The resin has high softening pt. but retains thermoplastic properties to enable it to be shaped as required. The ratio of monomers determines its flexibility; equimolar proportions give a very flexible resin. The resin can be preserved for several months in an air-tight can. 20.3.78 as 008021 (7pp1329)

WELA D21 26840W/16 =GB 1476-239
Reducing alkalinity of cosmetic preps e.g. hair dyes - by addn. of alkali-splitting, acid-releasing cpds before use

WELLA AG 29.09.73-DT-349050

(30.01.80) *NL7412-236 A61k-07/09

Aq. cosmetic preps. contg. as active ingredients an alkaline substance and H₂O₂ or a salt of a mercapto carboxylic acid are used by (i) adding to the prepd. ≥1 organic cpd. having ≥1 ester and/or halogen gp. in the molecule which is capable of being cleaved by the alkali to form a salt; (ii) applying to the hair or skin and (iii) leaving it to act so that the alkali concn. gradually decreases over the period.

Compsns. are e.g. hair dyes or permanent waving compsns. They do not contain sufficient alkali to harm hair or skin. 27.9.74 as 042057 (4pp974).

COLG D21 49033Y/28 =GB 1560-399
Hair conditioning compsns. contg. organic peracid - with foaming mixt. of surfactant and fatty acid amide

COLGATE PALMOLIVE CO 24.12.75-US-644229

E19 (06.02.80) *DT2657-172 A61k-07/06

Compsn. for imparting body to the hair comprises an aq. soln. of an organic peracid (I) and a foam-forming agent comprising an organic surfactant (II) and a 10-21C fatty acid amide (III). Pref. compsn. comprises 0.1-10 wt.% (I), 1-20 wt.% (II), 0.5-10 wt.% (III) and balance water. (II) is pref. an anionic surfactant. Pref. (I) is dipero-phthalic acid, esp. in a granular form with Mg sulphate diluent.

For application to the hair the compsn. is shaken to produce a viscous foam. The foam is left on the hair for up to 30 min. then rinsed off. Compsn. provides a permanent improvement in body and manageability of the hair. 23.12.76 as 053769 (5pp927).

HENK D21 63056Y/36 =GB 1560-428
Cosmetic water-in-oil emulsion compsns. - contg. acrylate or acrylate acrylamide copolymers as emulsifier

HENKEL KG AUF AKTIEN 04.03.76-DT-608875 (04.03.76-DT-608834)

A96 (A14) (06.02.80) *BE-852-033 A61k-07/48

Water-in-oil cosmetic emulsion contains 2-20 wt.% emulsifying agent comprising a statistical copolymer of mean mol. wt. 2000-100000 comprising units [CH₂-CX-COOR₁] (I), [CH₂-CXCOOR₂] (IIA) and [CH₂-CXCHOR₃] (IIB) in mol. ratio (I):(II) of a 2-20:1. In the formulae X is H or CH₃; R₁ is 6-24C alkyl; R₂ is CH₂CH₂OH, CH₂CH-ONCH₃, CH₂CHONCH₂OH or CH₂CH₂OCH₂CH₂OH; and R₃ is NHCH₂OH, NHCH₂CH₂OH or N(CH₂CH₂OH)₂. The emulsion contains 20-75 wt.% water and vegetable or animal fat, wax fatty alcohol or hydrocarbon.

The emulsions can be applied to a sensitive skin and, as they have no appreciable odour, they need not be perfumed. The emulsions have low acid sensitivity, thus raw materials, such as organic acids can be incorporated. They have good heat resistance e.g. they can be kept at 50°C for 6 weeks without detriment. 3.3.77 as 008983

(7pp945).

ALSO- D21 50097A/28 = GB 1560-461
Agents for treating scalp and preventing hair loss - contg. a natural
surfactant e.g. chenodeoxycholic acid for dissolving cholesterol
ALSO LAB SORBINNI & 04.01.77-IT-019025
B01 (06.02.80) *DT2758-484 A61k-07/06 + C11d-01

Compsn. for scalp treatment and against loss of hair, in the form of a lotion, elixir, shampoo or before-shampoo or after-shampoo formulation contains as active substance (I) chenodeoxycholic acid, ursodeoxycholic acid, a salt or deriv. of either acid or ≥ 2 and cpds.

Pref. 0.6-1 wt.% (I) is used. The compsn. also contains a cell-proliferating stimulant, esp. retinoic acid or provitamin A. A moderately irritating substance that improves supply of blood to peripheral vessels and opt. alcohol are also included. 3.1.78 as 000063 (4pp393).

CHEM D21 32890Y/19 =GB 1560-573
Cyclic diesters prepn. of dodecanedioic acid - by polyester
thermolysis using stannous salts of organic acids or stannic oxides as
catalysts

CHEM WERKE HULS AG 22.10.75-DT-547267
A35 E13 (A23) (06.02.80) *DT2547-267 C07d-321

Prodn. of a cyclic ether of dodecanoic diacid with an aliphatic diol which has a 2-12C chain and opt. bears ≤ 2 1-4C alkyl substituents, is effected by thermolysis of a corresp. linear polyester at subatmospheric pressure in the presence of a catalyst, at 200-300°C.

The catalyst is either (i) a Sn (II) salt of a $\leq 18\text{C}$ aliphatic monocarboxylic acid, a $\leq 36\text{C}$ aromatic or araliphatic monocarboxylic acid, or a $\leq 18\text{C}$ aliphatic or aromatic hydrocarboxylic, polycarboxylic or heterocarboxylic acid; or (ii) a mixt. of an organotin oxide $\text{R}^1\text{R}^2\text{SnO}$ with an O, O-di-(2-18C)alkyl-(3, 5-ditert. -butyl-4-hydroxybenzyl) phosphonate. The R^1 and R^2 gps. are 1-18C alkyl or 6-36 C aryl or aralkyl.

The cyclic esters obtd. have odoriferous properties and are used in the cosmetic industry as fixatives, e.g. in perfumes, soaps or mouthwashes. 21.10.76 as 043677 (5pp931).

IPCO- D21 84609X/45 #GB 1560-636
Temporary dental prosthesis moulding in situ - using elastomeric
gasket mould sealing round restoration site
IPCO HOSPITAL SUPPL 02.06.75-US-582813 (06.10.76-GB-
041608)

A96 P32 (06.02.80) *US3987-545 + A61c-05/10

Dental prosthesis is moulded in the patients mouth by placing over prepared teeth an elastomeric mould with a cavity which is an impression of a corrected model of the teeth and with flexible margins extending beyond the impressions. Inlet and exhaust ports communicate with the cavity so that a vacuum can be drawn and self-curing liquid introduced.

The liquid is prepared in an open-top vessel and the end of an inlet tube immersed in it, the tube being opened after drawing a vacuum, so that atmospheric pressure forces the liquid into the cavity while the margins seal against the mouth. The liquid is pref. an acrylic resin, and the mould is of silicone-base dental impression material. 6.10.76 as 041608 (8pp1358).

NAAR D21 31308Y/18 = GB 1560-697
Solid hydrophobic antiperspirant compsn. - suitable for use by
persons with delicate skins NL 19.4.77)
NAARDEN INT NV 17.10.75-NL-012239
A96 (06.02.80) *DT2647-217 A61k-07/32

A solid, transparent, gelled antiperspirant compsn. contains ≥ 1 acidic reacting antiperspirant cpd. The gel contains (a) 10-80 wt.% of ≥ 1 lower monohydric alcohol; (b) 10-60 wt.% of ≥ 1 di- and/or trihydric alcohol and/or lower polyglycol; (c) 5-30 wt.% of propylene-/ethylene-glycol-polycondensate of formula $\text{HO}(\text{C}_2\text{H}_4\text{O})_x(\text{C}_3\text{H}_6\text{O})_y\text{H}$ and average mol. wt. ≥ 500 , where $y/(x+y)$ is 0.6-1; (d) 0.5-5 wt.% of dibenzaldehyde-monosorbitol acetal; (e) 2-15 wt.% of ≥ 1 antiperspirant metal cpd.; and (f) 0-10 wt.% of ≥ 1 dialkylolamide of higher fatty acids.

Compsn. is esp. prepd. as a stick, producing no irritation even on users with a sensitive skin. 15.10.76 as 042923 (3pp931).

SELW/ D21 55836Y/32 =GB 1560-757
Dental compsn. for showing up plaque - using acid red CI 33 as
developing agent

SELWYN S L 07.04.76-GB-014189

B04 E24 + P32 R16 (06.02.80) *BE-853-272 A61k-07/16

Dental plaque is disclosed on teeth by using a compsn. contg. the dye D and C Red 33. Compsn. may e.g. be used as a soln. contg. 3.5% of the dye in water, a suitable dosage for disclosure being 0.7-0.8 ml. Also claimed are solns. contg. dye, flavour, ethyl alcohol and/or propylene glycol, preservative and deionised water; gels e.g. contg. a cellulose deriv.; tablets etc..

The dye does not persist on oral tissue, while still effectively and persistently staining plaque on teeth.
24.3.77 (3pp963).

BEEC ★ D21 09793C/06 ★ GB 2026-319
Oil-in-water emulsion base skin care compsn. - contains nonionic
emulsifying agent and retinol acetate

BEECHAM GROUP LTD 28.07.78-GB-031555

A96 E15 (06.02.80) A61k-07/48 A61k-31/07

Oil-in-H₂O emulsion base skin care compsn. contains 20-40% by wt. oil (I); >1 % by wt. non-ionic emulsifying agent (II), and 1000-15,000 IU/g of retinol acetate (III). With the emulsion base, compsns. have increased effectiveness in promoting skin mitosis, resulting in greater activity in skin thickening or 'plumping'.

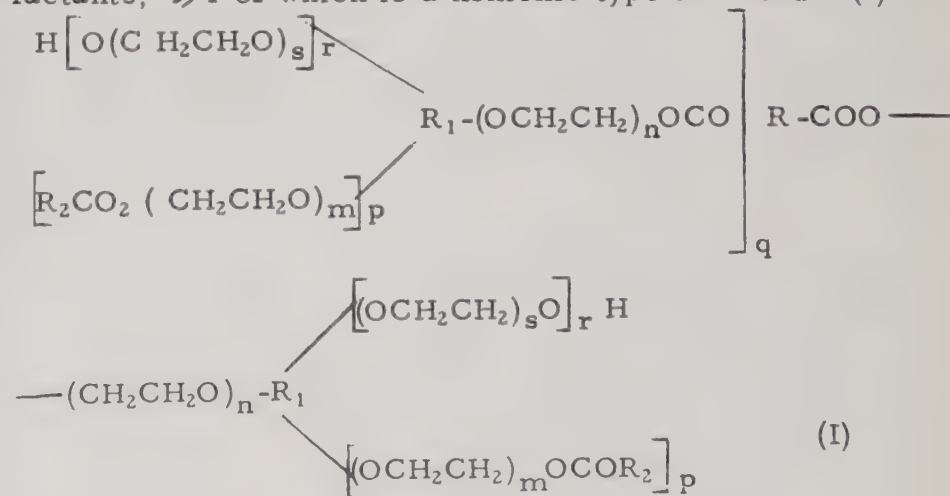
Compsns. pref. contain 2-12% (esp. 4-8% by wt. of (II), and pref. also an antioxidant (esp. butylated hydroxytoluene and/or butylated hydroxyanisole). Amt. of (III) is pref. 3000-6900 IU/g. (I) is suitably mineral or vegetable oil, synthetic fatty acid esters, fatty alcohols, or lanolin (or its derivs.). (I) is suitably sorbitan monostearate, glyceryl monostearate, a polysorbate, or a polyethylene deriv. of fatty alcohols. 28.7.78 as 013555 (3pp478).

JOHJ ★ D21 09838C/06 ★ GB 2026-532
Detergent compns. for personal use - contg. polybasic acid reaction
prod. of alkoxylated poly:ol fatty ester(s)

JOHNSON & JOHNSON 31.07.78-GB-031736

A96 E19 (A25) (06.02.80) C11d-01/74

Detergent compsn. for personal use consists of ≥ 2 surfactants, ≥ 1 of which is a nonionic type of formula (I):



(where R=di- or trivalent hydrocarbon; R₁=di- or higher-valent hydrocarbon or heterocyclic; R₂= ≤ 8 C monovalent hydrocarbon; r and s = O or an integer; n+pm+rs=4-100; r+p=2-7; q=1 or 2; provided that up to 20 mol. % of the ethylene oxide gps. may be replaced with propylene oxide).

Compsns. are prepd. from liq. ingredients but have suitable viscosities ((I) acting as thickening agents). The compsns. have low ocular irritation, yet give large foam vols. with improved foam stability. The compsns. are suitable for use as shampoos or bath additives. 31.7.78 as 031736 (6pp478).

OREA ★ D21 09850C/06 ★ GB 2026-553
Compsns. for dyeing hair - prepd. by anaerobic reaction of
poly:hydroxy benzene, and para-oxidative dyestuff precursor
LOREAL SA 27.07.78-FR-022296

A96 E24 (06.02.80) A61k-07/13

Compns. are prepd. as follows: (a) one or more polyhydroxybenzenes (I) are reacted with one or more oxidative dyestuff precursors (II) of the para-type in a solvent under anaerobic conditions; (b) reaction mixt. is frozen

at the desired stage; then (c) the mixt. is lyophilised.

The reversible reaction above may be stopped at any desired point, allowing a big increase in the range of shades available. In addn., it becomes possible to use two separate solvents, i.e. the most suitable one for the reaction, and the best 'cosmetic' solvent for application. 26.7.79 as 026134 (9pp478).

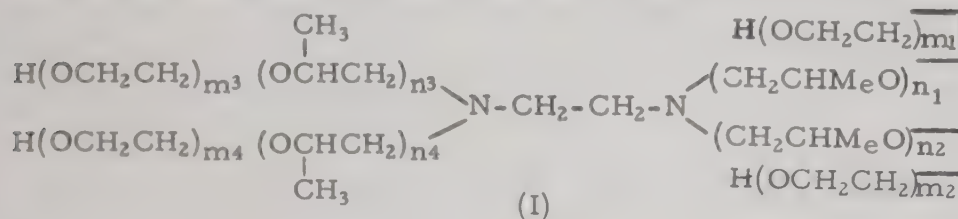
JAPS ★ D21 09882C/06 ★ J5 4114-479
Di:benzal:sorbitol-contg. gel-like substance prodn. - with addn. of metal cpd(s). to polar solvent to improve solubility of the sorbitol
JAPAN SYNTHETIC RUBBER 28.02.78-JA-021510

B07 E19 G04 (E37) (06.09.79) A61k-07/46 A61k-09 B01j-13
A dibenzalsorbitol-bearing gel-like substance for use as solid fuel etc. is prep'd. by heating a (aq.) liq. mixt. comprising dibenzalsorbitol, polar organic solvent(s) e.g. alcohols, esters, ketones and ethers having b.pt. of 50-140 °C i.e. MeOH, EtOH, n-propyl, iso-propyl, n-butyl, iso-butyl, tert.-butyl, sec. butyl alcohols, ethyleneglycolmethylether and ethyleneglycolethylether etc., and metal cpds., e.g. chlorides, bromides, iodides and nitrates of Li, Ca and Mg i.e. LiCl, CaCl₂, CaBr₂, Ca(NO₃)₂ and MgCl₂ etc. and subsequently cooling-down the mixt. to effect solidification.

The novelty is that the polar organic solvents which are bad solvents for dibenzalsorbitol become good solvents for dibenzalsorbitol by adding the metal cpds. This gel-like substance has lower combustibility and therefore improved in stability in storage and use esp. in admixture with water. The substance is also for use in the prodn. of cosmetics, medicines and perfumes etc. 28.2.78 as 021510(5pp34).

NISW ★ D21 10267C/06 ★ J5 4163-515
Esterified prods. derived from nitrogen-contg. poly:ol(s) - and di:carboxylic acids, useful as gelling, dispersing and solubilising agents in cosmetics

NISSHIN OIL MILLS KK 14.06.78-JA-070986
A96 E16 (A25) (26.12.79) A61k-07/48 C07c-93/04
An esterified prod. is obtd. by subjecting to esterification (1) a N-contg. high mol. polyol obtd. from ethylene diamine modified by addn. of propylene oxide and/or ethylene oxide to the four active H of the ethylene diamine, the polyol of formulae (I) where n₁, n₂, n₃ and n₄ are 1-20, and



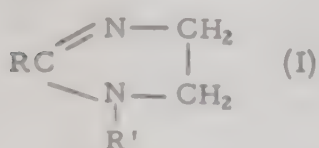
m₁, m₂, m₃ and m₄ are 0-15, and (2) satd. aliphatic dicarboxylic acid and/or oxydicarboxylic (sic) acid.

The esterified prod. is useful as a gelling agent, dispersing agent, solubilising agent and moisture-keeping agent, thus the cosmetic materials contg. it (claimed) are useful in skin treatments, such as creams, lotion, etc. 14.6.78 as 070986(6pp75).

LIOY ★ D21 10291C/06 ★ J5 4163-574
Prodn. of imidazoline cpds. for use in detergents, cosmetics, etc. - by reacting di:amine alkylol cpd. with higher fatty acid, followed by removing water, alcohol and excess di:amine

LION FAT & OIL KK 09.06.78-JA-069598
E13 (D25) (26.12.79) C07d-233/20

Diamine of the formula: H₂N-CH₂CH₂-NHR' (R' is 2-4C alkylol) is reacted higher fatty acid of the formula: RCOOH (where R is ≥ C₈ alk(en)yl,) or its methyl, ethyl or glycerin ester to produce an imidazoline cpd. of the formula (I):



The reaction is at 100-200 °C. This is followed by removing water, alcohol and excess diamine

The process gives high quality prod. at high yield. The ratio of diamine to acid is ≥ 1.01 (≥ 1.03)

The reaction system is closed and the pressure is 3-20 atmos. 9.6.78 as 069598(5pp119).

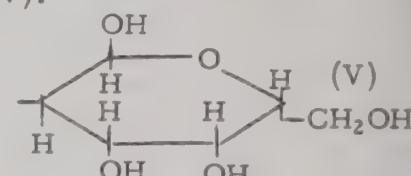
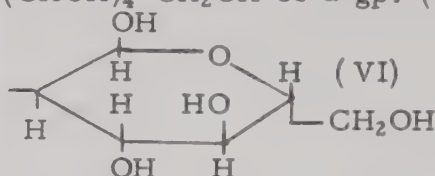
NIPP- ★ D21 10348C/06 ★ J5 4163-828
Cosmetic compsn. with good moistening properties - contains succinylated gelatin-hydrolysed peptide
NIPPI KK 14.06.78-JA-071769
(26.12.79) A61k-07

Cosmetic compsn. with good wetting properties contains succinated gelatin-hydrolysed peptide (I). Pref. (I) is combined as 5-30 w/w%. (I) is prep'd. e.g. by reacting an aq. soln. of gelatin-hydrolysed peptide with succinic anhydride at pH > 8 so that a succinic acid gp. is introduced in the amino gps. of the peptide as 70-100% of theoretical value.

(I) exhibits good water-holding property and good affinity to the skin, and has low toxicity to the skin. 14.6.78 as 071769(2pp5).

KANE ★ D21 10349C/06 ★ J5 4163-829
Low toxicity cosmetic compsn. - contg. reaction prod. of polyhydric alcohol glycidyl ether and n-methyl-alkanolamine
KANEBO KK 15.06.78-JA-072770
E19 (26.12.79) A61k-07

Cosmetic compsn. contains 1 cpd. of formula R₁OCH₂-O(OH)HCH₂N(CH₃)R₂ (I). In (I) R₁ is 10-22C alkyl or alkenyl; and R₂ is -C(CH₂OH)₂-CH₃, -C(CH₂OH)₂-CH₂OH, -CH₂-(CHOH)₄-CH₂OH or a gp. (VI) or (V).



Pref. R₁ includes n-decyl, n-dodecyl, n-tetradecyl, 2-pentylonyl, n-hexadecyl, 2-hexyldecyl, n-octadecyl, 2-heptylundecyl, 2-(1,3,3-trimethyl)butyl-5,7,7-trimethyloctyl, n-9-octadecenyl, n-9,12-octadecadienyl, n-9,12,15-octadecatrienyl, 2-octyldodecyl and n-docosyl. (I) is pref. combined as 0.1-30 w/w% in the cosmetics.

(I) have low toxicity, do not stimulate the skin and are readily dissolved or dispersed in water and oily cosmetic bases. Milky lotions, face lotions, hair conditioners, shampoos, rinses, etc. with high and good appearance and touch can be prep'd. from (I). 15.6.78 as 072770(11pp5).

POKK ★ D21 10350C/06 ★ J5 4163-830
Cosmetic compsns. having good feel and perfume holding properties - contain metal silicate, carbonate, tungstate, oxide or hydroxide in form of fine globular substance

POLA KASEI KOGYO KK 16.06.78-JA-072916
E37 (26.12.79) A61k-07

Cosmetics contg. hollow porous fine globular substance of 1-40 μ dia. selected from metal silicate, carbonate, tungstate, oxide and hydroxide.

Specifically the fine globules have average dia. 3-20 μ, true specific gravity 1.20-1.70 g/cm³, wall thickness 0.16-10 μ and pores of 10-160 Å dia.

The fine globular substances show excellent rolling effect and they give good touch, perfume-holding property, humidity-holding property, hygroscopic property, transparency, gas-permeability and stability to cosmetics. 16.6.78 as 072916(6pp5).

SHIS ★ D21 10351C/06 ★ J5 4163-831
Powdery cosmetic compsn. - prep'd. by admixing mica-type powder, pigment and e.g. fat with volatile liq., extruding, cutting and drying
SHISEIDO KK 16.06.78-JA-072784
(26.12.79) A61k-07

Compsn. is prep'd. by (a) mixing 30-90 pts.wt. mica-type powder; (b) < 40 pts.wt. pigment and 5-30 pts.wt. oil and fat, surfactant and/or water soluble binder with volatile liq.; (b) extruding into a bar; (c) cutting; opt. (d) form-adjusting and processing; and (e) drying.

Pref. the volatile liq. is water or ethanol, esp. used as 15-40 w/w% on the sum of powdery components. Pref. water soluble binders include cellulose derivs., PVA, PVP, Mg aluminium silicate and Na magnesium silicate.

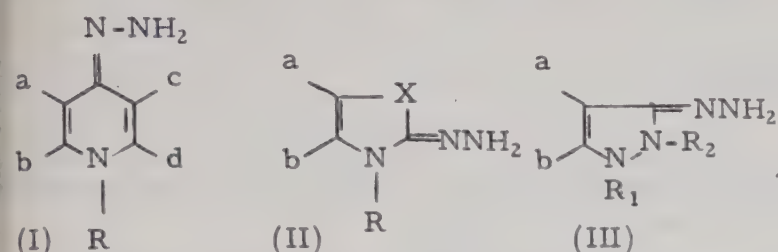
Up to 30-90 pts.wt. (a) (e.g. mica, titanium oxide-mica pearl agent, etc.) can be stably combined and the bar has high strength. When the prod. is applied with a spreading stick, it can be uniformly adhered to the head of the stick by rubbing. 16.6.78 as 072784(5pp5).

THER- D21 90999R/49 = NL-162-558
Dye for human hair based on oxidation dyes - and contg. heterocyclic hydrazones

THERACHEM THERAPEUT (THE -) 30.05.68-OE-005206

E23 (15.01.80) *FR1599-968 A61k-07/13

Human hair is dyed oxidatively using a heterocyclic cpd. developer with N in the ring and having N-contg. substituents.



and a coupler. The heterocyclic is a hydrazone with the hydrazone gp. in the 2-, 3- or 4-posn.

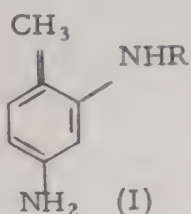
Pref. the hydrazone is of formula (I) or (II), where a and b or c and d are H, 1-4C alkyl, aromatic or functional gp. or condensed on opt. subst. alicyclic or aromatic ring; R is 1-5C alkyl; and X is O, S, imino, methylene, or -CH=CH-. Alternatively the hydrazone is of formula (III), where R₁ and R₂ are 1-4C alkyl, and a and b are H or 1-4C alkyl or opt. subst. condensed aromatic ring. The hydrazone can be in the form of a salt with an (in)-organic acid or reaction prod. with an organic acid chloride. 23.4.69 as 006270 (9pp913)

BRIM D21 27959W/17 = NL-162-559
Light- and perspiration-resistant hair oxidn dyes - made by reacting a subst. m-toluene diamine with a p-component in presence of peroxide

BRISTOL MYERS CO 15.10.73-US-406442

E24 (15.01.80) *DT2449-101 A61k-07/13 C07c-87/62 C07c-91/06 C07c-121/43 C07c-143/74

Human hair dyeing prepn. comprises a para dye component, meta dye component, and opt. other conventional components for hair dyes. The para dye and metal dye



components from a dye in the presence of an oxidant. The meta dye component is a 2,4-diaminotoluene cpd. (I) (where R is (hydroxy)alkyl, phenylalkyl, phenylsulphonyl, alkylsulphonyl or cyanoalkyl) or its non-toxic salt. The prepn. is new.

Dark colour nuances are obtd.

which are resistant to repeated shampooing, perspiration and light, and do not change towards red tints on further oxidn. 11.10.74 as 013406 (14pp913)

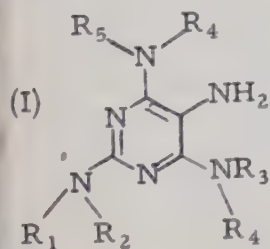
HENK D21 39183W/24 = US RE30-199
Tetraaminopyrimidines as developers in oxidation hair dyes - esp. used with meta aminophenol couplers for blue shading dyes

HENKEL KG AUF AKTIEN 02.10.74-DT-447017 (29.11.73-DT-359399)

E13 (29.01.80) *BE-822-542 A61k-07/13

Aq. prepn. for dyeing hair, consists of (1) 0.2-5 wt.% of an oxidn. dyestuff combination of a developer component, and a coupling component in equimolar amts. (2) 0-5 wt.% of a direct dyestuff, (3) 0-30 wt.% of a surfactant, (4) 0-25 wt.% of a thickener, and (5) the balance water.

The developer component consists of (A) a tetraaminopyrimidine of formula (I) or (B) its water soluble acid addn. salt. In (I) R₁₋₆ are each H, phenyl, 1-4C alkyl, phenylalkyl, phenylalkenyl, X(CH₂)_n, (where n = 1-4, and X is OH, halogen or -NR₇R₈; R₇ and R₈ are each H or 1-4C alkyl, or with the N form a 5- or 6-membered heterocyclic ring); or R₁ and R₂ or R₃ and R₄ or R₅ and R₆ with the N form a 5- or 6-membered heterocyclic ring opt. contg. an additional N or O atom.



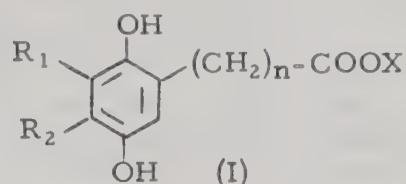
23.10.78 as 953688 Reissue of 4003699 (+22.11.74-US-526232) (15pp924)

BUGA/ D21 14188B/08 = US 4185-958
Hair colouring compsn. contg. direct colourants - and 2,5-di:hydroxyphenyl-carboxylic or -alkane carboxylic acid cpds.

BUGAUT A (OREA) 19.08.77-LU-077995

E14 (E12) (29.01.80) *BE-869-839 A61k-07/13

Compsn. for dyeing keratin fibres comprises an aq. soln. of ~5 wt.% of ≥1 direct dyestuff and 0.1-10 wt.% of an acid or salt of a cpd. of formula (I):



In (I), R₁ and R₂ are each H or straight or branched chain 1-4C alkyl; X is H, alkali metal, ammonium or alkanolamine radical; and n is 0 or integer 1-4. Pref. R₂ is (m)ethyl or propyl and X is Na,

K, monoethanolamine, diethanolamine or triethanolamine. Pref. (I) include 3-(2', 5'-dihydroxy-4'-methylphenyl)-propionic acid.

Compsn. is used partic. for dyeing hair after it has been freshly bleached; in use it is allowed to act for 5-30 minutes after which the hair is rinsed and dried. 18.8.78 as 935014 (10pp936)

HENK D21 58758A/33 = US 4186-186
Hair decolourising product based on peroxide cpds. - contg. guanidine derivatives as accelerators

HENKEL KG AUF AKTIEN 05.02.77-DT-704905

E16 (29.01.80) *BE-863-636 A61k-07/13

Hair bleaching compsn. comprises: (1) 0.1-10 wt.% of guanidine deriv. of formula (I) A-(CH₂)_n-A, A-(CH₂)_n-NH₂ or A-(CH₂)_n-NH-(CH₂)_n-A (where A is Y-NH-C(=NH)-NH-, Y is H, NH₂ or 1-4C alkyl, and n = 2 or 3); (2) 1-20 wt.% of NH₃-free alkali sufficient to give compsn. pH 8-10.5; (3) 2-8 wt.% of a peroxide oxidn. agent (calculated as H₂O₂); (4) 0-20 wt.% of ethylene diurea; (5) 0-0.01 mole l⁻¹ of heavy metal cations; (6) 0-10 wt.% of thickening agents; (7) 0-10 wt.% of peroxide stabiliser; (8) 0-2 wt.% of additives; and (9) 10-70 wt.% of solvent.

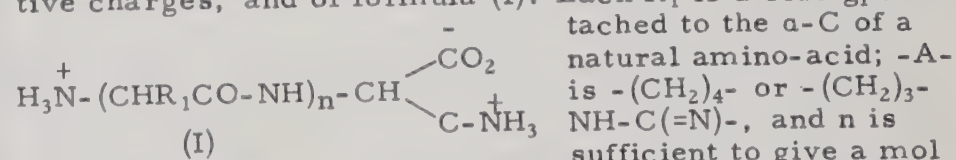
(I) is a bleaching accelerator. The compsn. minimises oxidative damage to the hair and does not irritate the skin. It does not have an obnoxious smell. 30.1.78 as 873219 (8pp977)

REDK- D21 33589B/18 = US 4186-188
Hair cosmetic compsns. for treating damaged hair - contain charged polypeptide having sterically unhindered positive charges and prepd. by protein hydrolysis

REDKEN LAB INC 25.10.77-US-845057 (26.11.75-US-635309)

A96 (29.01.80) *DT2817-866 A61k-07/06

Hair treatment comprises applying an aq. polypeptide soln. having pH 4-7, contg. a cosmetically effective amt. of charged polypeptides, having 2 sterically unhindered positive charges, and of formula (I). Each R₁ is a side gp. attached to the α-C of a



wt. of 200-2000. The charged polypeptides are insoluble at pH > 9 and < 4 and comprise ≥16% of the polypeptides in soln. They are formed by hydrolysis of proteins contg. 12-70 wt.% of arginine and lysin.

The treatment gives improved manageability, body and sheen. The positive charges of the polypeptides are available to neutralise the acidity of damaged hair by combining with acid gps. and are capable of forming ionic bridges between keratin protein chains. 25.10.77 as 845057 (8pp977)

HENK D21 18009A/10 = US 4186-207
Solns. of fat-soluble perfume oils or pharmaceuticals - contg. ethoxylated hydroxyalkyl ester or amide as solubiliser (BE 28.2.78)

HENKEL KG AUF AKTIEN 01.09.76-DT-639293

A96 B05 E19 (A25) (29.01.80) *DT2639-293 A61k-07/46 A61k-31/07

Clear, stable aq. (alcoholic) solns. of fat-soluble ethereal perfume oil or fat-soluble vitamin contain 0.5-5 wt.% N-(hydroxyalkyl)-amide-ethoxylate of formula:

H-(OC₂H₄)_n-OCHR₁-CHR₂-N(X)-COR₃ (I). R₁ and R₂ are 1-18C alkyl or H; R₃ is 1-5C alkyl or phenyl; X is H or -(C₂H₄O)_mH and n, m = 0-40. However, the total number

of carbons in R_1 and R_2 is 6-20 and $n+m = 6-40$. The amt. of perfume oil or vitamin is 0.1-1 wt.% of soln., and is less than $\frac{1}{4}$ of (I). Also present in the soln. is 0-10 wt.% water-miscible alcohol and the remainder is water. Amt. of water and alcohol is 70-99 wt.%.

(I) is an intermediary, acting as solubilising agent for water-insoluble perfume oils and drugs. Small quantities only, of (I) are required. 9.2.79 as 010757 (+19.8.77-US 826044) (6pp977)

See Also

D13 EP ---7486
D13 US 4186185

D13 J5 4163508
D22 GB 1560427

D13 US 4186149
D23 DS 2133107

D22: BANDAGES; DRESSINGS

KROY/ ★ D22 09219C/06 ★ BE-878-828
Appts. for air-laying cellulosic pulp fibres etc. - produces layered web with outer layer of long fibres and inner layer of short fibres
KROYER K 18.09.78-DK-004127
F04 (16.01.80) D04h

In the prodn. of continuous layers or sheets of cellulose pulp, an endless, air-permeable sheet-forming mesh belt is passed beneath fibre distributors providing fibres which influenced by suction boxes mounted opposite the surface of the forming box, are sucked towards the belt so as to form a layer of fibres upon it. The endless air-permeable mesh belt provides openings $> 1\text{mm}^2$, and the fibrous material which passes through the mesh beneath the fibre distributor is directed towards one or more further distributors, in the direction of movement of the mesh.

The fibrous prod. obtd. has > 1 outer layer consisting of relatively long fibres, and a middle layer of relatively short fibres. Such a prod. has a soft, warm feel, and is partic. weighs 100 gms/ m^2 . The prods. are suitable for use as napkins, face towels, hand towels and toilet paper. 17.9.79 as 878828 (25pp1359)

BEZE/ ★ D22 C/06 ★ CS 7706-206
Non-toxic deodorant - with improved disinfection activity
BEZEMEK J 00.00.77-CS-006206
P34 (17.09.79) A611-09/* A611-13

STAU D22 65899W/40 = DS 2511-191
Air-freshening gel free from syneresis - contg gelling compsn consisting of carrageenan, carob bean gum and water-soluble ammonium salt

STAUFFER CHEMICAL CO 21.03.74-US-453442
P34 (31.01.80) *DT2511-191 A611-09/04

Gels for continuous treatment of air with disinfectants, bactericides, insecticides, and/or perfumes comprises a gelling agent, (about 1.5-4 wt.%), containing λ -carrageenan; and an aq. medium, (about 98.5-96 wt.%), containing active components. In partic. the gelling agent comprises a mixt. of (a) carrageenan (about 0.6-2 wt.%) containing at least 40 wt.% λ -carrageenan; (b) carob bean gum, (about 0.2-1 wt.%); and a water-soluble NH_4 salt, (about 0.05-1 wt.%, $\text{pH} > 5$).

Prof. salts are the chloride, sulphate, acetate, dihydrogen phosphate and their mixts. 14.3.75 as 511191 (7pp047)

DURO/ ★ D22 09302C/06 ★ DT 2830-977
Sterilisation of medicine in closed bottles - by film of germ killing ion releasing silver or silver salt

DUROLFP 14.07.78-DT-830977
B07 P33 Q34 (31.01.80) A61j-01 B65d-85

A closed container for liq. medicine has inside a small deposit of silver or of not readily soluble silver salt. This can be present as coating of ceramic or glass rings or as an inside layer on a drop dispenser spout. The oligodynamic germ killing property of silver traces ensures that the medicine remains biologically pure even when used repeatedly. No preservatives need be added to the medicine.

In the case of a bottle contg. medicine and equipped with a drop dispenser spout on a screw cap, the layer on the inside of the spout would be of silver, silver chloride or silver bromide. Other possible applications include glass fruits; silver chloride is pptd. in their pores by a 1-4% silver nitrate soln. with a 1% sodium chloride soln.

14.7.78 as 830977 (10pp39)

KENO- ★ D22 09489C/06 ★ DT 2929-5
Prod. of absorbent cellulose flock - by addn. of fatty acid ester and cationic retention agent to the pulp
KENOGARD AB 21.07.78-SW-008056
A97 F09 P32 (A25) (31.01.80) A61f-13/18 B01j-01/22 C09k-03/32 D21c-09 D21h-05

Absorbent cellulose flock is produced from pulps using at least one cationic retention agent (A), with a partial fatty acid ester (B) of a polyhydric 2-8C alcohol (or its arhydride or ether), or of polyethylene glycol or polypropylene glycol with mol wt. up to 500, as non-ionic cpd. to reduce bonding forces between the fibres.

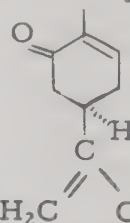
Used as absorbent material in baby's napkins, sanitary towels, etc. The combination of (A) and (B) gives good fibre-separation properties, and pulp with low water-absorption times, which are unchanged by ageing, high absorption capacity and good brightness. 20.7.79 as 929512 (11pp)

IDEK ★ D22 09493C/06 ★ DT 2929-920
l-carvone as insect repellent and insecticide - with pleasant odour, used e.g. against clothes moths

IDEMITSU KOSAN KK 13.04.79-JA-044264 (28.07.78-JA-091621)
C03 E15 F06 (31.01.80) A01n-17 A01n-25/12

New pleasant-smelling anti-insect agents (esp. insect powders) contain l-carvone (I):

(I)



(I) is suitable for use in insect powders for application to clothing etc in order to protect against clothes moths and the like. It is a naturally occurring cpd. which is non-toxic, safe and pleasant-smelling, and which has a good insect-repellant or insecticidal effect.

Prof. compsn are powders contg (I) on a sublimable carrier, pref. adamantane, endotrimethylene-norbornane, camphor and/or cyclododecane. The use of a sublimable carrier permits ready visual determination of the exhaustion of the l-carvone. 24.7.79 as 929920 (clg. 28.3.79-JA-035648) (21pp280)

BIOM- D22 22267B/12 = EP ---7-355
Anodic oxidn. sterilisation of fluids - after increasing conductivity by carbon dioxide introduction

INST BIOMEDIZIN TEC 14.09.77-DT-741317
P34 (06.02.80) *DT2741-317 + A611-02 C02f-01/46

D/S:E(CH, DT, FR, GB, LU, SW)

14.9.78 as 900117 (WP 7900145)

PROC ★ D22 09612C/06 ★ EP ---7-665
Steep sided embossed areas on fabric e.g. diaper - made by close fitting embossing rollers to increase strength of embossments

PROCTER & GAMBLE CO 24.07.78-US-927186
F07 (06.02.80) B29c-17/02 D06c-23/04

D/S:- E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

Embossed areas on a textile sheet have side walls at an angle less than 28° to the normal to the sheet. The sheet is embossed by close fitting male and female nip rollers with the embossments on the male roller having an angle less than 29° to the radius of the roll surface.

The reduced side wall clearance between the rolls improves the cold drawing effect during embossing. The embossed areas achieve better isolation of the sheet from an adjacent surface when under a moderate load, e.g. in the topsheet of diapers and sanitary towels.

12.7.79. as 200388 (24pp1320).

(E) ISR:- FR2261860; FR2256018; US4041951;
FR1085961; US2741215; NL6409450.

ICIL ★ D22 09651C/06 ★EP ---7-736
Gamma irradiation sterilisable olefin polymer medical article -
contg. hindered amine or salt improving resistance to discolouration
IMPERIAL CHEM INDS LTD 25.07.78-GB-031086
A96 B07 E13 (A17 A60) (06.02.80) C08k-05/34 C08l-23
D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, SW).

Gamma irradiation (Co⁶⁰) sterilisable medical component
comprises a crystalline polymer of an aliphatic α-olefin
containing 0.01-2 wt.% of a hindered amine or its salt, N-
oxide, N-hydroxide or N-nitroxide. The amine nitrogen is
part of the C-N-C chain forming part of a non-aromatic
heterocyclic ring, and each of the two C of the chain is
bonded to two 1-12C alkyl or 4-9C alicyclic gps. which
sterically hinder the amine.

Syringe components (barrels, plungers, needle hubs),
catheters, cannulae and prosthetic devices and their
wrappings may be sterilised. Resistance to discoloura-
tion of the components is improved. The components can
receive a radiation dose of 5.0 Mrad and have a discol-
ouration factor of > 0.750 two weeks after irradiation and
an oven life in air of ≥ 6, pref. > 10 days at 150°C in
sections 3.17 mm thick.

10.7.79 as 301347 (13pp966).

(E) ISR: DS1929928; DS2204659; CH-586252; CH-597297;
CH-597298.

ODEX- ★ D22 09777C/06 ★GB 1560-279
Disinfectant esp. for chemical toilets - contg. formaldehyde source
and quaternary ammonium germicide

ODEX RACASAN LTD 27.08.77-GB-036102
A92 E19 (06.02.80) A01n-33/12 A01n-35/02

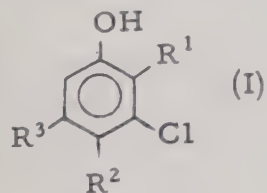
A solid sanitary germicide comprises formaldehyde or a
cpd. generating formaldehyde, and a germicidal quat.
ammonium salt (I), and does not contain a cresol.

(I) is pref. an alkyl dimethylbenzyl ammonium salt, e.g.
the chloride, where alkyl has 14-18C, and is esp. myris-
tyl. The wt. ratio of formaldehyde (source) to (I) is 0.2-5
(esp. 0.2-3). The formaldehyde is pref. in the form of
finely powdered paraformaldehyde. An alkaline depolymer-
ising agent is then included e.g. an alkali (esp. Na) car-
bonate, silicate or phosphate.

The compsn. is intended for use in chemical toilets.
It has a higher rate of germ kill than compsns. without
(I). 27.8.77 as 036102 (4pp955).

FARB D22 61418Y/35 =GB 1560-427
Biocidal (meta)-chlorophenols active against *Pseudomonas*
aeruginosa and other bacteria, fungi, yeasts and algae
BAYER AG 24.02.76-DT-607349
A60 C03 E14 P34 (D15 D21) (06.02.80) *DT2607-349 +A01n-
31/08 A61k-07

Microbicidal compsn. comprises an m-chlorophenol cpd.
of formula (I) (where R¹ is H or methyl; R² is H, methyl,
methoxy or 2,6-dichloro-4-hydroxyphenyl provided R¹, R² and
R³ are not all H) together with an
auxiliary material which does not
consist solely of solvents of mol.
wt. < 200.



(I)

The auxiliary material may
comprise a solid or liquefied gaseous diluent or carrier,
dyestuff, pigment, binder, scent, complexing agent,
plasticiser, softener, filler, disinfectant, or optical brigh-
tener. In addn. the compsn. may include solvent. (I) may
also be used directly as microbicides and may be applied
as textile preservatives. The compsn. pref. contains ≥
0.005 pts. (I) per 100 pts. wt. compsn.

(I) have a greater microbicidal effect than previously
used halophenols. 22.2.77 as 007381 (7pp945).

COLG D22 72135Y/40 =GB 1560-432
Diaper having absorbent cellulosic pad - with surface impregnated
with resin, cured to form porous matrix smooth surface
COLGATE PALMOLIVE CO 20.08.76-US-716094
A96 P32 + P21 (06.02.80) *US4050-463 A41b-13/02

Disposable diaper comprises a porous absorbent pad of
cellulosic fibres and water-impervious backing sheet
adjacent and bonded to one surface of the pad. The fibres
of the pad at the opposite surface are bonded together by

resinous binder. The bonded fibres form a porous matrix
defining the top surface of the diaper. Side margins of the
backing sheet are folded over and around respective side
edges of the pad and are adhered to the bonded fibres of
the top surface.

The binder is pref. an acrylic, alkyd, butyl, urethane
or vinyl resin. The basic wt. of the pad is 0.025-0.050
g/cm², its density under compression of 2,1 g/cm² is
0.06-0.140 g/cm³ and its density under 51.2 g/cm² is
0.105-0.210 g/cm³.

Conventional top sheet of the diaper is not required.
The resin bonding provides desired surface strength,
integrity, absorption and surface dryness. 11.8.77 as
033781 (4pp393).

SCHU D22 00170A/01 =GB 1560-525
Aq. per-glutaric acid soln. - stabilised with hydrogen peroxide
excess and used as disinfectant, oxidant and/or bleaching agent

SCHULKE & MAYR GMBH 30.11.76-DT-654164

E17 P34 (D25) (06.02.80) *DS2654-164 A01n-37/04 A01n-59

Compsn. useful as disinfectant, bleach and oxidising agent,
comprises an aq. soln. of perglutaric acid in the presence
of excess H₂O₂ and ≥ 1 stabilisers (for H₂O₂ in aq. soln.)

Pref. stabilisers are urea, pyridin-N-oxide, pyridin-
2,3-dicarboxylic acid, pyridin-2,6-dicarboxylic acid,
pyrophosphates or phytic acid. Compsn. pref. contains
1-50 (5-30) wt.% H₂O₂ and 1-60 (5-45) wt.% perglutaric
acid. Compsn. may also contain 0-50 (0.1-10) wt.%
glutaric acid.

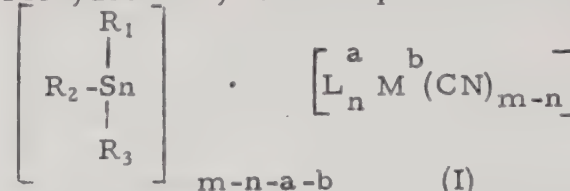
Perglutaric acid is almost odourless, non-volatile and
is adequately soluble in water. Further it is stable cf.
other cpds. e.g. persuccinic acid. 29.11.77 as 049589
(6pp963).

CIBA D22 49782Y/28 =GB 1560-578
Triorgano-tin cyano-metallate cpds. - useful as biocides and
polymerisation catalysts

CIBA GEIGY AG 23.12.75-CH-016699

A60 C01 E12 + P34 (06.02.80) *NL7614-214 C07f-07/22
+A01n-55/04

Trihydrocarbyl tin complexes of formula (I) are new. In



m-n-a-b

(I)

(I), m is 4, 6 or
8; n is 0 or 1;
a is 0 or 1; b is
1-5; each of R₁₋₃
is alkyl opt. inte-
rupted by -CO-
or -COO-, alk-
enyl, (alkyl)cyclo-

alkyl, opt. substd. aryl or opt. substd. aralkyl; L is
NH₃, pyridine, water, CO, NO or halogen.

M, if m is 4, is Ni (O), Ni (I), Ni (II), Pd (II), Pa
(II), Cu (I), Cu (II), Ag (I), Au (III), Zn (II), Cd (II),
Hg (II), and, if m is 6, Ti (III), V (II), V (III), Cr
(I), Cr (II), Cr (III), Mn (I), Mn (II), Mn (III), Tc (I),
Re (I), Re (II), Re (III), Re (IV), Fe (II), Fe (III), Ru
(II), Ru (III), Os (II), Co (I), Co (II), Co (III), Rh (III),
Ir (III), Pt (IV), and, if m is 8, Ti (III), Mo (IV), Mo
(I), W (IV), W (V), Mn (IV) or Re (V).

(I) are biocides with broad-spectrum activity. (I) have
low solubility. 20.12.76 as 053070 (10pp982).

HIRS/ D22 12463A/07 #GB 1560-736
Absorbent tampon for sanitary hygiene - in one piece with narrower
front section for easy insertion

HIRSCHMAN S Z 04.08.76-DT-635041 (26.07.76-GB-031129)

P32 (06.02.80) *DT2635-041 A61f-13/20

Female hygiene absorbent pad insertable entirely into the
interlabial space has integral posterior and anterior
parts symmetrical about a central axis defining pad
height. The anterior part is of smaller transverse cross-
section, and the axis is longer than the longest transverse
dimension of the posterior part.

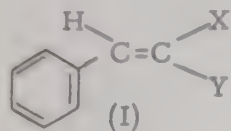
The anterior part is wedge-shaped or has an axially
extending part of uniform transverse size much less than
the longest transverse dimension of the posterior part.
On insertion the anterior part faces the vestibule to facil-
itate pad insertion. The posterior part provides reliable
retention even after substantial absorption of fluid.
26.7.76 as 031129 (7pp1358).

KAOS ★ D22 09880C/06 ★ J5 4113-440
Deodorant contg. a phenyl-substd. ethylene cpd. - is effective against smells caused by mercaptan and hydrogen sulphide

KAO SOAP KK 23.02.78-JA-019132

E14 P34 (05.09.79) A611-09/* B01d-53/34

Deodorant contains cpd. of formula (I): (where X is H, C₁-C₃ alkyl; Y is -OR=O, -COOR or (CH₂)_nOH, R is C₁-C₃ alkyl, and n is 1-3).



A pref. compsn. comprises
> 0.01% (I), 0.1-10% surfactant,
0-20% solvent, 0-20% perfume,
0-1% pigment, and balance deion-
ised water. 23.2.78 as 019132

(7pp68).

HOSH- ★ D22 10488C/06 ★ J8 0001-096
Treating dead experimental animals - by irradiating with microwaves to decompose them into solid, liq. and a gas which is purified

HOSHASEN KANRI CENT (KISO- NAGS NIMU-) 09.09.75-JA-109667

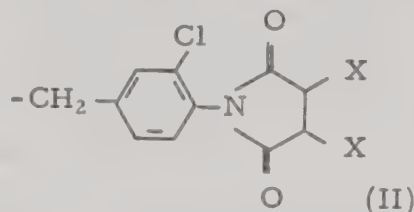
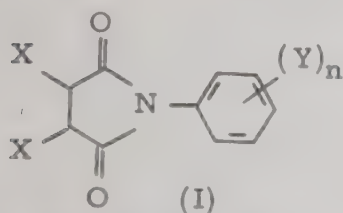
Q73 R59 (11.01.80) B01i-19/08 F23a-01 G21f-09 H05b-06/64
Dead animals, which have been used in experiments in universities, hospitals and institutes, are treated by irradiating them with microwaves until they decompose into solid, liq. and gas components. The gas component is then purified. 9.9.75 as 109667 B01j-19/08, F23g-1/00; G21f-9/00; H05b-6/64 (11.1.80) HOSHASEN KANRI CENTER KK; KISO KOGYO KK; NAGASE SANGYO KK; SHIN NIPPON MUSEN KK (3pp26)(J5 2033383)

IHAR D22 12435X/07 =NL-162-685
Antifouling compsns. for controlling aquatic organisms - contg. halogenated N-phenyl-succinimides

IHARA CHEM IND 09.08.74-JA-091367 (23.07.74-JA-084317)

C02 G02 +P14 (D15) (15.01.80) *NL7415-267 A01n-43/36
C09d-05/16 D06m-13/40

N-Phenylakane dicarboxylic acid imides (I) are made up into paints or dissolved in organic solvents with a resin,



and used as antifouling agents in marine environments.

In the formula, >1 X is halo and the other can be H; n is O, 1-5; Y is halo, 1-4C(halo)alkyl or alkoxy, CN, NO₂, or gp. (II); with the proviso that n is ≥2, Y are the same or different. Pref. both X are halo (esp. Br), and n is 2 or 3 and Y are halo.

The prepn. is esp. useful for treating fishing nets, and have long-lasting growth inhibitory activity against algae and shelled organisms. 22.11.74 as 015267 (+5.8.74-JA-089602)(8pp913)

UCEL= ★ D22 10773C/06 ★ SU-664-654
Fibrous bactericidal wound dressing material - contg. cellulosic fibre mixt. impregnated with 5 nitro-2-furyl acrolein bactericide

UKR CELLULOSE PAPER 25.02.72-SU-753387

P34 (30.05.79) A611-15/03

Fibrous material contg. antimicrobial agent is used in medicine for the treatment of infected wounds, trophic ulcers, abscesses etc. in a form of a dressing which can be applied to wound or inserted into the cavity after surgical treatment of abscess etc.

The material is air-permeable and easily absorbs fluids formed in the wound or cavity. It does not adhere to the wound tissue and does not retard granulation process. It comprises cellulosic fibres mixt. impregnated with 5-nitro-2-furyl-acrolein bactericide.

The typical material comprises (in wt. %): cellulose fibres 50-80 and cellulose fibres contg. above bactericide 20-50.

Zosim, Z.D., Palienko, L.Ya., Solyanik, N.A. et al.
Bul. 20/30.5.79. 25.2.72. as 753387 (3pp938)

SCOL D22 01735C/02 =US 4185-402
Deodorising footwear insole - having top fabric, bottom compressible plastics layer and intermediate deodorant particle contg. incompressible plastics layer (BR 22.5.79)

SCHOLL INC 02.11.77-US-847918

A83 F08 P22 P73 (29.01.80) *CA1068-107 A43b-13/38

Insole for footwear comprises (a) a multisheet laminate shaped to overlie the inner sole and composed of bottom open cell resilient compressible plastics sheet with a smooth bottom skin for resting on the inner sole, (b) an intermediate pliable relatively incompressible plastics sheet having particles of odour-absorbing chemical dispersed uniformly through it and locked in it, and (c) a top fabric sheet presenting a slippery abrasion resisting top surface for the foot of the wearer.

The sheets are bonded together and holes extend through all the layers exposing the chemical particles in the intermediate layer. The open cell resilient bottom layer is compressible under the foot to pump air from the cells through the holes in intimate contact with the chemical to absorb odours and moisture.

Pref. the intermediate sheet is styrene-butadiene latex and contains 15-30 wt.% activated charcoal. 2.11.77 as 847918 (6pp393)

JOHJ ★ D22 10957C/06 ★ US 4185-626
X-ray detectable surgical dressing - incorporating elastomeric filament with opaque filler and reinforcing thread

JOHNSON & JOHNSON 20.12.77-US-862479

A96 F01 P34 (29.01.80) A611-15

The dressing incorporates an elastomeric filament contg. 40-90% by wt. of X-ray opaque filler and a continuous reinforcing thread throughout the filament length. The filler is a non-toxic element of atomic weight >100, pref. powdered BaSO₄.

The elastomer is pref. PVC and the thread is a central textile yarn. Filament thickness is pref. such as to give an X-ray opaque transverse path of at least 28 mils. 20.12.77 as 862479 (4pp1358)

JOHJ ★ D22 10960C/06 ★ US 4185-631
Readily removable expanding catamenial tampon - with cylindrical body having surrounding ring expanding on release or on wetting

JOHNSON & JOHNSON 17.03.78-US-887698

A96 P32 (A25) (29.01.80) A61f-13/20

Tampon has an absorbent cylindrical body around which is a slidable ring of material which expands when in the vagina. The ring is attached to the body insertion end by a fluid pervious sack with the ring fixed to its open mouth so that the body can be inserted in the sack and the ring and top end of the sack rolled back over the body.

A withdrawal string is fixed to the body, and the tampon is pref. held in a retainer for application with the ring compressed, when the ring is of resilient foamed polyurethane. Alternatively, the ring may be of compressed absorbent material expanding when wetted. 17.3.78 as 887698 (5pp1358)

ETHI D22 89654B/50 =US 4185-637
Multifilament suture material with good knotting properties - coated with a dried gel of a fatty acid salt and an organic solvent

ETHICON INC 30.05.78-US-910263

A96 E12 F01 P34 (29.01.80) *DT2921-810 A611-17

Multifilament suture having improved tie-down properties under both wet and dry conditions, is coated with 1-5 wt.% of the dry residue of a compsn. comprising a gel of polyvalent metal ion salt of an ≥6C higher fatty acid in volatile organic solvent.

Pref. the fatty acid is a mixt. of stearic and palmitic acid and the salt is of Ca, Mg, Ba, Al or Zn. The solvent is pref. benzene, toluene, xylene, mesitylene, 1,1,2-trichloroethane or chloroform. The suture is pref. a (co)-polymer of lactide and glycolide. 30.5.78 as 910263 (5pp)

METB ★ D22 11000C/06 ★ US 4185-973
Communal waste disposal system for hospital - uses central incinerator and vacuum conveying of waste comminuted in individual receiving units

METAL BOX CO LTD 01.04.77-GB-013780

(29.01.80) B01d-51

Comminuted waste from the units is drawn into a common duct by an air stream which conveys the waste to a central incinerator. When waste is being introduced into a receiver a valve is operated to disconnect it from the common duct apart from a residual air flow through the receiver.

Pref. the door to the receiver includes a pressure relief valve and preferably the door opened by a control circuit in response to the operator depressing an activating pedal. The system is installed in a hospital to collect and convey waste to a central incinerator.

Valving isolates an individual receiver from the common duct while waste is being introduced. 29.3.78 as 891323 (12pp295)

JOHJ ★ D22 75719B/42 = US 4186-113
liq. toilet compsns. of reduced irritating potential - contg. a sulphobetaine, and an anionic detergent
JOHNSON & JOHNSON 03.04.78-US-892803
E12 (E16) (29.01.80) *EP---4-755 C11d-01/92

Lower irritating liq. detergent compsn. contains (a) 1-15 wt.% of a sulphobetaine of formula $R-C(=O)-NH-(CH_2)_x-N(CH_3)_2-CH_2-CHR'-CH_2-SO_3M$ (I) and (b) 1-15 wt.% of an anionic detergent of formula $R''-O-(C_2H_4O)_x-SO_3M$ (II). The total of (a) and (b) is ≤ 20 wt.%.

In the formulae, R is 8-18C alkyl; R' is OH or H; x is 1, 2 or 3; and m is alkali(ne earth) metal or mono-, di- or triethanolamine salt; and R'' is opt. branched (un)satd. hydrocarbon gp., alkylaromatic hydrocarbon gp. or alkylaryl hydrocarbon gp. contg. 6-20C.

Compsn. has good cleansing characteristics and low ocular and skin irritancy. 3.4.78 as 892803 (5pp982)

JOHJ ★ D22 11078C/06 ★ US 4186-165
Absorbent fibrous pad mfr. - by impregnating cellulosic fibre batt with hydrocolloid particles then hot pressing from one side
JOHNSON & JOHNSON 05.01.78-US-867062 (14.06.76-US-695683)
A81 F04 (29.01.80) D04h-01/64

An absorbent compoent, e.g. for a diaper or sanitary napkin, is made by forming an air-laid cellulosic fibre batt with the fibres constituting at least 50% of the batt, and distributing a particulate hydrocolloid within the batt, then simultaneously heating one batt surface to drive moisture away from that surface but below the water b.pt., while compressing at ≥ 2 kg./cm.²

The treatment forms in the batt an integral densified compacted porous absorbent region with much higher cohesive strength, capillarity, shape and volume stability and fluid retentivity compared to the initial batt. The hydrocolloid is pref. starch polyacrylonitrile which is fixed partly by mechanical locking and partly by bonding to fibres. Parent patent claims an absorbent fibrous batt with a hydrocolloid-contg. layer. 5.1.78 as 867062 Div.ex. 4103062 (8pp1358)

USNA ★ D22 11088C/06 ★ US 4186-190
Protective film for burns - composed of poly-epsilon-caprolactone with triethyl citrate or triacetin plasticiser
US SEC OF NAVY 13.11.78-US-959952
A96 (A14) (29.01.80) A61k-31/74

Burns are treated by application of a soln. contg. 100 pts. poly-ε-caprolactone of mol. wt. 2,000-300,000 and 33 pts. triethylcitrate or triacetin as plasticiser, dissolved in a mixture of methylacetate and methylene chloride, and allowing the solvents to evaporate.

The polymer forms a protective, fluid retentive film which is flexible. The method is suitable for use at the scene of the injury, by relatively unskilled personnel. The film is easily removed when the victim has been transported to hospital so that traditional treatment can be applied. Pref. the polymer film formed is 0.001-0.01 ins. thick. 13.11.78 as 959952 (2pp955)

DOWC ★ D22 11089C/06 ★ US 4186-191
Sanitising or disinfecting contaminated substrate - by contacting with aq. soln. of solid complex comprising poly-2-oxazoline or poly-2-oxazine, and halogen or inter-halogen

DOW CHEMICAL CO 11.12.78-US-968228 (06.09.77-US-830529)
A26 P34 (29.01.80) A611-13 C08g-73/06 C08l-79/04

A substrate contaminated with microorganisms is sanitised or disinfected by contacting it with an aq. soln. of a solid complex comprising (A) a poly-2-oxazoline or poly-2-oxazine, and (B) (i) bromine or iodine, or (ii) an interhalogen.

Pref. the soln. is of a complex comprising poly(2-ethyl-2-oxazoline) and iodine, the soln. esp. contg. 40 ppm. of such a complex having a molar ratio of 2-ethyl-2-oxazoline monomer to iodine of 2-10:1. Alternatively, the soln. is of a complex comprising poly(2-ethyl-2-oxazolidine) and an interhalogen of formula XX'_n (where X and X' are each Cl, Br or I; n is an odd integer ≥ 1 ; and X' is the lighter halogen when n is >1).

US 4144211 claimed solid complexes comprising (A) a poly-2-oxazoline or poly-2-oxazine, and (B) a halogen, interhalogen or pseudo-halogen. 11.12.78 as 968228 Div.ex. 4144211 (4pp990)

DOWC ★ D22 11114C/06 ★ US 4186-233
Sanitary towels, etc. comprising absorbent water swellable film - coated with water insoluble and impervious polymer to stop premature disintegration

DOW CHEMICAL CO 27.03.78-US-890159
A96 P32 P73 (A14 A82) (29.01.80) A61f-13/16 B32b-07/02

A disposable composite comprises an absorbent swellable film of a water-insoluble water-swellable polymer covered on both sides by a hydrophobic coating of a water-insoluble water-impervious polymer. The hydrophobic coating is resistant to moisture to prevent premature disintegration of the composite. The swellable film can absorb enough water to convert it to a weak expanded gel thereby breaking the hydrophobic coating into several pieces which separate from the film.

Used as a liner or packaging for sanitary napkins. The composite holds together in use, but disintegrates when flushed down the toilet.

The water swellable film is e.g. a lightly crosslinked polyacrylate, polyvinylpyrrolidone, sulphonated polystyrene, polysulphoethyl acrylate, poly-2-hydroxyethyl acrylate, hydrolysed polyacrylamide, acrylamide acrylic acid copolymer, polyvinyl morpholine, or an amide or salt of a copolymer of maleic anhydride with vinyl methyl ether, vinyl pyrrolidone, vinyl morpholine or an olefin. The hydrophobic coating is PVAc, PVdC, a polyacrylate or water-insoluble ethyl cellulose. 27.3.78 as 890159 (7pp)

GREC ★ D22 11125C/06 ★ US 4186-253
Perfusate for preserving organs to be transplanted - comprising a modified Ringer's soln., albumin, perfluorocarbon cpd. and emulsifier

GREEN CROSS CORP 10.10.78-US-950071
A96 (29.01.80) A61k-31/02 C12b-03

A liq. for the perfusional preservation of an organ for transplantation comprises a modified Ringer's soln. contg. 8-20 mequiv./l. K ions and dissolved albumin, an emulsified liq. perfluorocarbon cpd. and an emulsifier.

The use of, e.g. perfluorodecalin, perfluoro(butyl-cyclohexane), perfluoro(hexyl-tetrahydrofuran), perfluoro(diethyl-hexylamine), perfluoro(N-pentyl-morpholine), perfluoro(N-hexyl-piperidine), or perfluoro(tetramethylene glycol diisopropyl ether) as the perfluorocarbon cpd., and a polyoxyethylene-polyoxypropylene copolymer, polyoxyethylene alkyl ether, polyoxyalkyl allyl ether or phospholipid as the emulsifier is claimed. 10.10.78 as 950071 (8pp)

See Also

D13 NL 162654

D23: OILS; FATS; WAXES

MOSI-★ D23 09257C/06 ★DS 1617-012
Lanolin recovery from wool wash waste waters - by adding small amt. of (cyclo)aliphatic alcohol and sepg. lighter from heavier lanolin-free phase

MOSILANA VLNARSKE 24.03.65-CS-001947

B01 F01 (D15) (31.01.80) C11b-11

After washing wool with soap or synthetic detergents, the waste water is mixed, without changing its original pH, with 1.5-2.5 vol. % 6-8C aliphatic or cycloaliphatic alcohol, pref. n-hexanol. The heavy lanolin-free phase is sepd., by settling or centrifuging, from the lighter phase consisting of lanolin and alcohol, and lanolin is then recovered from the lighter phase.

Alcohol addn. breaks the emulsion formed during washing. 95% lanolin can be recovered. The purified waste waters can be recycled to water process and can emulsify larger lanolin quantities than non-purified recycle waters. Washed wool qualith is improved by not extracting lanolin with solvents during washing. 17.3.66 as 627012(4pp200)

PHAS D23 81328S/51 =DS 2133-107
Extraction of insaponifiable fraction - from nat fatty material - by mixed solvent treatment

PHARMASCIENCE LABS (PHAL) 02.07.70-FR-024542

(D13 D21) (31.01.80) *BE-768-647 +C11b-11

Process for the isolation of unhydrolysed components from the saponification of natural fats, comprises (a) extn. with a solvent mixt. contg. ≥ 1 polar and one nonpolar solvent in which the fatty materials are insoluble or only sparingly soluble, but in which other components are soluble; (b) sepn. of the solvent phase; and (c) evapn.

The extraction is conducted in a counter-current extraction system. A pref. solvent mixt. comprise MeOH and benzene, esp. for use with Avocado oil components. 2.7.71 as 133107(3pp047)

UNIL D23 16427W/10 =DS 2440-111
Refining edible glyceride-base oil by contact with adsorbent - to improve colour and storage stability

UNILEVER NV 24.08.73-GB-040150

(31.01.80) *DT2440-111 C11b-03/10

Edible glyceride oils are treated to improve colour and storage properties by passing a soln. of the oil in a nonpolar solvent down a column packed with metal oxide or metalloid oxide adsorbents. The solvent is then evaporated and the oil treated with a mild bleaching adsorbent, esp. activated Fuller's earth.

Purified oil is used to produce edible fat prod., esp. margarine. 21.8.74 as 440111(7pp047)

HAAR D23 04157Y/03 =DS 2530-481
Batch crystalliser for prodn. of large crystals - with the soln. in vertical tubes externally cooled

HAARMANN & REIMER GMBH (FARB) 09.07.75-DT-530481

B05 E15 J01 (31.01.80) *DT2530-481 B01d-09/02 C07c-29/24 C07c-35/12

Crystallisation appts. comprises a number of externally cooled, vertical open-ended tubes above which is a hood and below which is a collecting funnel. The tubes are held in a chamber, between an upper and a lower tube plate. There is an inlet, for soln. to be crystallised, above or below the tube plates, and a closable outlet for mother liquor and crystals below a breaker situated beneath the lower tube plate. Heat exchange medium is supplied to the space between the chamber wall and the tubes.

Appts. is esp. suitable for crystallisation of optically active menthols. Large needle- and bar- shaped crystals can be obtd., with predetermined size and dryness. 9.7.75 as 530481(4pp927)

MILO- D23 07903Y/05 =DS 2533-171
Oil recovery from oil seeds, esp. cotton - using a rotary filter on ground seed prepressed at low pressure with solvent extn. of residual oil cake

MILOUOT HAIFA BAY S 24.07.75-DT-533171

(31.01.80) *DT2533-171 C11b-01

A plant for the production of oil from linseed consists of a

kneeder and an oil separator with filter. The separator has a horizontal shaft with radial paddle rods. The coaxial filter is formed by a stack of rings with a cross-section of truncated cones. Radial webs on each ring ensure that radial gaps are produced between the rings. The complete stack of rings rests with a rim on rollers so that it can be revolved at an angular velocity which differs from that of the stirring shaft.

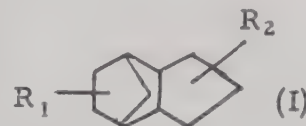
This machine has a lower power consumption and less wear than conventional types; it produces a high oil yield at low pressure. 24.7.75 as 533171(6pp39)

RUHR D23 88397Y/50 =DS 2623-285
Perfume compsns. contg. isomeric tricyclodecanes - esp. hydroxymethyl-formyl-tricyclodecanes (NL 29.11.77)

RUHRCHEMIE AG 25.05.76-DT-623285

E15 (31.01.80) *DT2623-285 A61k-07/46

Mixts. of isomeric hydroxymethylformyltricyclo [5, 2, 1, 0^{2,6}]decanes of formula (I) are used as additives in perfume compsns. In (I) R₁ is CH₂OH and R₂ is CHO; or R₁ is CHO and R₂ is CH₂OH. Additives are used in proportions of about 0.75-2.5 wt. % to bestow a Tonkin musk odour. 25.5.76 as 623285(3pp047)



FARB★ D23 09421C/06 ★DT 2832-346
Prepn. of hydroxyalkyl per:fluoroalkyl sulphonamide cpds. - for use as flow-improvers and in hydrophobic or oleophobic agents for textiles, leather, paper etc.

BAYER AG 22.07.78-DT-832346

A25 E19 G02 (31.01.80) C07c-143/74

Hydroxyalkyl perfluoroalkyl sulphonamides of formula

$R_FSO_2NR(CH_2CHO)_nH$ or $R_FSO_2N[(CH_2CR'HO)_nH][CH_2CR'HO)_mH]$ (in which R_F is 1-20C perfluoroalkyl; R and R' are alkyl, hydroxyalkyl, halogen-alkyl, cycloalkyl, aralkyl, alkenyl or aryl; m and n are 1-30) are prepd. by reaction of perfluoroalkyl sulphonamides of formula R_FSO₂NHR with epoxides of formula CH_2-CHR' , in presence of basic organic or inorganic metal cpds. or basic ion exchangers.

Used as intermediates in prodn. of hydrophobic or oleophobic agents for impregnation of textiles, leather, paper, etc., and as flow improvers for waxes, fats, paints, etc. Simple and economic one-stage process, which does not require use of solvents and their subsequent removal. Yield of pure product is almost quantitative. 22.7.78 as 832346 (18pp195)

ANIS★ D23 09473C/06 ★DT 2929-082
Phenolic ether prodn. from phenol cpd. and carboxylic alkyl ester - using a base and (in)organic iodide catalysts (BE 21.1.80)

ANIC SPA 21.07.78-IT-025974

A60 E14 (D13) (31.01.80) C07c-41 C07c-43/20 C07c-65/21 C07c-69/92

The process is effected under mild temp. conditions, ie. <160 (100-150)°C., for 2-6 hrs., with high yields of product.

Used for the prepn. of perfumes, as anti-oxidants for oils and fats in foods, and as stabilisers for plastics. 18.7.79 as 929082 (8pp004)

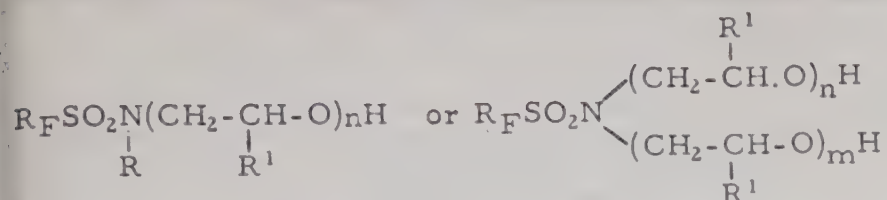
FARB D23 09421C/06 =EP ---7-519
Prepn. of hydroxyalkyl per:fluoroalkyl sulphonamide cpds. - for use as flow-improvers and in hydrophobic or oleophobic agents for textiles, leather, paper etc.

BAYER AG 22.07.78-DT-832346

A25 E19 G02 (06.02.80) *DT2832-346 C07c-143/82

D/S: E(BE, DT, FR, GB, IT, NL).

A novel method for the prepn. of hydroxyalkyl-perfluoroalkylsulphonamides of formula:



(in which R_F is 1-20C perfluoralkyl; R and R^1 are H, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, aralkyl, alkenyl or aryl; and m and n are 1-30) comprises reaction of perfluoralkyl sulphonamides of formula $\text{R}_F\text{SO}_2\text{NHR}$ with epoxides of formula CH_2-CHR^1 , in pres-

ence of basic (in)org. metal cpds. or basic ion exchangers.

The cpds. are used as intermediates in prodn. of hydrophobic or oleophobic agents for impregnation of textiles, leather, paper, etc., and as flow improvers for waxes, fats, paints, etc.

The method provides a one-stage process, which does not require use of solvents and their subsequent removal. Yield of pure product is almost quantitative.

11.7.79 as 102375 (20pp195).

(G) ISR: OE-242118; DS2024909; GB1298291; DT2307377; US3808272; DS1140188; DS-738703; US2803656; + 1 Journal Reference.

RUHR ★ D23 09585C/06 ★EP ---7-609
Alpha-methyl alkyl-aldehyde perfumery component prepn. - by rhodium complex catalysed higher linear olefin hydroformylation and heat treatment of prod.

RUHRCHEMIE AG 31.07.78-DT-833538
E17 (06.02.80) C07c-45/50 C07c-47/02
D/S: E(BE, FR, GB)

Prepn. of aldehydes (I) of formula $\text{R}-\text{CHMe}-\text{CHO}$ (where R is 7-12C n-alkyl) comprises (i) reacting olefins (II) of formula $\text{R}-\text{CH}=\text{CH}_2$ with CO and H_2 at 80-170°C and 200-350 bar in the presence of complex Rh cpd. catalysts, added as such or formed under the reaction conditions from olefin-soluble Rh salts, organic phosphines, CO and H_2 , and (ii) heating the reaction prod. at 100-190°C, opt. after sepg. the catalyst.

(I) are used as components of perfumery compsns. In step (i), (II) are converted at high reaction rates and space-time yields to an isomer mixt. of n-aldehydes and α-methyl-aldehydes. In step (ii), the n-aldehydes are converted to less volatile higher mol. wt. condensn. prods. which are easily sepd. from (I) which remain unchanged. 24.7.79 as 102604 (10pp200)

(G) ISR: DT2055539; DS1768391; DS-933338.

RHON D23 38933B/20 =EP ---7-882
Allylic alcohol prepn. from allylic halide(s) - with recycling of alkali metal carboxylic acid salt; useful as perfumery ingredients and flavourants

RHON-POULENC INDUSTRIES 24.07.78-US-927330
E17 (D13) (06.02.80) *US4152-530 C07c-29/80 C07c-33/03
C07c-67/58 + C07c-27/02 C07c-67/10
D/S: E(BE, CH, DT, FR, GB, IT, NL).

Allyl alcohols (I) are made by first condensing an allyl halide (II) with an alkali carboxylate (III) in the presence of a nitrogen base (IV) as catalyst, to give an allyl carbonylate (V). (V) is then saponified with a base to give (I) and (III). In the first stage, (II) and (III) are condensed together at 50-150°C in the presence of (IV) in an anhydrous medium comprising a water-immiscible ketone (VI) which forms an azeotrope with water. Water is then added to the reaction mixt. to dissolve the alkali halide formed during the condensn. The aq. alkali halide soln. is sepd. from the ketone phase contg. (V).

Aq. alkali hydroxide soln. is added to the ketone phase to saponify (V) at 50-150°C. The organic and aq. phases are sepd. and (I) is recovered by distn. from the organic phase. The residual (VI) may be recycled. (VI) is added to the aq. soln. of (III) obtd. in the sepn. and the water is removed by azeotropic distn. The resulting suspension of (III) in (VI) is recycled to the condensn. phase.

The process operates without sepn. of the intermediate (III), which is recycled. Relatively simple appts. is used and there are no costly drying stages. (I) are intermediates for use in perfumes and aroma compsns.

20.7.79 as 420033 (18pp513).

(F) ISR: FR1424075; FR-971242; US4091039; DS1217364; J52095606; FR1290402; US3031442; FR2228763; US4152530; 1 Journal Reference.

UNIL D23 56058Y/32 =GB 1560-401
Liquid antiperspirant emulsion opt. applied as spray - contg. volatile polydimethyl siloxane, wax, antiperspirant, emulsifier and water
UNILEVER LTD 28.01.76-GB-003295
A96 (A26) (06.02.80) *DT2703-373 A61k-07/32

Liq. anti-perspirant emulsion comprises, by wt. (i) 2-60 (esp. 5-40)% volatile polydimethyl siloxane, (ii) 0.1-30% wax, (iii) 0.2-40 (3-25) esp. 5-20% perspiration inhibitor component, (iv) 0.5-10% emulsifier and (v) water.

Anti-perspirant emulsion is used on the skin, esp. as a spray. The wax-contg. polydimethyl siloxane can be thickened satisfactorily, to prevent dripping of compsn. Polydimethyl siloxane is volatilised after use and causes no staining of clothing near treated skin surface. 28.1.76 as 003295 (--pp200)

NEST D23 19069U/14 =J8 0001-030
Perfume-and aroma extract from orange oil - - using hexane and propyleneglycol-citrus-base for lemon, grapefruit e
SOC PROD NESTLE SA 17.09.71-US-181623
(11.01.80) *NL7212-407 A231-01/22

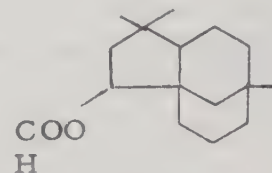
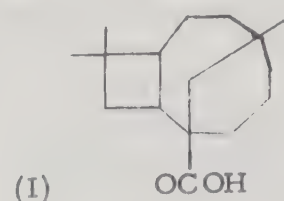
Orange oil is selectively extracted with propyleneglycol and a hydrocarbon solvent. The propyleneglycol phase (PPG) is sepd. from the solvent and contains 10-30% of the orange-oil components with a citrus character which may be used as a basis for the prepn. of specific aromas such as limonene, grapefruit, lemon or mandarin.

The solvent phase contains the typical orange flavours and perfumes. The starting material may be single-fold or pref. five-fold orange oil. The pref. ratio of five-fold oil in extn. is oil/solvent/PPG = 25-35:45-55:15-25. The phases are then sepd. and the propyleneglycol phase may be used as such. 14.9.72 as 092787 (clg. 17.9.71-US-181623) A231-1/222 (11.1.80) PRODUITS NESTLE S.A. (3pp)(J4 8061666)

FIRM D23 62495W/38 =NL-162-688
Aroma substance from caryophyllene and/or humulene - by reaction with formic acid

FIRMENICH SA 07.03.74-CH-003196
B07 E15 + P15 (15.01.80) *DT2440-024 A61k-07/46 C07c-67/04
C07c-69/06 C11b-09

Compsn. which is used in perfumes or to enhance perfumes comprises a caryophyllene ester mixt. of 4,4,8-trimethyltri-



cyclo[6,3,1,0^{2.5}] dodec-1-yl-formate (I) and 4,4,8-trimethyltricyclo[6,3,1,

0^{1.5}] dodec-2-yl formate (I), and is prepd. by treating caryophyllen or the terpene fraction isolated from clove oil with formic acid. Solns. of the mixt. in conventional solvents are specifically excluded by the claims.

Typically reaction is effected e.g. at 10-60 (pref. 40)° C for 2-24 (pref. 5) hrs. The compsn. has a fine woody note, and can be used in soaps, cosmetics, cleansers, bleaches etc. in amts. of 0.01-0.1 wt.%. 3.9.74 as 011659 (6pp913)

CHAG= ★ D23 10760C/06 ★SU-664-621
Wax extraction from raw material produced by bees - by mixing with chopped straw, adding water and heating, while mixing, supplying UHF energy from central emitter
CHELY AGRIC MECHAN 20.02.78-SU-581851
P14 (30.05.79) A01k-59/06

Wax is extracted from raw material produced by bees, by mixing it with chopped straw, loading the mixture into a centrifuge, centrifuging while simultaneously heating,

and drawing off the wax into a settling tank. Productivity is increased by cutting down on wax melting-out cycle, by moistening with water prior to mixing with the straw, and heating to a temp., where the wax is completely melted, in a UHF energy field with a frequency equal to the resonance frequency of the dipole of water.

Filippov, R.L., Filippova, L.R. Bul. 20/30.5.79. 20.2.78. as 581851 (2pp29)

ORCH= ★ D23 10910C/06 ★SU-664-966
Sitosol pharmaceutical and intermediate prepn. - by extraction of wine prodn. yeast waste with chloroform and purificn using methanol and carbon

ORCHARD VINE WINE 31.01.78-SU-576968

B01 (30.05.79) A61k-31/56 C07j-01

Sitosol is used in medicine, perfumery and as intermediate in the mfr. of steroidal hormonal preps. is extd. from alcoholic fermentation yeast residue during mfr. of wines with chloroform. The yield and the purity of the final prod. are improved if the extract is evapd. and the residue redissolved in hot methanol. The soln. is cooled and pptd. prod. is recrystallised from methanol in the presence of carbon. The final prod. has m. pt. 132-134°C. Khositashvili, V.L., Pkheidze, T.A., Kemertelidze, E.P. et al. Bul. 20/30.5.79. 31.1.78. as 576968 (2pp938)

SCHI/ D23 68199A/38 =US 4185-953
Candle which burns uniformly with flame of constant height - has wicks supported by floating rotating holder with vanes

SCHIRNEKER H L 17.09.77-DT-742017 (03.03.77-DT-709170)

Q71 + Q73 (29.01.80) *NL7802-314 + F23d-03/16

Wick lamp includes a wick carrier floating on liquid fuel and holding at least one wick partially immersed in the fuel. A bladed rotor on the carrier is axially or radially

impacted in use by the thermal airflow of each lit wick to rotate the carrier.

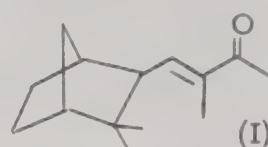
The carrier is pref. centrally mounted on and rotatable on an axle, and each wick has an external metal wire spiral with spaced turns, surrounding a non-combustible absorbent material embedding one or more metal heat conductors parallel to the wick axis. The carrier top is pref. open and the outer edge spaced above the base has a circle of vertical radial outward blades. 3.3.78 as 883095 (+20.8.77-DT-737652) (12pp1358)

INFL ★ D23 11071C/06 ★US 4186-150
Oxy-hydrocarbyl-norbornane mixts. - useful for enhancing the aroma of perfume compsns., etc.

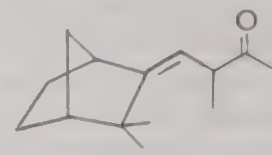
INT FLAVORS & FRAGR INC 13.12.77-US-860124 (04.02.77-US-765847)

E15 (29.01.80) C07c-49/61

A mixt. of the norbornyl ketones (I) and (II) is new:



(I)



(II)

The mixt. has a sweet, floral, dried fruity, ionone-like aroma with a dry, woody, piney nuance. The mixt. may thus be used to impart, augment, or enhance the aroma of a variety of perfume compsns. The mixt. is also useful in the prepn. of other organoleptic norbornyl cpds. 13.12.77 as 860124 (17pp478)

See Also

D13 EP ---7486

D13 US 4186 149

D21 DS 2504961

D24: SOAP; SOAP DETERGENTS

DAI D24 17591U/13 =J8 0001-320
Detergent compsn for use in washing machines - contg soap and ester(s) of cane sugar with fatty acids

DAI-ICHI KOGYO SEIY 06.10.71-JA-078872

(12.01.80) *DT2244-310 C11d-09/26 + C11d-10/04

Detergent compsn. having enhanced cleaning power at low temps. consists of a mixture of soap with an ester(s) of cane sugar; in particular ≥ 1 ester of cane sugar is a fatty acid ester; a saccharide can be present. No stable foam

is formed; the compsn. is biologically decomposable; it does not exert any harmful effect on human body.

Textile materials washed with this compsn. have soft hand; there is no deposition of heavy metal soaps. 6.10.71 as 078872 C11d-9/26, 10/04 (12.1.80) DAI-ICHI KOGYO SEIYAKU CO. LTD. (7pp)(J4 8043708)

D25: OTHER DETERGENTS

NOVA/ ★ D25 C/06 ★CS 7701-990
Cleaning and degreasing agent for dairy vessels

NOVAK L 25.03.77-CS-001990

(17.09.79) C11d-01/86

LUBK/ ★ D25 C/06 ★CS 7704-448
Surfactants based on mono-amine type complexones

LUBKEOVA S 05.07.77-CS-004448

E19 (17.09.79) C11d-01/90

CHUR- D25 02853V/02 =DS 2331-353
Oven cleaner - contg alkali metal salts of weak organic acids

CHURCH & DWIGHT CO (CHU -) 17.05.73-US-361140 (23.06.72-US-265639)

E12 + P43 (31.01.80) *NL7308-708 B08b-03/08 C11d-03/20 C23g-01/28

Cleansing liq. or paste comprises a dispersion of cleansing agent, diluents, and opt. a thickening aid, surfactant and finely divided inorganic abrasive to remove dirt or waste containing free or combined organic acids. In partic, ≥ 1 alkali salt of an aliphatic or alicyclic 1-7C carboxylic acid (1-99%), is used as the cleansing agent, esp. binary or ternary alkali acetate mixts, such as a mixt. of at ≥ 2 salts Na, Li and K acetate; alkali glycollate and/or glycinate and an alkaline earth carbonate may also be present.

The prods. are esp. useful as oven cleaning aerosols, esp. with 1-45 wt. % NaOAc-LiOAc-KOAc eutectic. These compsns. are applied to deposits and dirt in ovens, which are then heated at 121-288°; after cooling the residue is removed to leave a clean surface. 20.6.73 as 331353(8pp)

BADI ★ D25 09373C/06 ★DT 2832-021
Continuous N,N,N',N'-tetra:acetyl ethylene di:amine prepn. - by reacting excess ethylene di:amine with acetic anhydride in one step in bubble plate column, used as detergent cold bleach activator

BASF AG 21.07.78-DT-832021

E16 (31.01.80) C07c-102 C07c-103/90

In continuous N,N,N',N'-tetraacetyl ethylene diamine, (I) prepn. by reacting ethylene diamine with esp. excess Ac₂O at 120-190°C. and distilling off water and AcOH as they are formed, the reaction takes place in 1 step in a bubble plate column. The eventually Ac₂O-contg. (I) is recovered at the foot of the column and distilled under reduced pressure, after sepn. of Ac₂O if present.

(I) is used as a cold bleach activator for perborate-contg. detergents and allows the use of lower temps. in washing synthetic fibre-and coloured textiles. At least 1 raw material is converted completely. After distilling off Ac₂O, active Ac gp. content reaches 93-96% w.r.t. pure (I). Ac₂O consumption is low. Crude (I) can be distilled at

-10 mbar/155-170°C. without coloured by-prod. formation. 21.7.78 as 832021 (7pp200)

AOS ★ D25 09448C/06 ★DT 2927-595
Impregnating scouring pad - using injection of hot and pressurised chemical soln. to expand explosively within fibrous mass
KAO SOAP KK 14.07.78-JA-086375
P42 (31.01.80) B05d-01/02 B05d-07/14 C11d-17/04 D01f-01/02

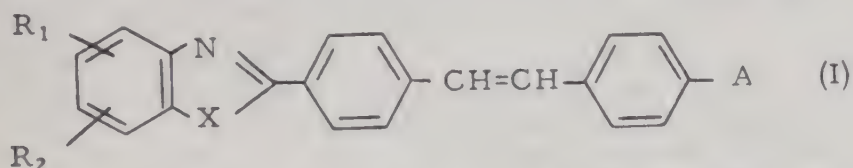
Impregnation of fibrous materials with chemicals, e.g. as scouring pads, uses a chemical solution which is held under a high temp. and pressure. This is injected into the fibrous mass and then brought up to an explosive evapn point while within the fibres.

Process ensures that the chemical matter is fully dispersed throughout the whole of the fibrous mass. 7.7.79 as 927595 (8pp249)

FARH D25 84282B/47 =EP ---7-392
Optical brightening stilbene derivs. - for natural and synthetic fibres and detergents

HOECHST AG 10.05.78-DT-820322
A60 E13 F06 (06.02.80) *DT2820-322 C07d-413/14 C07d-417/14 D06l-03/12 + C07d-213/78
D/S: E(BE, CH, DT, FR, GB, IT NL, OE, SW).

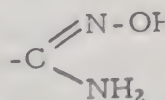
Prepn. of new stilbene cpds. of formula (I) is claimed



where X = O or S; R₁ and R₂ are each H, F, Cl, phenyl, lower alkyl or alkoxy, lower dialkylamino, lower trialkylammonium, acylamino or opt. functionally modified carboxy or sulpho gps.; two adjacent R₁ and R₂ gps. may together form a phenylene, lower alkylene or 1,3-dioxapropylene gp.;



in which R₃ = α-, β- or γ-pyridyl, pyridyl methylene, thiophenyl, furanyl, benzofuranyl, pyrazinyl, pyrimidinyl or pyridazinyl gp.

A cpd. of formula (I) (in which A = ) (II)

or -COC1) is reacted with a cpd. R₃-Z (where Z is COCl when A is (II) or is (II) when A is -COC1) at 20-200°C, pref. using an acid binder, in an inert solvent.

The almost colourless fluorescent (I) are used as optical brighteners for lacquers, natural and synthetic fibres, e.g. natural and synthetic polyamides, natural and regenerated cellulose, PVC, etc. (I) may be also added to detergents.

8.5.79. as 101404 (19pp004).
(G) ISR: FR2343741; CH1191964

BADI ★ D25 09559C/06 ★EP ---7-566
Acylated phosphoric and sulphuric acid derivs. - used as activators for cleansers and detergents contg. bleach yielding active oxygen
BASF AG 20.07.78-DT-831899
E11 (E17) (06.02.80) C11d-03/39 C11d-07/54 D06l-03/02
D/S: E(BE, CH, DT, FR, GB, IT, NL, OE, SW).

Orthophosphoric, metaphosphoric or sulphuric acid derivs. acylated with 1-4C alkane-carboxylic acids or their derivs. and which contain at least one acyl gp. and at least one OH gp. contg. a free H atom for salt formation, or their alkali(ne earth) metal or ammonium salts, are used as cold bleach activators in detergent and cleansing compns. contg. active oxygen yielding cpds. as bleaching agents.

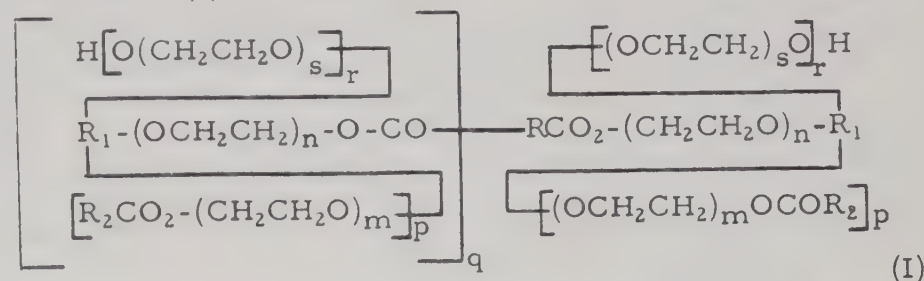
The activators are used in compns. for washing and bleaching cotton cloth, e.g. stained with tea or red wine. The activators are easily available, cheap and at least as effective as tetraacetyl ethylene diamine.

18.07.79 as 102512 (12pp200).
(G) ISR: DS1107632; DT2614148; DT2725151; FR2353634; DT2733849; DT2738976; DT2750528; FR2370832.

HONE ★ D25 09652C/06 ★EP ---7-737
Esterified alkoxyated hexitol fatty acid ester(s) - useful as surfactants with viscosity which increases in aq. soln.

HONEYWELL-ATLAS LTD 31.07.78-GB-031730
A25 E17 (A97) (06.02.80) B01f-17/34 C11d-03/37
D/S: E(BE, CH, DT, FR, GB, IT, LU, NL, OE, SW).

Surfactants (I) are new:



(where R = di- or trivalent hydrocarbon; R₁ = di- or higher valent hydrocarbon or heterocyclic; R₂ = ≥ 8C monovalent hydrocarbon; r, s = 0 or integer; n, m, p, q = integer ≥ 1); provided n + m + rs = 4-100; r + p = 2-7; q = 1 or 2; ≤ 20 mole % of the ethylene oxide gps. may be propylene oxide).

An emulsion of a water immiscible oil, in water contg. 5-15 wt. % of (I) is also claimed.

(I) are surfactants which when mixed with H₂O give solns. (esp. contg. 10-30% I) with critical viscosity > 100 times that of pure (I). (I) are useful in the prepn. of cosmetic, pharmaceutical, and crop protection compns.

10.7.79 as 301348 (17pp478).

(E) ISR: DT2717809; US3954658.

PROC D25 49047Y/28 =GB 1560-419
Polyethoxylated glyceryl ethers - for use as nonionic surfactants in detergent compns.

PROCTER & GAMBLE CO 24.12.75-US-644271
A25 E17 (A97) (06.02.80) *DT2657-518 C07c-43/11
Polyether cpds. of formula RO(CH₂CH₂O)_nCH₂CHOH-CH₂-OH (I), where R is 8-18C alk(en)yl or alkanyl having a 5-14C alkyl chain, and n is 1-6, are new. Pref. R is 10-16C alkyl and n is 2-5.

The surfactant cpds. (I) are used in detergent compns. at concns. of 2-95%. Pref. detergent compns. contain 10-50% (I) and 10-60 % detergency builder. In partic. (I) is used in admixture with a cosurfactant (II) comprising an anionic, nonionic, zwitterionic or ampholytic surfactant, ratio (I):(II) being 10:1-1:0. (II) is esp. an anionic surfactant, e.g. alkali metal, Ca, Mg, ammonium or alkanolammonium 9-20C alkylene benzene sulphonate, 8-18C alkyl sulphate or sulphonate, 10-20C alkyl ether sulphate, or olefin sulphonate derived from 12-24C alpha-olefin.

(I) are esp. effective for removing oily stains, esp. stains comprising hydrocarbon oil. 22.12.76 as 053520 (10pp945).

HENK D25 07562Y/05 =GB 1560-543
Alkali zeolite prodn. in presence of sulphate ions - using waste pickling liquor from aluminium mfr.

HENKEL KG AUF AKTIEN (DEGS) 26.07.75-DT-533614
E33 J04 M12 (J01) (06.02.80) *BE-844-514 C01b-33/28

Zeolitic alkali metal aluminium silicates are produced by reacting an aq. alkali metal silicate and an aq. alkali metal aluminate soln. at pptn. temps. of 0-110°C, then subjecting the ppte. formed to shearing forces, and crystallising the amorphous alkali metal aluminium silicate pptd. at elevated temps..

The alkali metal aluminate soln. contains alkali metal sulphate in up to an equimolar amt. w.r.t. Al₂O₃. The molar ratio of alkali metal oxide:Al₂O₃:SiO₂ in the batch is 1.5-6.0:1.0:1-5.0, Na₂O being present in stoichiometric excess w.r.t. SiO₂. The higher the sulphate content in the batch, the smaller is the excess of alkali metal oxide w.r.t. SiO₂ as well as the alkali metal oxide concn. The active solid content in the batch is 10-40 wt. %.

The crystallisation time is <10 hrs. and is shorter w.r.t. higher active solid and sulphate contents. The crystallisation is discontinued on reacting the optimal calcium binding capacity of the molecular sieve formed. 23.7.76 as 030749 (5pp931).

PROC D25 40311Y/23 = GB 1560-640
Detergent for washing textiles - contg. surfactant and perfume encapsulated in friable polymer microcapsules releasing contents on handling

PROCTER & GAMBLE CO 28.11.75-US-636381

A97 +P43 (06.02.80) *DT2653-329 C11d-01/12 C11d-03/50 C11d-09/44

A laundry detergent compsn. is prep'd. contg. 2-95% of an anionic, nonionic, ampholytic or zwitterionic surfactant, opt. in mixt., and an effective amt. of a perfuming agent comprising a perfume encapsulated in water insoluble, friable microcapsules of size 5-300 μm .

Prof. the microcapsules have a shell wall material which is a urea-formaldehyde polymer. The microcapsules are 10-200 μm in size, and comprise 50-85 wt.% of perfume. The microcapsules are present in amt. 0.1-1 wt.% w.r.t. the compsn..

The compsn. becomes entrained in or on a fabric during a laundering process, and the perfume is released during manipulation of the dry fabric. 26.11.76 as 049411 (11pp931).

KAOS ★ D25 09986C/06 ★ J5 4161-607
Starching-cleaning compsn. for clothes - contains cationic high vinyl polymer and nonionic, anionic and/or amphoteric surfactant

KAO SOAP KK 12.06.78-JA-070537

A87 F06 (21.12.79) C11d-03/37 D06m-15

A starching cleaner contains (I) 10-50 wt.% of cationic high polymer prep'd. by emulsion polymerisation of vinyl monomer using cationic high molecular cpd. or mixt. of cationic high molecular cpd. and nonionic high molecular cpd. and (II) nonionic-, anionic-, and/or amphoteric surfactant agent.

Washing and starching of clothes are performed at the same time. Starching component is obtd. by the emulsion polymerisation. Cationic high molecular cpds. of formula $A-(-O-R-N(R_1)(R_2))$ (where A is residue of starch, cellulose or their derivs. R is alkylene or hydroxyalkylene, R_1, R_2 are each H, alkyl, aryl, or aralkyl, 1 = positive integer), $A-(-O-R-N^+(R_1)(R_2)(R_3).X^-)$ (where A is residue of starch or cellulose, R_1, R_2, R_3 are each alkyl, aryl or aralkyl, X is anion, 1 = positive integer), etc. are employed in amt. of 0.004-0.2 wt.% (by the base of cationic nitrogen) on vinylmonomer (e.g. vinyl-acetate). 12.6.78 as 070537(7pp170).

KAOS ★ D25 10367C/06 ★ J5 4163-906
Foam generating and bleaching detergent compsn. - comprises heat treated sodium percarbonate, anhydrous alkali metal (bi)carbonate and an organic acid

KAO SOAP KK 16.06.78-JA-072789

A97 E17 (E34) (27.12.79) C11d-07/54

Compsn. contains sodium percarbonate (I) heat-treated at from 70°C for 10-120 mins to 110°C for 10-30 min., anhydrous alkali metal (bi)carbonate (II), and succinic acid, citric acid, and maleic acid (III) as essential components. The ratio of (II)-(III) (by wt.) is 0.6-5.0

The storage stability of the compsn.. The solubility of sodium percarbonate is improved without spoiling its stability by combining the heat-treatment of sodium percarbonate with the incorporation of anhydrous alkali (bi)carbonate in addn. to an acid such as succinic acid. 16.6.78 as 072789(6pp126).

PROC ★ D25 C/06 ★ J5 4163-907
Low phosphate detergent compsn. for washing

PROCTER & GAMBLE CO 22.11.78-US-962882 (13.03.78-US-885931)

(27.12.79)

13.3.79 as 029276.(+18.9.78, 6.10.78-US-943419, 949182)

FARH D25 04109Y/03 = NL-162-613
Alkali phosphates with high degree of whiteness - where vanadium and iron are removed using sodium hydroxymethane-sulphinate (NL301276)

HOECHST AG 28.06.75-DT-528895

E34 (E12) (15.01.80) *DT2528-895 C01b-25/30

Alkali metal phosphate solns. with low vanadium contents are obtd. from wet process phosphoric acid which contains iron and vanadium. The metals are converted from the highest to a lower oxidn. state using hydroxymethane sul-

phinic acid as reductant. The acids are then neutralised with alkali metal lyes and/or carbonates to pH > 3, and the ppte. sepd. off.

Prof. a soln. of hydroxymethane sulphinic acid sodium salt in 10-30 wt.% natron lye is used as reductant. The Na salt is used as 600-1000 wt.% based on the vanadium present in the phosphoric acid. The prep'd. solns. are converted to condensed alkali metal phosphates (e.g. di- and tri-phosphates) for inclusion in washing agents. 25.6.76 as 006985 (3pp913)

PROC D25 40922F/00 = NL-162-690
Enzyme preparations

PROCTER & GAMBLE CO 15.11.67-US-683196

B04 (D16) (15.01.80) *BE-723-873 + A61k-07 C11d-07/42

Water-based surfactant contg. an alcohol-stabilised enzyme comprises (based on total wt. of the compsn.) (a) 65-97% water, (b) 0.001-1.0% protease and/or amylase, (c) 17-25% methanol, 6-18% ethanol and 9-20% isopropanol and (4) 4-15% non-ionogenic wash-active material. Compsns. which also include a combination of polyvalent alcohol and a Ca salt, are specifically excluded by the claim.

Prof. the compsn. is adjusted to pH 6.5-8.5. Used for treating stains and as additives for commercially used washing agents. 15.11.68 as 016356 (6pp913)

INTE- D25 72728A/41 = US 4185-960
Super-oxidised sodium perborate mfr. in fluid bed - giving high active oxygen ratio and good storage stability

INTEROX 08.04.77-LU-077095

E34 (29.01.80) *BE-865-651 C01b-15/12 C11d-03/39

Superoxidised solid Na perborate (I) contains >17 (17-32) wt.% active O and <1.4 (0.7-1.4) atoms H per active O atom. Prepn. of (I) comprises simultaneously introducing into a fluidised bed dryer contg. seeds of dimensions smaller than those of the prod., an aq. soln. contg. H_2O_2 in concns. >30 wt.% and an aq. soln. contg. Na metaborate in such quantities that the molar ratio between the H_2O_2 and the Na metaborate introduced into the fluidised bed is >1.12, and evaporating the water present in the aq. solns. by means of fluidising gas.

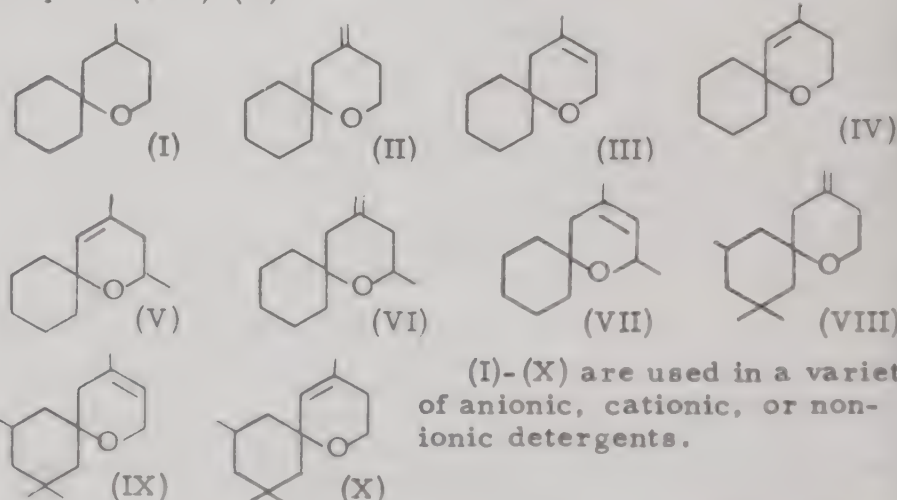
Prod. is useful as a bleaching agent and has high abrasion resistance. 10.4.78 as 895274 (9pp936)

INFL ★ D25 11060C/06 ★ US 4186-103
Spiro:pyran derivs. used in detergents, etc. - give green, floral, herbal, eucalyptus, sweet, mint and/or terpeneol-like notes

INT FLAVORS & FRAGR INC 06.04.79-US-027949 (04.02.75-US-547057)

E13 (29.01.80) C11d-03/50

Solid or liq. detergent compsns. are prep'd. by mixing a detergent base with 100 ppm.-3% by wt. of a spiro:pyran compsn. consisting of ≥ 1 of (a) cpd. (I); (b) a mixt. of cpds. (II)-(IV); (c) a mixt. of cpds. (V)-(VII) or (d) a mixt. of cpds. (VIII)-(X).



(I)-(X) are used in a variety of anionic, cationic, or non-ionic detergents.

6.4.79 as 027949 (+30.6.77; 4.2.77-US-701249; 765629) (28pp478)

LIOY D25 24218B/13 = US 4186-114
Easily rinsed out granular detergent compsns. - contain alpha-olefin-sulphonate, polyoxyethylene polyoxypropylene alkyl ether and inorganic builder

LION FAT & OIL KK 12.09.77-JA-108782

A97 E17 (A25) (29.01.80) *DT2839-619 C11d-01/14 C11d-17/06

Granular detergent compsn. consists of (i) 10-31 wt.% of synthetic organic surfactant consisting of a mixt, of (a) 12-18C α -olefin sulphonate and (b) polyoxyethylene-polyoxypropylene alkyl ether having 9-15C alkyl gp. and 6-22 ethylene oxide units and 2-8 propylene oxide units in a wt. ratio (a)0(b) of 10/3 to 1/1, and (ii) a water-soluble inorganic builder.

Pref. the sulphonate contains ≤ 10 wt.% of disulphonate and the builder is Na pyrophosphate. Compsn. has good powder properties and is easy to rinse out after being used for washing. 5.9.78 as 939455 (5pp982)

See Also

D21 J5 4163574	D22 GB 1560525
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- *AAZM= 20.01.78 AS AZERB MICROBIOL B05 D13 E14 *SU -663-717
Physiologically active meta-cresotinic acid microbiological prepn. - 10633C/06
- *ABEL/ 22.07.78 ABEL G D15 *DT 2832-277
Sewage treatment - 09409C/06
- *ADAM/ 28.02.78 ADAMS C M D15 J01 *US 4185-468
Appts. for sepg. impurities from solvent - 10930C/06
- *AGAA 12.06.78 AGA HEATING AB D16 *SW 7905-078
Composting device for organic household waste - C/06
- *AGEN 09.06.78 AGENCY OF IND SCI TECH D15 H07 J01 *J5 4161-749
Coagulation-sedimentation treatment of oil-contg. waste water - 10047C/06
- AHSC 13.07.78 AMER HOSPITAL SUPPL CORP B04 D16 =NL 7905-141
Enzymatic assay of tri:glyceride in biological fluid - 82609B/46
- AIRP 24.09.75 AIR PRODUCTS & CHEM INC D15 =GB 1560-655
Aeration tank for activated sludge treatment of waste water - 19956Y/12
- AJIN 30.11.72 AJINOMOTO KK B05 D16 E16 =J8 0001-040
L-lysine prodn - 61502U/41
- AJIN 10.01.78 AJINOMOTO KK D13 =US 4186-218
Improving the quality of denatured defatted soybean protein - 65619B/36
- ALBR 21.06.67 ALBRIGHT & WILSON LTD D23 =IT 1036-006
Treatment of aqueous soap layers - 50674Z/00
- ALFA 20.04.78 ALFA-LAVAL AB D13 =FR 2423-146
Gravity pressure extrusion to mfr. blocks of cheese from curds - 64736B/36
- ALLI/ 17.04.78 ALLIGER H D22 #FR 2423-225
Germicidal compsn. prepn. from sodium chlorite - 41958A/23
- ALPI- 30.05.78 ALPI MILCHIND D13 =DK 7902-201
Preparing whey products equiv. to skimmed milk in protein - 71817B/40
- ALSO- 04.01.77 ALSO LAB SORBINNI & B01 D21 =GB 1560-461
Agents for treating scalp and preventing hair loss - 50097A/28
- *ALZA 08.04.76 ALZA CORP A25 B07 C03 D13 (A96 A97 B04 D21) *US 4186-185
Controlled release pharmaceutical compsn. - 11086C/06
- AMCY 03.11.70 AMERICAN CYANAMID CO A96 B04 C03 D16 (A21 A91) =J8 0001-025
Animal feed additive contg an antibiotic av 290 syntan complex - 31285T/20
- AMCY 18.04.78 AMERICAN CYANAMID CO A91 D15 (A14) =FR 2423-449
Dewatering lime disinfected sewage sludge - 56195B/30
- AMPO- 03.05.66 AMERICAN POTATO CO D13 =NL -162-548
Dehydrated potato products - 30668R/18
- AMTO 07.03.68 AMERICAN TOBACCO CO D18 =IT 1036-017
Tobacco stem smoking taste improvement - 07731S/04
- *ANDE/ 17.07.78 ANDERLL D15 F07 *DT 2831-365
Waste water fluff filter - 09328C/06
- ANIS 21.07.78 ANIC SPA A60 D23 E14 (D13) =BE -877-820
Phenolic ether prodn. from phenol cpd. and carboxylic alkyl ester - 09473C/06
- *ANIS 21.07.78 ANIC SPA A60 D23 E14 (D13) *DT 2929-082
Phenolic ether prodn. from phenol cpd. and carboxylic alkyl ester - 09473C/06
- ANIS 21.07.78 ANIC SPA A60 D23 E14 (D13) =GB 2026-484
Phenolic ether prodn. from phenol cpd. and carboxylic alkyl ester - 09473C/06
- *ANVR 05.08.76 AGENCE NAT VALORISATION B07 C03 D16 *FR 2423-217
Administration of myxomatosis vaccine - 09734C/06
- *ANVR 18.04.78 ANVAR AGENCE NAT DE B04 D16 *FR 2423-541
Sorting of microorganisms, esp. bacteria - 09752C/06
- *APAL/ 17.12.74 APALOVIC R D13 *CS 7408-647
Waste lignocellulose materials treatment - C/06
- APVC 26.02.74 APV CO LTD D14 =NL -162-549
Rotary autoclave for sterilising particulate foodstuffs - 60779W/37
- *AREN 19.07.78 ARENCO-BMD MASCH D18 *DT 2831-617
Wet-tanning hides and pelts - 09350C/06
- *ARIE- 16.11.77 ARIE S A D13 *FR 2423-163
Cold milk-based food prod. expanded with air - 09731C/06
- ASAH 08.06.76 ASAH KASEI KOGYO D15 =CA 1070-189
Preservation and transport of live fish and shell fish - 20467A/11
- ASAH 08.09.76 ASAH KASEI KOGYO A14 D15 J01 L03 (A32 A85 D16) =FR 2423-871
Porous polyacrylonitrile membranes with compact skins - 30455A/17
- *ASAH 13.06.78 ASAH CHEMICAL IND KK A88 D15 H07 J01 *J5 4163-904
Treating oil emulsion opt. contg. surfactant - 10366C/06
- *ASKO- 12.06.78 ASKO-UPO OY D16 *SW 7905-078
Composting device for organic household waste - C/06
- *ASMI= 11.01.77 AS USSR MICROB PHYS D16 *SU -663-713
Continuous cultivation of yeasts *Saccharomyces cerevisiae* - 10629C/06
- *ATOM= 13.12.76 ATOM POWER ENG INST D15 J01 *SU -664-664
Uniform regeneration of cation exchanger - 10778C/06
- AVIR- 05.03.76 AVIREM SOC AVICULT D12 =FR 2423-672
Quick action grapple for overhead poultry conveyor - 61148Y/35
- AZIE- 12.06.75 AZIENDA ACQUEBOTTO D15 =IT 1036-285
Sewage purification by percolation through activated carbon bed - 21357A/11
- *AZOV= 04.05.77 AZOV BLACK SEA AGRI C03 D13 *SU -664-629
Highly nutritive feed for ruminants - 10767C/06
- BADI 19.04.78 BASF AG D18 E21 F06 =FR 2423-519
Reactive mono:azo dyes of aromatic series - 79257B/44
- BADI 08.06.78 BASF AG D18 =GB 2026-538
De-liming limed hides - 73687B/41
- BADI 14.07.78 BASF AG D23 E15 =DT 2830-971
Di:hydro-bisabolene and di:hydro-bisabolol derivs. - 05772C/04
- *BADI 15.07.78 BASF AG A89 D15 E14 G06 *DT 2831-263
Quat. ammonium cpds. of benzoic derivs. - 09318C/06
- *BADI 20.07.78 BASF AG D25 E11 (E17) *EP ---7-566
Acylated phosphoric and sulphuric acid derivs. - 09559C/06
- *BADI 21.07.78 BASF AG D25 E16 *DT 2832-021
Continuous N,N,N',N'-tetra:acetyl ethylene di:amine prepn. - 09373C/06
- *BAKP 11.05.78 BAKER PERKINS LTD D13 *GB 2026-378
Depositor placing cooked viscous confection in advancing moulds - 09805C/06
- BAUM- 08.12.75 BAUMGARTNER PAPIERS D18 =US 4185-645
Continuously producing cigarette filter tips - 25317Y/15
- *BDAl= 06.10.77 BELO DAIRY IND RES D13 *SU -664-627
Casein continuous prodn. - 10765C/06
- BECK- 16.05.75 NATURIN-WERK BECKER A35 D12 (A97) =CA 1070-163
Pre-softening tie zones on sausage skin ends - 88810X/48
- BECT 09.12.70 BECTON DICKINSON CO D16 =DS 2144-245
Flexible petri dish - 42877T/27
- BEEC 28.03.74 BEECHAM GROUP LTD B04 D16 =CS 7502-120
Antibiotic MM 13902 from *Streptomyces olivaceus* - 67720W/41
- *BEEC 28.07.78 BEECHAM GROUP LTD A96 D21 E12 *EP ---7-704
Prepn. of hair conditioning compsns. - 09635C/06
- *BEEC 28.07.78 BEECHAM GROUP LTD A96 D21 E15 *GB 2026-319
Oil-in-water emulsion base skin care compsn. - 09793C/06
- BEHW 23.01.76 BEHRINGWERKE AG B04 C03 D16 =DS 2602-478
Vaccine against feline panleukopenia or infectious gastroenteritis - 52202Y/30
- BEHW 14.04.76 BEHRINGWERKE AG B04 D16 =GB 1560-344
Agent for gastro-enteritis treatment and prevention - 74168Y/42
- BEHW 06.07.78 BEHRINGWERKE AG B04 D16 =EP ---7-461
Hepatitis A virus recovery from monkey stools - 07676C/05
- BERG 31.07.74 BERGWERKSVERBAND GMBH D15 =DS 2436-792
Waste water purify by adsorption of activated carbon - 78746W/48
- BERG/ 24.01.77 BERGE J M A D13 =FR 2423-147
Preliminary ultrafiltration of milk for soft cheeses - 53458A/30
- BETT- 17.07.78 BETTCHER IND INC D12 =DT 2926-914
Hand held meat knife with rotating annular blade - 01506C/01
- BETT- 17.07.78 BETTCHER IND INC D12 =DT 2926-915
Rotating ring knife mounted in hand-held tool - 76945B/42
- *BEZE/ 00.00.77 BEZEMEK J D22 *CS 7706-206
Non-toxic deodorant - C/06
- BIFO- 14.06.78 BIFOK AB D16 J04 =SW 7806-853
Continuous flow analysis device - 00375C/01
- *BIOL= 02.11.76 BIOLOG ENG RES D16 *SU -663-723
Nutrient medium for cultivation of photo autotrophic micro-algae - 10638C/06
- *BIOL= 01.03.78 BIOLOGY RES INST A97 D15 E36 *SU -664-683
Sorbent for removal of sulphur-contg. cpds. from aq. waste - 10793C/06
- BIOM- 14.09.77 INST BIOMEDIZIN TEC D22 =EP ---7-355
Anodic oxidn. sterilisation of fluids - 22267B/12
- BLEN/ 08.07.78 BLENKE H A13 D16 J04 =EP ---7-489
Chemical and biochemical reactor - 07687C/05
- BOEF 27.07.76 BOEHRINGER MANNHEIM GMBH B04 D16 =US 4186-052
Streptococcus faecalis ATCC 8043 NADH peroxidase - 10543A/06
- BOEF 12.06.78 BOEHRINGER MANNHEIM GMBH A96 B04 D16 J04 =J5 4163-882
Microbiological test materials e.g. for detecting microorganisms - 00076C/01
- BOEF 03.07.78 BOEHRINGER MANNHEIM GMBH D15 =BE -877-403
Increasing biological breakdown of toxic waste water - 03746C/03
- *BOEF 01.08.78 BOEHRINGER MANNHEIM GMBH B04 D16 *EP ---7-476
Determin. of nicotinamide-adenine di:nucleotide or its phosphate - 09528C/06
- BOEH 03.06.78 BOEHRINGER C H SOHN B04 C03 D16 =DK 7902-306
Antiviral compsn. contg. eucaryotic transfer-RNA - 87609B/49
- BOHL/ 31.10.75 BOHLMANN P D16 H06 =CS 7606-433
Additive for mineral oil prods. to improve combustion - 20075Y/12
- BOLI 24.10.77 BOLIDEN AB D15 =EP ---7-366
Purificn. of water with magnetic sepn. of pptd. sludge - 31595B/17
- *BRAN- 23.10.78 BRANDT INC D13 *US 4185-927
Dehydrated potato reconstituting appts. - 10991C/06
- *BRAN/ 17.09.75 BRANCATO D D14 *IT 1036-205
Appts. for forming solns. of chemical cpds. - C/06
- BRAU- 10.12.76 BRAUN K O KG A96 D22 F07 =CA 1070-217
Readily torn elastic bandage for surgical and sports usage - 80224A/45
- *BRES= 16.01.78 BREST ENG CONS INST D15 *SU -664-929
Aerator for water purificn. system - 10879C/06
- BRIM 04.10.71 BRISTOL MYERS CO D21 E24 =DS 2240-495
Hair dye - contg a para diamino cpd and a coupler reacting - 20809U/15

BRIM

- BRIM 15.10.73 BRISTOL MYERS CO D21 E24 = NL -162-559
Light- and perspiration-resistant hair oxidn dyes - 27959W/17
- * BRSY- 12.03.76 BRIT SYPHON IND LTD D15 *GB 1560-753
Carbonating vessel for drinks dispenser - 09790C/06
- BRTA 18.08.70 BRIT AMER TOBACCO LTD A97 D18 (A18) = NL -162-550
Cigarette cover - 15463T/10
- BRUN/ 10.06.74 BRUNNER P D12 = IT 1036-161
Slaughtering stall for cattle - 75798W/46
- * BUDE- 18.07.78 BUDERUS AG D15 J01 *DT 2831-434
Filter for oil separation from water - 09332C/06
- BUGA/ 19.08.77 BUGAUT A D21 E14 (E12) = US 4185-958
Hair colouring compsn. contg. direct colourants - 14188B/08
- BUHL 31.07.75 BUEHLER GEGR AG D11 = GB 1560-545
Fluidised bed drying tunnel for pasta prods. - 33193Y/19
- BURR- 08.12.75 BURRUS F J & CIE D18 = IL -51-051
Continuously producing cigarette filter tips - 25317Y/15
- BURR- 08.12.75 BURRUS F J & CIE D18 = US 4185-645
Continuously producing cigarette filter tips - 25317Y/15
- CALG 05.06.78 CALGON CORP D15 M14 = DK 7902-318
Corrosion inhibiting compsn. for water treatment appts. - 89851B/50
- CALI 30.05.78 CHEVRON RESEARCH CO A97 D11 H07 J07 (E17) #DK 7802-399
Lubricants for refrigerators, heat pumps and heat engines - 60814A/34
- CANP 19.07.78 CANADA PACKERS LTD D23 (D13) = DT 2929-106
Continuous bleaching of oils and fats esp. edible material - 84203B/47
- CANT- 06.08.75 CANTON TEXTILE MILL D15 = GB 1560-412
Aerobic treatment of liquid wastes - 88614X/47
- * CARD- 22.09.78 CARDIGIANI BRUTO MA D13 *BE -878-929
Machine which homogenises heats and freezes liq. mixt. - 09241C/06
- CARL- 12.07.76 CARLE & MONTANARI D13 = NL -162-546
Mould fastener for continuous chocolate moulding machine - 61268Y/35
- CARL- 07.06.78 CRLE & MONTANARI D13 = DK 7902-292
Automatic synchronisation of dispenser with mould boxes - 91331B/51
- CARN- 29.04.77 CARNATION CO D13 E12 = CA 1070-162
Coffee whitener contg. acetate as stabiliser salt - 53347A/29
- * CHAG= 20.02.78 CHELY AGRIC MECHAN D23 *SU -664-621
Wax extraction from raw material produced by bees - 10760C/06
- * CHAR- 19.07.78 CHARLES OF THE RITZ A96 D21 E14 (A14 A17) *DT 2929-101
Sun-tan compsn. esp. water-in-oil emulsion - 09477C/06
- CHEM 22.10.75 CHEM WERKE HULS AG A35 D21 E13 (A23) = GB 1560-573
Cyclic diesters prepn. of dodecanedioic acid - 32890Y/19
- CHEM- 15.06.78 CHEMED CORP A97 D15 E11 = SW 7905-174
Organo-phosphonic acid scale inhibitors - 00221C/01
- * CHFW 25.11.78 WERNER & MERTZ D11 *DS 2851-053
Whole-meal bread mfr. - 09267C/06
- * CHOK/ 14.06.78 CHOKAN K D16 *J5 4163-898
Culturing film-forming yeast on rice liquor surface - 10363C/06
- CHUR- 23.06.72 CHURCH & DWIGHT CO D25 E12 = DS 2331-353
Oven cleaner - 02853V/02
- CHUR- 30.06.76 CHURCH & DWIGHT CO D25 E34 = CA 1070-210
Washing powder compsn. based on sodium carbonate - 77625Y/44
- CIBA 23.12.75 CIBA GEIGY AG A60 C01 D22 E12 = GB 1560-578
Triorgano-tin cyano-metallate cpds. - 49782Y/28
- CIGA 21.04.78 CIGARETTE COMPONENT LTD D18 F07 = FR 2423-169
Cigarette filter additives carried on preimpregnated threads - 64740B/36
- CITR- 12.07.78 CITRUS CENTRAL INC D13 E24 #DT 2830-663
Solventless recovery of carotenoid(s) from citrus fruit - 87772A/48
- * CNRS 02.08.78 INST NAT SANTE RECH MED B04 D16 *EP ---7-879
3-Keto-steroid-5-ene isomerase enzymatic markers - 09721C/06
- COCH/ 18.04.78 COCHARD M A89 D16 J04 = FR 2423-769
Moulded, transparent plate used in biological agglutination study - 81082B/45
- COLG 24.12.75 COLGATE PALMOLIVE CO D21 E19 = GB 1560-399
Hair conditioning compsns. contg. organic peracid - 49033Y/28
- COLG 20.08.76 COLGATE PALMOLIVE CO A96 D22 = GB 1560-432
Diaper having absorbent cellulosic pad - 72135Y/40
- COLG 08.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = BR 7903-572
Throwaway sanitary articles - 73668B/41
- COLG 08.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = DK 7902-366
Throwaway sanitary articles - 73668B/41
- COLG 08.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = J5 4163-136
Throwaway sanitary articles - 73668B/41
- COLG 09.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = DK 7902-386
Disposable absorbent hygienic pad with hydrophobic layers - 75332B/42
- COLG 09.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = DK 7902-388
Throwaway sanitary products e.g. napkin - 73650B/41
- COLG 09.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = J5 4163-137
Throwaway sanitary products e.g. napkin - 73650B/41
- COLG 09.06.78 COLGATE PALMOLIVE CO A96 D22 F07 = J5 4163-138
Disposable absorbent hygienic pad with hydrophobic layers - 75332B/42
- COMS 05.06.74 COMMISS ENERGIE ATOMIQUE D15 J01 = IT 1036-163
Small volume extraction involving two miscible liquids - 72516W/44
- * CONS= 09.08.77 CONSERVE FRUIT DRYI D13 *SU -664-628
Hydrolysate purification for condiment prodn. - 10766C/06
- * CONS= 23.01.78 CONS MATERIAL SAFET D15 E31 *SU -664-934
Chromium ions removal from aq. waste - 10884C/06
- CORP 08.05.78 CPC INTERNATIONAL INC D16 (D13 D23) = J5 4163-890
Microbiological prodn. of glyceride oil - 84535B/47
- CORP 18.07.78 CPC INTERNATIONAL INC D13 = BE -877-565
Storage-stable aq. acidic condiment dispersion e.g. salad dressing - 09343C/06
- * CORP 18.07.78 MAIZENA GMBH D13 *DT 2831-556
Storage-stable aq. acidic condiment dispersion e.g. salad dressing - 09343C/06
- CRCH 07.05.76 CIA DI RICERCH CHIM SA C03 D16 #SU -664-531
Bacillus thuringiensis insecticide prodn. - 81408Y/46
- CSIR 19.08.74 COMMONWEALTH SCIENT ORG B05 C03 D13 = CA 1070-158
Feed additives for ruminants - 19144X/11
- DAII 06.10.71 DAI-ICHI KOGYO SEIY D24 = J8 0001-320
Detergent compsn for use in washing machines - 17591U/13
- DAIL 19.09.75 DAICEL KK A88 D18 F06 (A11) = GB 1560-418
Cigarette filters contg. cellulose acetate fibres - 22221Y/13
- DAMO- 20.06.78 DAMON CORP B01 D16 J04 K08 = NO 7902-030
Determin. of biologically active species in protein-contg. sample - 77217B/43
- DEBA- 28.07.71 DEBAG DEUT BACKOFEN D11 = DS 2137-770
Automatic bakery plant - 09899U/08
- DEGM 17.09.76 DEGREMONT SA D15 = GB 1560-520
Packaged plant for physicochemical purification of waste water - 04212A/03
- DEGS 26.07.75 DEUTSCHE GOLD UND SILBER D25 E33 J04 M12 (J01) = GB 1560-543
Alkali zeolite prodn. in presence of sulphate ions - 07562Y/05
- DEGU/ 10.09.75 DEGUCHIK D15 E33 = GB 1560-674
Water defluorination by aluminium fluoride formation and pptn. - 20335Y/12
- DELA/ 17.04.78 DELAUNAY J P C04 D15 = FR 2423-468
Deodorising treatment for pig excrement - 79472B/44
- DENT- 15.06.78 DENTAL THERAPEUTI D21 E19 = NO 7901-980
Cleaning agent for dentine surfaces - 09172C/05
- DENT- 15.06.78 DENTAL THERAPEUTICS D21 E19 = SW 7806-914
Cleaning agent for dentine surfaces - 09172C/05
- * DIDI 22.07.78 DIDIER ENGINEERING D15 H09 *DT 2832-289
Purification of coke oven effluent water - 09412C/06
- DISI= 13.07.78 DISINTEGRATOR DES C03 D13 = NL 7905-437
Bacterially produced animal feedstuff - 07998C/05
- DISI= 13.07.78 DISINTEGRATOR DES C03 D16 (D13) = NL 7905-438
Bacterially produced dietary supplement for humans and animals - 07999C/05
- DIVE 06.06.78 DIVERSEY CORP A88 D13 J01 (D15 D16) = DK 7902-325
Multielement pipe filter for milk, wine effluent etc. - 73649B/41
- DOKO/ 26.11.76 DOKOUPIL J D18 = DT 2660-485
Continuous leather embossing machine - 40602A/23
- DORO 24.05.78 DORR OLIVER INC D15 J04 = J5 4163-782
Flow distributor for fluid bed reactor - 86324B/48
- * DOWC 06.09.77 DOW CHEMICAL CO A26 D22 *US 4186-191
Sanitising or disinfecting contaminated substrate - 11089C/06
- * DOWC 27.03.78 DOW CHEMICAL CO A96 D22 (A14 A82) *US 4186-233
Sanitary towels, etc. comprising absorbent water swellable film - 11114C/06
- DUPO 13.06.75 DU PONT DE NEMOURS CO D13 (D16) = CA 1070-160
Mycelium texturing for human food - 00327Y/01
- DUPO 16.06.75 DU PONT DE NEMOURS CO D16 = CA 1070-159
Treating fermentation filter cake contg. protein - 02343Y/02
- DUPO 15.02.78 DU PONT DE NEMOURS CO A96 B04 D16 = J5 4163-886
Sepn. of creatine kinase isoenzyme(s) - 61783B/34
- * DURO/ 14.07.78 DUROLF P B07 D22 *DT 2830-977
Sterilisation of medicine in closed bottles - 09302C/06
- * EBAI 14.06.78 EBARA INFILCO KK A88 D15 J01 *J5 4162-683
Desalination of water contg. silica - 10131C/06
- ECOL- 08.06.78 ECOLOGICAL CONS PRO B04 C03 D13 (D16 D21) = DK 7902-358
Comminution of algae material - 91502B/51
- ECOL- 08.06.78 ECOLOGICAL CONSULTA B04 C03 D13 (D16 D21) = NO 7901-860
Comminution of algae material - 91502B/51
- * ECOL- 19.07.78 ECOLOTROL INC D15 *EP ---7-783
Excess growth control system for fluidised bed reactor - 09673C/06
- ECOT- 03.05.72 ECO TEC LTD D15 J01 M11 #US 4186-174
Ion exchange cong. of solns - 74402U/49
- EICK/ 17.10.67 EICKEMEYER R A11 D17 F09 (A71) = NL -162-692
Cellulosic materials decomposing percolator - 62775Z/00
- EINH- 16.07.75 EINHELL H GMBH D15 J03 = GB 1560-730
Electrolysis cell for water purificn. - 05655Y/04
- ELIL 25.05.78 ELI LILLY & CO B04 D16 = J5 4163-502
Antibiotic A-38533 complex contg. four separate factors - 89800B 50
- * ELLE/ 18.09.78 ELLENBERGER W C03 D13 *BE -878-848
Protein hydrolysate prodn. by acid hydrolysis of lactalbumin - 09224C 06

- ELLN/ 07.06.78 ELLNER S D15 (D22) #DK 7802-525
Ultraviolet liquid purification system - 79920A/44
- ELLN/ 12.06.78 ELLNER S D15 (D22) #SW 7806-771
Ultraviolet liquid purification system - 79920A/44
- ELMQ- 27.07.77 ELMQVIST O A88 D15 =EP ---7-340
Heat exchanger flow elements comprising plastics foils - 15958B/08
- ERAP 24.11.72 ENTR RECH ACTIVIT PETROL B05 D16 E17 H04 =IT 1036-051
Diploid strains of candida lipolytica - 25020V/14
- *ESCH/ 27.12.78 ESCH M A97 C03 D13 *BE -878-821
Hardened animal foodstuff additive - 09216C/06
- *ESSO 03.01.78 EXXON RES & ENG CO D15 *US 4186-085
Treatment of waste water - 11049C/06
- ETHI 30.05.78 ETHICON INC A96 D22 E12 F01 =US 4185-637
Multifilament suture material with good knotting properties - 89654B/50
- EVER- 21.07.78 EVERS D & ASSOC LTD C04 D15 E17 H06 =DT 2929-062
Treating biodegradable effluent anaerobically to recover methane - 84213B/47
- FAME- 05.06.78 FAMECCANICA SPA A96 D22 =BR 7903-508
Baby's disposable napkin pants - 91366B/51
- FAME- 05.06.78 FAMECCANICA SPA A96 D22 =GB 2026-323
Baby's disposable napkin pants - 91366B/51
- FANT- 02.09.77 FANTASIA CONFECTION D11 =EP ---7-350
Device for cutting sheet cakes into small pieces, e.g. petits/fours - 72063A/40
- FARB 19.04.74 BAYER AG A88 D15 J01 (A26 D13) =CA 1070-065
Polybenz-1,3-oxazine-2,4-dione semi-permeable membranes - 74310W/45
- FARB 31.01.75 BAYER AG A82 D18 (A25) =DS 2504-081
Tanning process using hydrophilic oligo-urethanes - 05919X/04
- FARB 24.02.76 BAYER AG A60 C03 D22 E14 (D15 D21) =GB 1560-427
Biocidal (meta)-chlorophenols active against Pseudomonas aeruginosa - 61418Y/35
- FARB 03.05.76 BAYER AG A97 B04 D16 =IL --51-978
Activated polymeric supports for enzymes, etc. - 79349Y/45
- *FARB 11.07.78 BAYER AG B03 C02 D13 *DT 2830-457
6-Substd. amino-6-deoxy-l-sorbo:furanose salts - 09283C/06
- FARB 13.07.78 BAYER AG C01 D22 E11 F09 =DT 2830-766
2-Cyclopropyl-pyrimidinyl phosphoric and phosphonic acid derivs. - 05760C/04
- FARB 19.07.78 BAYER AG A41 C03 D21 E17 =DT 2831-719
Polyhydric alcohol prepn. by two/step formose hydrogenation - 05788C/04
- *FARB 22.07.78 BAYER AG B03 C02 D13 *DT 2832-268
Sisomycin-type pseudo-tri:saccharide cpds. - 09408C/06
- *FARB 22.07.78 BAYER AG A25 D23 E19 G02 *DT 2832-346
Prepn. of hydroxyalkyl per:fluoroalkyl sulphonamide cpds. - 09421C/06
- FARB 22.07.78 BAYER AG A25 D23 E19 G02 =EP ---7-519
Prepn. of hydroxyalkyl per:fluoroalkyl sulphonamide cpds. - 09421C/06
- FARH 23.09.71 HOECHST AG D12 =US 4185-358
Tubular sleeve corrugator - 20104U/15
- FARH 28.06.75 HOECHST AG D25 E34 (E12) =NL -162-613
Alkali phosphates with high degree of whiteness - 04109Y/03
- FARH 10.05.78 HOECHST AG A60 D25 E13 F06 =EP ---7-392
Optical brightening stilbene derivs. - 84282B/47
- FARH 08.06.78 HOECHST AG A60 D22 E14 G06 (E24) =BR 7903-602
Resorcinol derivs. prodn. from delta-keto carboxylate ester - 00050C/01
- FARH 09.06.78 HOECHST AG A60 D25 E23 F06 =J5 4162-725
Pyrido:oxazolyl or pyrido:thiazolyl substd. stilbene derivs. - 02006C/02
- FARH 09.06.78 HOECHST AG A60 D25 E23 F06 =J5 4163-577
Unsymmetrical 4,4-bis:oxadiazolyl stilbene derivs. - 02005C/02
- FARM- 06.05.74 INST FARMACOL ESPAN D16 =IT 1036-212
Clearing or prevention of clouding of aq liquids e.g. drinks - 78067W/47
- *FASS/ 18.07.78 FASSBENDER H A97 D18 *DT 2831-475
Chrome leather for calcium chloride-resistant protective clothing - 09337C/06
- FERR/ 16.06.78 FERRUTI P A96 B07 D22 L01 (B04) =NO 7902-009
Rendering glass non-thrombogenic - 75368B/42
- FERR/ 16.06.78 FERRUTI P A96 B07 D22 L01 (B04) =SW 7905-270
Rendering glass non-thrombogenic - 75368B/42
- FIND- 13.06.78 PROD FINDUS SA D13 =NO 7901-784
Frozen fried vegetables - 02109C/02
- FINL/ 16.09.77 FINLEY W T D15 =EP ---7-356
Elevating nutrient-rich ocean water from aphotic to photic zone - 25900B/13
- FINN- 28.02.78 FINNPIPETTE SUOVAN B04 D16 J04 =FR 2423-783
Automatic measurement of agglutination test samples - 64904B/36
- FIRM 07.03.74 FIRMENICH SA B07 D23 E15 =NL -162-688
Aroma substance from caryophyllene and/or humulene - 62495W/38
- FIRM 04.10.77 FIRMENICH SA B07 D13 E13 (B03) #GB 1560-286
Tetra:methyl-oxa-spiro-deca:diene cpds. - 34615B/18
- FIRM 15.06.78 FIRMENICH SA B05 D13 E15 (B07) =J5 4163-865
Alpha-di:hydro-ionone used as aroma for foods and pharmaceuticals - 00240C/01
- *FIRM 05.07.78 FIRMENICH SA B05 D13 E15 (B07 D21 D23) *EP ---7-486
3-Methyl tri:cyclo(6.2.1.0)-undecane derivs. - 09534C/06
- FISH- 29.01.76 FISHER SCIENTIFIC C B04 D16 =GB 1560-570
Extracting membrane or surface antigens - 54082Y/31
- *FIVE 18.07.78 FIVES-CAIL BABCOCK D17 *EP ---7-859
Horizontal drum for countercurrent contacting of liq. and solid - 09715C/06
- FMCC 15.07.75 FMC CORP D25 E34 =CA 1070-084
Sodium peroxycarbonate crystals continuous prepn. - 07454Y/05
- FMCC 15.07.75 FMC CORP D25 E34 =CA 1070-085
Drying crystalline sodium peroxycarbonate without decomposition - 07455Y/05
- FMCC 30.09.75 FMC CORP D15 =CA 1070-293
Diffusing gas into liquid from rotating porous disc - 90502X/48
- FMCC 31.05.78 FMC CORP D13 =DK 7902-234
Powder for stabilising and enhancing quality of dairy prods. - 89801B/50
- *FMCC 27.07.78 FMC CORP D15 *US 4186-091
Water straining unit for removing fish and refuse - 11053C/06
- *FOOD= 25.05.77 FOOD IND EXTRAMURAL D14 *SU -664-631
Liquid and puree type food products steriliser - 10769C/06
- *FOOD= 27.01.78 FOOD IND CORR COLL D16 *SU -663-718
Changing colour and flavour of wine - 10634C/06
- FORM- 20.10.75 FORMAX INC D13 =GB 1560-414
Machine for forming hamburgers or similar prods. - 32117Y/18
- *FRIM/ 16.05.77 FRIML Z D18 *CS 7703-175
Synthetic tannins prepn. - C/06
- *FRRR 23.06.75 FERRERO P & CIA SPA D13 *IT 1036-352
Nougat-like confectionery product prodn. - C/06
- *FUJF 21.07.78 FUJI PHOTO FILM KK D15 *DT 2922-281
Continuous water degassing - 09437C/06
- FUJI 24.04.72 FUJISAWA PHARM KK B02 D16 =J8 0001-271
3-Substd methyl 7 amino 3 cephem 4 carboxylic acids - 21812V/12
- *FURU/ 13.06.78 FURUSAWA E C03 D16 (C04 D13 D15) *J5 4163-881
Microorganism mixt. prodn. - 10361C/06
- *GASH- 18.04.78 GASHOR-OOMS SA D11 *FR 2423-159
Automatic loader for charging fermented dough pieces into bakery oven - 09729C/06
- GENE- 08.11.77 GENENTECH INC B04 D16 =J5 4163-600
Recombining plasmid for transformation of bacteria - 35257B/19
- GENM 25.02.76 GENERAL MILLS INC D13 =J8 0001-022
Freeze thaw stabilisers for ice cream etc. - 96194X/51
- GENO 20.08.70 GENERAL FOODS CORP D13 =J8 0001-024
Artificial meat products - 15471T/10
- GENO 09.03.76 GENERAL FOODS CORP C03 D12 E17 =CA 1070-156
Intermediate-moisture pet food contg. meat and sorbic acid - 68700Y/38
- GENO 09.03.76 GENERAL FOODS CORP C03 D12 =CA 1070-157
Intermediate-moisture pet foods contg. polyhydric alcohol - 70625Y/39
- *GILL 30.05.78 GILLETTE CO A97 D13 (A18) *US 4186-214
Chewing gum with prolonged flavour release - 11102C/06
- *GIPR= 26.10.76 GIPRONINMETALLORUD D15 *SU -664-932
Removing organic and mechanical impurities from aq. waste - 10882C/06
- GIVA 22.02.73 GIVAUDAN L & CIE CORP A96 B04 D16 (A21) =US 4186-053
1,3-Phenylenediamine/glutaraldehyde condensation product - 63478V/36
- GIVA 25.07.78 GIVAUDAN L & CIE SA D18 E15 =EP ---7-582
2-Hydroxy methylene-cyclohexan-1-one(s) - 07166C/04
- GLAT- 30.09.77 GLATZ J GMBH A97 D18 F09 =US 4185-643
Cigarette filter covering strip with cork appearance - 29872B/16
- GLAX 26.04.78 GLAXO LTD A97 B04 D16 =J5 4163-880
Acromonium chrysogenum strains for cephalosporin prodn. - 80819B/45
- GLED/ 18.04.78 GLEDITZSCH I D23 =FR 2423-532
Sepn. of untreated animal fat into water grease, and tissue - 64727B/36
- *GOET/ 21.07.78 GOETTING T J A97 D13 (A13 A25) *EP ---7-777
Incubating jacket for yoghurt culture - 09671C/06
- GOJO 30.01.76 GORDON JOHNSON CO D12 =NL -162-545
Poultry evisceration by cooperating pullers - 32425Y/18
- GOLD- 18.06.75 GOLDWELL DOTTE GMBH D21 #IT 1036-324
Device for foaming liquid cosmetics - 02008Y/01
- GOLD- 09.02.76 GOLDEN WONDER LTD D13 =NL -162-547
Expanded cereal esp. maize prod. from extrusion cooker - 39922Y/23
- GOOR 02.07.74 GOODRICH B F CO A14 B07 D21 (A91) =IT 1036-409
Copolymers of unsatd. carboxylic acids and higher alkyl(meth)acrylates - 75628W/45
- GRAC 02.08.77 GRACE W R CO B02 D16 =EP ---7-341
Tetra:cyclic antitumour agent quadron - 87867A/49
- GRAC 01.02.78 GRACE W R CO B02 C02 D16 =J5 4163-896
Fermentative prodn. of monordene - 40690B/22
- *GRAM- 01.06.78 BRODRENE GRAM A/S D14 *DK 7802-452
Freezing cylinder for a continuously operating ice cream freezer - C/06
- *GRAT/ 19.07.78 GRATZER G D15 E36 J01 *DT 2831-614
High grade activated carbon prodn. from crude lignite - 09349C/06
- *GREC 10.10.78 GREEN CROSS CORP A96 D22 *US 4186-253
Perfusate for preserving organs to be transplanted - 11125C/06
- GRIF- 22.01.70 GRIFFIN POLLUTION B04 D16 E36 =IT 1036-039
Microorganism culturing - 50799S/31

- GUBE 15.06.78 GUBERNATOROVA VA D15 E36 #J5 4162-846
Removal of nitrate(s) nitrite(s) and organic cpds. from waste water - 77373B/43
- HAAG- 13.07.78 HAAGSE BAKKERIJM BV D11 =NL 7807-547
Dough shapes mfr. - 07786C/05
- HAAR 09.07.75 HAARMANN & REIMER GMBH B05 D23 E15 J01 =DS 2530-481
Batch crystalliser for prodn. of large crystals - 04157Y/03
- HAGI/ 14.09.71 HAGIWARA Y D13 =J4 8036-375
Extracting germ components from crops - 10479C/06
- *HAGI/ 14.09.71 HAGIWARA Y D13 *J8 0001-027
Extracting germ components from crops - 10479C/06
- HARR- 06.06.78 HARRIS HATCHERY INC D12 =US 4185-359
Cleaning abdominal cavity of poultry - 15435B/08
- HARV- 08.06.78 HARVARD COLLEGE B04 D16 =DK 7902-379
Protein prodn. from bacterium contg. recombinant gene - 05454C/03
- HAYA/ 14.01.72 HAYAKAWA N A97 D16 =J4 8075-796
Alcoholic beverage, e.g. Japanese sake, in solid form - 10481C/06
- *HAYA/ 14.01.72 HAYAKAWA N A97 D16 *J8 0001-035
Alcoholic beverage, e.g. Japanese sake, in solid form - 10481C/06
- *HAYA/ 14.06.78 HAYATA C D15 *J5 4162-847
Treating polluted water without using special deodorising appts. - 10222C/06
- HAYB 01.04.68 HAYASHIBARA CO B04 D17 =NL -162-691
Alpha-1,6-glucosidases enzymes for hydrolysing - 09944R/07
- *HAYB 04.03.78 HAYASHIBARA BIOCHEM A96 B04 D16 (A11) *J5 4118-297
Determn. of alpha-amylase activity - 09888C/06
- HENK 29.11.73 HENKEL KG AUF AKTIEN D21 E13 =US RE30-199
Tetraaminopyrimidines as developers in oxidation hair dyes - 39183W/24
- HENK 01.07.74 HENKEL UND CIE GMBH A97 D25 =IT 1036-412
Washing powder contg. non-ionic surfactant - 03864X/03
- HENK 04.07.74 HENKEL UND CIE GMBH D25 =IT 1036-442
Phosphate-deficient detergents and cleansers - 05882X/04
- HENK 26.07.75 HENKEL KG AUF AKTIEN D25 E33 J04 M12 (J01) =GB 1560-543
Alkali zeolite prodn. in presence of sulphate ions - 07562Y/05
- HENK 04.03.76 HENKEL KG AUF AKTIEN A96 D21 (A14) =GB 1560-428
Cosmetic water-in-oil emulsion compsns. - 63056Y/36
- HENK 01.09.76 HENKEL KG AUF AKTIEN A96 B05 D21 E19 (A25) =US 4186-207
Solns. of fat-soluble perfume oils or pharmaceuticals - 18009A/10
- HENK 05.02.77 HENKEL KG AUF AKTIEN D21 E16 =US 4186-186
Hair decolourising product based on peroxide cpds. - 58758A/33
- HENK 01.06.78 HENKEL KG AUF AKTIEN D21 E36 =DK 7901-933
Cosmetic hair treating compsn. contg. boric acid - 89732B/50
- HENK 01.06.78 HENKEL KG AUF AKTIEN D21 E13 =DK 7901-934
Hair care compsn. contg. reducing sugar - 89531B/50
- HENK 05.06.78 HENKEL KG AUF AKTIEN C02 D22 E13 G03 =DK 7902-192
3-Omega-aminoalkyl-oxazolidine derivs. - 89576B/50
- HENK 19.06.78 HENKEL KG AUF AKTIEN D21 E17 (E15) =BE -877-050
Deodorant compsns. contg. hydroxy-carboxylic acid ester cpds. - 00158C/01
- *HENK 17.07.78 HENKEL KG AUF AKTIEN C03 D13 *DT 2831-306
Animal feed giving improved weight gain and/or feed efficiency - 09323C/06
- *HENK 20.07.78 HENKEL KG AUF AKTIEN D18 E33 *EP ---7-555
Water insoluble aluminium silicate for leather tanning - 09554C/06
- HENK 21.07.78 HENKEL KG AUF AKTIEN D18 E33 =DT 2832-089
Dressing fur skins - 07997C/05
- HENS- 02.04.74 HENS VOEDERS NV C03 D13 =IT 1036-096
Liquid cattle food - 55677W/34
- HESS/ 16.06.78 HESSELGREN S A96 D21 (A11) =SW 7806-939
Adhesive compsn. for dental prostheses - 00246C/01
- HEXC 19.11.75 HEXCEL CORP A96 D22 =CA 1070-201
Mouldable orthopaedic bandaging for immobilising injuries - 14647Y/09
- HIRS/ 26.07.76 HIRSCHMAN S Z D22 #GB 1560-736
Absorbent tampon for sanitary hygiene - 12463A/07
- *HITA 16.06.78 HITACHI KK D15 M13 *J5 4163-734
Reusing copper plating process washing water - 10316C/06
- HOFF 14.02.78 HOFFMANN-LA ROCHE AG B03 D16 =J5 4163-511
Trestatin amino sugar derivs. - 61777B/34
- HOFF/ 28.02.78 HOFFMANN K D15 E34 (E31) =FR 2423-438
Oxygen dispenser for fish tanks - 66442B/37
- *HOKK- 14.06.78 HOKKAIDO GYOGYO-KYO D13 *J5 4163-852
Prodn. of jam contg. tangle as principal component - 10359C/06
- *HONE 31.07.78 HONEYWELL-ATLAS LTD A25 D25 E17 (A97) *EP ---7-737
Esterified alkoxylated hexitol fatty acid ester(s) - 09652C/06
- *HORA/ 31.10.77 HORA A D16 *CS 7707-071
Complex hops additive - C/06
- HOSH- 09.09.75 HOSHASEN KANRI CENT D22 =J5 2033-383
Treating dead experimental animals - 10488C/06
- *HOSH- 09.09.75 HOSHASEN KANRI CENT D22 *J8 0001-096
Treating dead experimental animals - 10488C/06
- *HOWE/ 09.03.78 HOWELL F M C03 D13 *US 4186-212
Animal feed contg. high mol. wt. aliphatic alcohol(s) - 11100C/06
- *HUMB/ 20.04.78 HUMBERT H D12 *FR 2423-161
Fluid power press for reconstituted meat partic. ham - 09730C/06
- *HYDR= 22.12.77 HYDROLYSIS IND ASSO C03 D16 (D13) *SU -663-712
Nutrient medium for cultivation or microorganisms, e.g. fodder yeasts - 10628C/06
- ICIL 24.04.70 ATLAS CHEM INDS INC B05 D17 E12 =J8 0001-247
Producing an aluminium complex - 09749T/06
- ICIL 09.12.70 IMPERIAL CHEM INDS LTD B04 C03 D16 (D13) =J8 0001-038
Protein prodn - 40494T/25
- *ICIL 25.07.78 IMPERIAL CHEM INDS LTD A96 B07 D22 E13 (A17 A60) *EP ---7-736
Gamma irradiation sterilisable olefin polymer medical article - 09651C/06
- *IDEK 28.07.78 IDEMITSU KOSAN KK C03 D22 E15 F06 *DT 2929-920
L-carvone as insect repellent and insecticide - 09493C/06
- IHAR 23.07.74 IHARA CHEM IND C02 D22 G02 (D15) =NL -162-685
Antifouling compsns. for controlling aquatic organisms - 12435X/07
- IIZU/ 03.04.78 IIZUKA C B04 C03 D16 #FR 2423-158
Antiviral extract of basidiomycetes culture prodn. - 82867A/46
- *INFL 04.02.75 INT FLAVORS & FRAGR INC D25 E13 *US 4186-103
Spiro:pyran derivs. used in detergents, etc. - 11060C/06
- INFL 11.11.76 INT FLAVORS & FRAGR INC D23 E15 =DT 2759-622
Unsaturated-acetyl-di:methyl-cyclohexane cpds. - 21425A/11
- *INFL 04.02.77 INT FLAVORS & FRAGR INC D23 E15 *US 4186-150
Oxy-hydrocarbyl-norbornane mixts. - 11071C/06
- *INFL 03.03.77 INT FLAVORS & FRAGR INC B05 D13 E15 (B07 D21 D23) *US 4186-149
Prodn. of 4-alkyl-3,4,5-tri:methyl-2,5 cyclohexadien-1-one cpds. - 11070C/06
- *INFL 27.07.78 INT FLAVORS & FRAGR INC D13 E13 *GB 2026-482
2,5-Di:alkyl- and 2,4,5-tri:alkyl-di:hydro-furanone(s) - 09819C/06
- INRG 12.05.75 INST NAT RECH AGRON C03 D16 (D13) =CA 1070-161
Edible protein recovery from plant press cakes - 90900X/49
- *INSP 18.04.78 INST PASTEUR B04 D16 *FR 2423-541
Sorting of microorganisms, esp. bacteria - 09752C/06
- *INSP 07.07.78 INST PASTEUR B04 D16 *DT 2927-309
Antibiotic sensitivity determination - 09443C/06
- INTE- 08.04.77 INTEROX D25 E34 =US 4185-960
Super-oxidised sodium perborate mfr. in fluid bed - 72728A/41
- INTE- 17.04.78 INTEROX SA D25 E37 F06 (E14 F09) =FR 2423-536
Washing and bleaching compsn. contg. carbonate and peroxy cpd. - 77163B/43
- IONI 19.04.78 IONICS INC D13 =FR 2423-165
Concn. of whey protein - 29388B/15
- *IOWA 12.07.77 IOWA STATE UNIV RES INC C03 D13 *US 4186-213
Maximising utilisation of protein by cattle - 11101C/06
- IPCO- 06.10.76 IPCO HOSPITAL SUPPL A96 D21 #GB 1560-636
Temporary dental prosthesis moulding in situ - 84609X/45
- *ITMU- 06.04.78 INT MULTIFOODS CORP D11 *US 4185-528
Cleaning rotating disc cutter - 10937C/06
- *IZBI/ 14.09.77 IZBICKY A B04 D16 *CS 7705-988
Dog kidney cell culture prepn. - C/06
- JACC- 22.11.77 JACCARD CORP D12 =FR 2423-160
Meat tenderising tool - 42673B/23
- *JAOR 15.06.78 JAPAN ORGANO KK D15 J01 *J5 4162-680
Regeneration of complex bed-type ion exchange appts. - 10129C/06
- *JAPS 28.02.78 JAPAN SYNTHETIC RUBBER B07 D21 E19 G04 (E37) *J5 4114-479
Di:benzal:sorbitol-contg. gel-like substance prodn. - 09882C/06
- *JENP 06.10.72 JENAPHARM VEB B04 D16 *SU -663-724
Antibiotic effective against viruses and tumours - 10639C/06
- JOHJ 27.09.67 JOHNSON & JOHNSON A11 D12 (A33 A97) =NL -162-543
Edible collagen casings by extrusion - 63962R/36
- JOHJ 06.03.75 JOHNSON & JOHNSON A96 D22 G03 (A18 A25) =CA 1070-202
Highly conformable adhesive bandage backing - 64734X/34
- JOHJ 15.12.75 JOHNSON & JOHNSON A96 D21 E14 (A14) =IL --51-105
Dental sealing compsn. - 43933Y/25
- *JOHJ 14.06.76 JOHNSON & JOHNSON A81 D22 F04 *US 4186-165
Absorbent fibrous pad mfr. - 11078C/06
- *JOHJ 20.12.77 JOHNSON & JOHNSON A96 D22 F01 *US 4185-626
X-ray detectable surgical dressing - 10957C/06
- JOHJ 21.02.78 JOHNSON & JOHNSON A97 D22 F09 =FR 2423-171
Absorbent pad for disposable napkins, sanitary towels etc. - 63155B/35
- *JOHJ 17.03.78 JOHNSON & JOHNSON A96 D22 (A25) *US 4185-631
Readily removable expanding catamenial tampon - 10960C/06
- JOHJ 03.04.78 JOHNSON & JOHNSON D22 E12 (E16) =US 4186-113
Liq. toilet compsns. of reduced irritating potential - 75719B/42
- JOHJ 17.04.78 JOHNSON & JOHNSON A96 D22 =FR 2423-208
Surgical drape with liquid collection bag - 75107B/41
- *JOHJ 31.07.78 JOHNSON & JOHNSON A96 D21 E19 (A25) *GB 2026-532
Detergent compsns. for personal use - 09838C/06
- JOHO 09.07.75 JOHNSON MATTHEY LTD D16 E12 J04 (E17) =GB 1560-481
Complexes of osmium tetroxide with heterocyclic contg. tert. nitrogen - 06123Y/04

KAGO- 26.07.77 KAGOME KK D13 E24 = J8 0001-311
Carotenoid-contg. material for foodstuff colouration - 25093B/13

* KANE 15.06.78 KANEBO KK D21 E19 *J5 4163-829
Low toxicity cosmetic compsn. - 10349C/06

KANE- 12.03.77 KANESA MISO KK D13 = GB 1560-607
Granulating moist foodstuffs under vacuum - 80729A/45

* KANZ 13.06.78 KANZAKI PAPER MFG KK D15 E19 *J5 4162-673
Cyanide-contg. waste water treatment - 10124C/06

* KAOS 23.02.78 KAO SOAP KK D22 E14 *J5 4113-440
Deodorant contg. a phenyl-substd. ethylene cpd. - 09880C/06

* KAOS 12.06.78 KAO SOAP KK A87 D25 F06 *J5 4161-607
Starching-cleaning compsn. for clothes - 09986C/06

* KAOS 16.06.78 KAO SOAP KK A97 D25 E17 (E34) *J5 4163-906
Foam generating and bleaching detergent compsn. - 10367C/06

KAOS 13.07.78 KAO SOAP KK A96 D21 E19 = DT 2928-903
Soap contg. tri:chloro-hydroxy-di:phenyl ether antibacterial - 06033C/04

* KAOS 14.07.78 KAO SOAP KK D25 *DT 2927-595
Impregnating scouring pad - 09448C/06

* KASI/ 08.05.79 KASIDECIOGLU E D21 E17 *DS 2918-422
Depilatory compsn. which does not cause allergic reactions - 09269C/06

* KATZ/ 28.04.76 KATZ J D15 J01 *US 4186-058
High volume liquid distillation - 11035C/06

* KATZ/ 28.04.76 KATZ J D15 J01 *US 4186-060
High volume liquid distn. - 11037C/06

KEND 28.07.78 KENDALL CO A88 D14 F07 J01 (A11) #GB 2026-567
High strength nonwoven cellulosic filter e.g. for milk - 89693A/50

* KENO- 21.07.78 KENOGARD AB A97 D22 F09 (A25) *DT 2929-512
Prodn. of absorbent cellulose flock - 09489C/06

KERJ 24.12.75 KERNFORSCHUNGS JULICH D16 K05 M25 = GB 1560-300
Living cells prodn. for absorbing metals from liqs. - 48957Y/28

* KIAU= 19.12.77 KIEV AUTOMATION INS D16 *SU -662-580
Microorganism cultivation control in nutrient yeast prodn. - 10562C/06

KIER/ 03.07.78 KIER TS D16 = BE -877-426
Conc. fruit flavoured alcoholic drink - 08609C/05

* KIKK 15.06.78 KIKKOMAN SHOYU KK D13 *J5 4163-899
Agent for improvement of soy sauce brightness - 10364C/06

* KISO- 09.09.75 KISO KOGYO KK D22 *J8 0001-096
Treating dead experimental animals - 10488C/06

KLEI/ 07.07.78 KLEIN M A97 D15 F09 J01 (A13 A17 A25 A88) = BE -877-538
Absorption and filtration mat for waste liquids - 04079C/03

KNHS 09.07.75 HOOGO VENS IJMUIDEN BV D15 J01 = IL --49-954
Regeneration of weakly basic anion exchanger - 05572Y/04

KONN 22.12.72 GIST-BROCADES NV B03 C02 D13 E13 (B02 D22) = NL -162-654
Oxadiazolyacetic acid antibiotics - 51365V/28

KONN 03.07.74 GIST-BROCADES NV B05 C02 D13 = IT 1036-421
Fungicidal compsn contg a polyene antibiotic - 05872X/04

KONN 10.11.75 GIST-BROCADES NV D16 (D11) = GB 1560-478
Compactable yeast mass, esp. for baking - 36713Y/21

KONN 05.06.78 GIST-BROCADES NV B04 D13 = DK 7902-307
Test unit for simplified testing of biological fluids - 89770B/50

KOPS 19.11.71 KRUPP-KOPPERS GMBH D15 H09 = DS 2157-365
Coke oven gas desulphurising process - 18336U/13

* KORI/ 07.12.77 KORINEK J B04 D16 *CS 7708-161
Diagnostic serum for hepatitis B antigen and antibody prodn. - C/06

KOTT/ 03.04.78 KOTT R D13 = J5 4163-855
Low calorie crisp, pref. chipped, meat roast snacks - 73782B/41

* KOZI/ 16.06.75 KOZIAKI B04 D16 *CS 7504-217
Pad for collecting material for microbiological investigation - C/06

KRFT 30.11.77 KRAFT INC D13 = FR 2423-164
Cheese-making process using concentrate of protein fat and salts - 25998B/14

* KROY/ 18.09.78 KROYER K D22 F04 *BE -878-828
Appts. for air-laying cellulosic pulp fibres etc. - 09219C/06

* KTUB= 15.08.77 KAZA TUBERCULOSIS B04 D16 *SU -663-721
Reagent for exposure of cells or tissues structure - 10636C/06

KUBI 26.11.74 KUBOTA KK D15 J01 = J8 0001-119
Treatment of waste water contg organic nitrogen - 54827X/29

* KUBO/ 12.06.78 KUBOTA S D13 *J5 4163-845
Bean curd prepn. - 10356C/06

* KURE 12.06.78 KUREHA CHEM IND KK D15 J09 *J5 4161-584
Heat treating furnace column - 09973C/06

KURK 16.05.77 KURITA WATER IND KK D15 J01 (D14) = US 4186-089
Pulp dewatering system - 86474A/48

KURS 13.12.72 KURARAY KK A81 D15 = J4 9081-271
Burying heavy metal-contg. waste in the ground - 10496C/06

* KURS 13.12.72 KURARAY KK A81 D15 *J8 0001-120
Burying heavy metal-contg. waste in the ground - 10496C/06

KYOW 18.04.74 KYOWA HAKKO KOGYO B05 D16 E16 #IT 1036-057
Biotechnical prodn of L-lysine - 77839V/45

KYOW 01.08.75 KYOWA HAKKO KOGYO K A89 D16 J04 (J03) = GB 1560-691
Microporous enzyme membrane for immobilising enzymes - 13245Y/08

KYOW 00.00.76 KYOWA HAKKO KOGYO KK D16 E16 (D13) = J5 4163-891
Laevo-glutamic acid prepn - 14740W/09

KYOW 20.04.78 KYOWA HAKKO KOGYO B04 D16 = FR 2423-539
Antibiotic DC-11 from Micromonospora sp. NRRL 11289 - 79569B/44

* KYOW 01.08.78 KYOWA HAKKO KOGYO B04 D16 E36 J04 *EP ---7-787
Reagent for hydrogen peroxide assay - 09676C/06

LABA 17.04.78 LABATT J LTD D17 = FR 2423-167

Dry, odourless, tasteless vital gluten prepn. - 79336B/44

LABA 17.04.78 LABATT J LTD D11 = FR 2423-168

Film-forming lipoprotein complex for baking - 79337B/44

LACH/ 25.07.78 LACHER J H D17 #GB 2026-333

Releasing compacted sugar crystals from centrifuge screen - 74261A/41

LAIT- 02.03.78 LAITERIES H TRIBALL A97 D13 = J5 4163-858

Acidulation of milk using cationic resin followed by acid - 68506B/38

LAKS/ 17.05.78 LAKS S A82 D25 E19 G02 = J5 4164-076

Non-wax cleaning and polishing compsn. for plastic surfaces - 05321C/03

LANG/ 23.03.68 LANG F D13 = DS 1767-046

Agglomerating powder - 21801T/14

LAWS/ 28.01.76 LAWSON V D15 = US 4185-680

Treating mixed organic and inorganic waste esp. household rubbish - 38155Y/22

* LEOP/ 20.10.76 LEOPOLD J D16 E17 *CS 7606-750

Molasses substrate for citrate fermentation - C/06

LIND/ 27.06.78 LINDMAN W E D15 J01 #EP ---7-325

Waste liquids purificn. - 18498B/10

LINM 26.07.73 LINDE AG D15 = DS 2337-999

Organically contaminated fluid purificn - 12908W/08

* LINM 20.07.78 LINDE AG D16 *EP ---7-507

Wort fermenting system - 09540C/06

LIOY 12.09.77 LION FAT & OIL KK A97 D25 E17 (A25) = US 4186-114

Easily rinsed out granular detergent compsns. - 24218B/13

LIOY 09.06.78 LION FAT & OIL KK D25 E33 = J5 4163-525

Prodn. of surface-active magnesium sulphonate(s) or sulphate(s) - 00209C/01

* LIOY 09.06.78 LION FAT & OIL KK D21 E13 (D25) *J5 4163-574

Prodn. of imidazoline cpds. for use in detergents, cosmetics, etc. - 10291C/06

* LIVE= 21.02.77 LIVESTOCK FARM MACH D14 *SU -663-428

Fodder crusher screw conveyor feeder - 10575C/06

* LOCO/ 20.04.78 LOCOLAS C D11 *FR 2423-757

Volumetrically adjustable depositor esp. for dividing baker's dough - 09767C/06

* LOTT 14.06.78 LOTTE KK D13 *J5 4163-836

Preventing hydrolysis of lauric acid oil and fat contg. foodstuffs - 10353C/06

* LUBK/ 05.07.77 LUBKEOVA S D25 E19 *CS 7704-448

Surfactants based on mono-amine type complexones - C/06

MAK 22.05.74 MAKHTESHIM BEERSHEV C02 D22 = IL --44-882

Fungicidal, bactericidal halo:alkyl:thio-(thio urazole cpds. - 45668A/25

MANC/ 16.02.78 MANCHAK F D15 #GB 1560-467

Treating waste sludges with calcium oxide - 28632A/15

MANU- 05.03.76 AMNUMECA D12 = FR 2423-672

Quick action grapple for overhead poultry conveyor - 61148Y/35

MANU- 05.03.76 AMNUMECA D12 = FR 2423-672

Quick action grapple for overhead poultry conveyor - 61148Y/35

MART/ 17.03.70 MARTINEAU J D25 E16 = IT 1036-038

Fatty amide containing industrial soaps - 36534S/21

MASW 15.07.78 MASCH BUCKAU WOLF R D17 = NL 7905-063

Ring for sugar cane mill roll - 05980C/04

MCCO/ 20.04.78 MCCOLLESTER D L B04 D16 = FR 2423-223

Antitumour vaccine - 86122A/48

* MEAT= 22.04.77 MEAT IND RES INST A11 D12 (A97) *SU -664-624

Collagen prodn. from waste meat products - 10762C/06

MEDI- 20.06.75 MEDICAL PLAS PTY LT D16 = GB 1560-492

Agar and silica gel nutrient media cultivation flask - 02388Y/02

* MEDI= 02.08.76 MEDICAL ENZYME ANTI B04 D16 *SU -663-715

Proteolytic enzyme hygrolytin for use in medicine - 10631C/06

MEGG 31.05.74 MOKEREI J A MEGGLE C03 D13 = IT 1036-137

Dry surfactant-free caseinate powder for foods - 72551W/44

MEIP 04.11.77 MEIJI NYUGYO KK D14 J04 = US 4185-547

Appts. for easily-wettable granules prodn. from powder - 50037B/27

MENN- 10.04.70 MENNEM COMP A28 D21 J04 (A96) #IT 1036-030

Aerosol products formed from micro-capsul-es - 69501S/44

MERE 21.04.78 MERCK PATENT GMBH D16 = FR 2423-542

Testing for microorganisms on surfaces - 79580B/44

* MERI 04.11.71 MERCK & CO INC A11 C03 D13 F06 (A87 A97) *US 4186-025

Hetero-polysaccharide-10 used as thickener in aq. compsns. - 11020C/06

* METB 01.04.77 METAL BOX CO LTD D22 *US 4185-973

Communal waste disposal system for hospital - 11000C/06

* METG 28.07.78 METALLGESELLSCHAFT AG D15 E36 J04 *EP ---7-653

Liquid additive metering - 09608C/06

MIES-

- MIES- 01.07.69 INST PRZEM MIESNEGO B07 D13 E19 K07 (D22) = IT 1036-032
 Flavours anti-septics and antioxidant compns - 03227S/02
- MILE 31.03.73 MILES LABORATORIES INC B04 D16 = US 4186-251
 Colorimetric determination of total and free cholesterol - 53797V/30
- MILE 23.03.78 MILES LABORATORIES INC D13 (D16) = J5 4163-894
 L-Aminoacid-substd. polypeptide food additive prepn. - 73814B/41
- MILL- 13.03.68 MILLER BREWING CO D16 = DS 1907-157
 Granular free flowing complexes of ammonia and - 24437R/15
- MILO- 24.07.75 MILOUT HAIFA BAY S D23 = DS 2533-171
 Oil recovery from oil seeds, esp. cotton - 07903Y/05
- MINA 24.01.78 UK SEC FOR DEFENCE A97 B04 D16 J01 = EP ---7-917
 Affinity chromatography media for protein binding - 61546B/33
- *MINE- 17.04.78 MINEMET RECHERCHE C04 D15 M12 *FR 2423-451
 Purification of metal pickling effluent - 09746C/06
- MINN 29.12.77 MINNESOTA MINING CO A96 D21 E19 = EP ---7-913
 Dentifrice contg. membrane forming material - 57996B/31
- MINN 19.04.78 MINNESOTA MINING CO A81 D22 G03 (A14 A96) = FR 2423-525
 Tacky, pressure-sensitive adhesive tape - 79544B/44
- MINN 22.05.78 MINNESOTA MINING CO A96 D21 G03 (A14) = J5 4163-930
 Readily mixed surgical cement for dentistry - 86437B/48
- MINN 02.06.78 MINNESOTA MINING CO A96 D21 E11 (A14 A26) = DK 7902-237
 Oligomeric methacrylated siloxane prepolymer used in dental filler - 91399B/51
- MITB 26.04.77 MITSUI SHIPBUILDING ENGG D15 = J8 0001-083
 Waste water treatment column - 00806B/01
- *MITK 08.10.70 MITSUI TOATSU CHEM INC D13 (D12) *J8 0001-031
 Fibrous protein prodn. - 10480C/06
- MITK 17.04.78 MITSUI TOATSU CHEM INC B05 D16 E17 = FR 2423-472
 Pyruvic acid salts prodn. - 79334B/44
- *MITU 13.06.78 MITSUBISHI CHEM IND KK D16 *J5 4163-883
 Introduction of mitochondria gene into yeast - 10362C/06
- *MIYA/ 16.06.78 MIYANO K D15 *J5 4164-343
 Treating waste water sludge - 10455C/06
- *MOFO= 19.10.77 MOSC FOOD IND TECH D13 *SU -664-626
 Ice-cream shaper - 10764C/06
- *MOFO= 23.12.77 MOSC FOOD IND TECH D16 *SU -663-722
 High-quality sherry prodn. - 10637C/06
- *MOFO= 26.01.78 MOSC FOOD IND TECH D17 *SU -663-725
 Sugar beet juice extractor - 10640C/06
- MOLI- 21.04.78 MOLINIER SA A96 D22 = FR 2423-211
 Composite surgical bandage of tubular stretchable fabric - 81092B/45
- *MOLI= 13.04.78 MOSCLIQ VODKA WKS D15 E36 *SU -663-719
 Restoring activity of carbon used for purification of alcohol - 10635C/06
- MONS 24.05.78 MONSANTO CO B04 D16 = J5 4163-887
 Urokinase prodn. in increased yields - 86321B/48
- *MORE= 19.10.77 MOSC REFRIGERATOR COMBIN D13 *SU -664-626
 Ice-cream shaper - 10764C/06
- MORG 14.06.74 MORINAGA MILK KK D13 = IT 1036-290
 Continuous whipped cream-topped desserts prodn - 02343X/02
- MORG 04.07.75 MORINAGA MILK KK B04 C03 D13 = DS 2630-157
 Flowable lactulose powder prodn. from lactose soln. - 86973X/47
- MORR/ 08.06.78 MORRIS W E D15 = US 4186-098
 Two-stage apparatus for dewatering sludge - 70593A/39
- MORT- 22.01.74 CENT MORTGAGE HOUS D15 = DS 2502-501
 Municipal or industrial effluents treatment - 52761W/32
- *MOSI- 24.03.65 MOSILANA VLNARSKE B01 D23 F01 (D15) *DS 1617-012
 Lanolin recovery from wool wash waste waters - 09257C/06
- MULL/ 20.06.78 MULLER A D16 = GB 2026-539
 Extracting hops with carbon dioxide under specified conditions - 77230B 43
- MUND 25.08.76 MUNDIPHARMA AG A96 B05 C03 D22 (A25) = IL --52-045
 Antimicrobial aerosol foams for wounded skin - 70776Y/40
- MUND 14.06.78 MUNDIPHARMA AG A96 B07 C03 D21 #J5 4163-810
 Gel for topical application to skin and hair - 08347B/05
- MUZZ/ 14.06.78 MUZZARELLI R A11 B04 D16 F06 (B07 D13 D22 F09) = GB 2026-516
 Chitosan-glucan complex from fungal mycelium - 00225C/01
- NAAR 17.10.75 NAARDEN INT NV A96 D21 = GB 1560-697
 Solid hydrophobic antiperspirant compsn. - 31308Y/18
- *NAGS 09.09.75 NAGASE SANGYO KK D22 *J8 0001-096
 Treating dead experimental animals - 10488C/06
- NALC 06.01.77 NALCO CHEMICAL CO A97 D15 (A17 A25) = GB 1560-327
 Eliminating or preventing biological sludge in cooling systems - 77230B 43
- NATR 01.11.77 NATIONAL RES DEV CORP B04 D16 J04 = EP ---7-372
 Enzymatic analysis using nitro-styrene derivs. - 18088B/10
- NATR 07.06.78 NATIONAL RES DEV CORP A96 B04 D16 = J5 4163-889
 Bacterial beta-galactosidase of high thermal stability - 89839B/50
- NATT 11.09.72 NAT STARCH & CHEM CORP A11 D17 E19 (D13) = DS 2345-341
 Double inhibited starches - 23349V/13
- *NEME- 17.07.78 ING NEMETZ & RUESS C03 D13 (D15) *DT 2831-351
 Animal faeces utilisation in feedstuff prodn - 09326C 06
- NEST 17.09.71 SOC PROD NESTLE SA D23 = J8 0001-030
 Perfume-and aroma extract from orange oil - 19069U/14
- NEST 09.07.75 SOC PROD NESTLE SA D13 = CA 1070-164
 Cheese powder prepn. from skim soln. - 06000Y/04
- NEST 04.12.75 SOC PROD NESTLE SA D14 #SU -664-580
 Lyophilization of solid, fluid or paste prods - 26726X/15
- NEST 08.12.75 SOC PRODS NESTLE B02 D13 E13 = IL --50-991
 Caffeine extrn. from vegetable material using fatty material - 36274Y/21
- NEST 16.03.78 SOC PROD NESTLE SA D16 (D13) = J5 4163-885
 Stable plasmid- contg. Lactobacillus species culture prodn. - 70242B/39
- *NEST 20.07.78 SOC PROD NESTLE SA D13 *EP ---7-411
 Gravimetric dispenser for ice cream container filling machine - 09506C/06
- NIDE 08.08.75 NIPPON ELECTRIC KK D15 L02 = GB 1560-644
 Treatment of effluent contg. difficultly soluble ingredients - 13286Y/08
- NIKK- 08.10.68 NIKKISO CO LTD D15 = NL -162-720
 Pump arrangement for treatment of waste liquids - 33593R/19
- *NIMU- 09.09.75 SHIN NIPPON MUSEN KK D22 *J8 0001-096
 Treating dead experimental animals - 10488C/06
- *NIPP- 14.06.78 NIPPI KK D21 *J5 4163-828
 Cosmetic compsn. with good moistening properties - 10348C/06
- *NISH- 16.06.78 NISHIHARA KANKYO EI D15 *J5 4164-344
 Treatment of sewage sludge, waste water etc. - 10456C/06
- *NISN 15.06.78 NISSHIN SPINNING KK A97 D15 *J5 4162-845
 Effluent treatment to remove oils or suspended matter - 10221C/06
- *NISS 15.06.78 NISSHIN FLOUR MILL KK D11 *J5 4163-841
 Bulky bread prodn. - 10354C/06
- NISW 13.12.76 NISSHIN OIL MILLS KK D13 = J5 3075-358
 Rice cake or snack - 10478C/06
- *NISW 13.12.76 NISSHIN OIL MILLS KK D13 *J8 0001-020
 Rice cake or snack - 10478C/06
- *NISW 14.06.78 NISSHIN OIL MILLS KK A96 D21 E16 (A25) *J5 4163-515
 Esterified prods. derived from nitrogen-contg. poly:ol(s) - 10267C/06
- *NMHB 11.03.78 NORDISCH MASCH R BAADER D12 (D14) *DT 2810-573
 Fish heat treatment plant - 09271C/06
- NMHB 19.04.78 NORDISCH MASCH R BAADER D12 (D14) #FR 2423-162
 Fish heat treatment plant - 09271C/06
- NNSH 19.03.74 NIPPON SHINYAKU KK D15 E36 = DS 2505-597
 Sterilising activity of silver-impregnated active carbon - 65847W/40
- *NORD- 17.07.78 NORDFLEISCH AG B07 D13 *DT 2831-338
 Colourless protein for food use made from blood - 09325C/06
- *NOVA/ 25.03.77 NOVAK L D25 *CS 7701-990
 Cleaning and degreasing agent for dairy vessels - C/06
- NOVO 19.04.78 NOVO INDUSTRI A/S A96 B04 D16 = FR 2423-497
 Immobilising glutaraldehyde-sensitive enzymes - 77179B/43
- NOVO 19.04.78 NOVO IND AS A96 B04 D16 = J5 4163-888
 Immobilising glutaraldehyde-sensitive enzymes - 77179B/43
- NOVO 04.07.78 NOVO INDUSTRI A/S D16 (D25) = BE -877-435
 Protease concentrate for use in washing compsns. - 03854C/03
- *NTRA= 02.11.77 NORTH TRANSUR ALGR D14 *SU -664-686
 Mechanism for treating damp vegetable matter - 10795C/06
- *ODEX- 27.08.77 ODEX RACASAN LTD A92 D22 E19 *GB 1560-279
 Disinfectant esp. for chemical toilets - 09777C/06
- *ODFO= 27.05.77 ODESS FOOD TECH INS D14 *SU -662-367
 Control system for worm press for fruit berry pulp - 10560C/06
- *ORCH= 31.01.78 ORCHARD VINE WINE B01 D23 *SU -664-966
 Sitosterol pharmaceutical and intermediate prepn. - 10910C/06
- OREA 26.10.67 L'OREAL SA D21 E16 = IT 1036-012
 Cosmetic hair treatment compositions - 76300R/42
- OREA 26.10.67 L'OREAL SA A96 D21 E16 = IT 1036-013
 Hair treatment contng polycondensable cpds - 25168Q/00
- OREA 15.07.68 L'OREAL SA D21 E24 = IT 1036-024
 Dyes and dyeing compositions for keratin fibres - 05506R/04
- OREA 13.08.68 L'OREAL SA D21 E13 (E14 E23) = IT 1036-026
 Human hair dye contg a benzmorpholine - 20030S/11
- OREA 10.04.70 L'OREAL SA A96 D21 E13 (A18 E23) = IT 1036-041
 Indamine hair dyes - 67484S/42
- OREA 13.09.71 L'OREAL SA A96 D21 (A14) = DT 2265-564
 Hair waving compsn - 18202U/13
- OREA 22.02.74 L'OREAL SA A96 D21 E24 (E23) = IT 1036-075
 4'-N,N-Disubstd. diphenylamines from indoanilines - 59141W/36
- OREA 22.02.74 L'OREAL SA D21 E24 = IT 1036-076
 Dyeing human hair in luminous shades - 59140W/36
- OREA 22.02.74 L'OREAL SA A96 D21 E24 = IT 1036-077
 Dialkyl aminodiphenyl amine dye compsns - 59139W/36
- OREA 16.05.74 L'OREAL SA A96 D21 = IT 1036-214
 Quat. polymers for hair treating compsns. - 80223W/49
- OREA 06.04.78 L'OREAL SA D21 E14 (E13 E24) = FR 2423-476
 2,4-Di:hydroxy-4'-amino-di:phenylamine cpds. - 73614B/41
- OREA 11.07.78 L'OREAL SA D21 E14 = BE -877-596
 UV radiation-absorbing 3-para-oxy:benzylidene-2 bornanone derivs. - 07814C/05

- OREA 11.07.78 L'OREAL SA D21 E14 = NL 7905-373
UV radiation-absorbing 3-para-oxy:benzylidene-2 bornanone derivs. - 07814C/05
- OREA 12.07.78 L'OREAL SA D21 E24 = BE -877-597
1-Alkoxy-4-amino-2-(hydroxyalkyl)aminobenzene(s) - 07964C/05
- OREA 12.07.78 L'OREAL SA D21 = BE -877-598
Assessing surface oxidn. of keratin fibres - 06066C/04
- OREA 12.07.78 L'OREAL SA A96 D21 E19 = BE -877-629
Compsn. for treating greasy skin and hair - 06019C/04
- OREA 12.07.78 L'OREAL SA D21 E24 = DT 2927-870
1-Alkoxy-4-amino-2-(hydroxyalkyl)aminobenzene(s) - 07964C/05
- OREA 12.07.78 L'OREAL SA D21 E24 = NL 7905-264
1-Alkoxy-4-amino-2-(hydroxyalkyl)aminobenzene(s) - 07964C/05
- OREA 12.07.78 L'OREAL SA A96 D21 E19 = NL 7905-427
Compsn. for treating greasy skin and hair - 06019C/04
- *OREA 13.07.78 L'OREAL SA D21 E24 *BE -877-632
Determin. of the ionic state of human hair - 09208C/06
- OREA 13.07.78 L'OREAL SA A96 B04 D21 E19 (A97 B07 D25) = BE -877-664
Surfactive statistical oligomer derivs. - 07830C/05
- OREA 13.07.78 L'OREAL SA A96 B04 D21 E19 (A97 B07 D25) = NL 7905-296
Surfactive statistical oligomer derivs. - 07830C/05
- *OREA 27.07.78 L'OREAL SA A96 D21 E24 *GB 2026-553
Compsns. for dyeing hair - 09850C/06
- OREN/ 15.09.75 ORENSTEN H E D15 = GB 1560-581
Air suction-type submerged water conditioner for aquarium - 22194Y/13
- *ORIY 16.06.78 ORIENTAL YEAST KK D11 *J5 4163-842
Bread prepn. - 10355C/06
- OSAK- 16.09.76 OSAKA HITACHI REIKI D15 J01 = J8 0001-081
Cooling a waste soln. to ppte. solute - 35405A/20
- *OSAK- 13.06.78 OSAKA SEIKEN YG D16 (D13) *J5 4163-850
Protein prodn. from poly:cellular algae - 10358C/06
- OSAY 10.01.77 ENSO GUTZEIT OY D15 F09 J01 #CA 1070-442
Bio-filter comprising bed of coniferous tree barking residue - 43888A/24
- PASE 08.01.68 PASSAVANTW MICHEL BACHER D15 = NL -162-617
Effluent aerating device - 81523R/44
- PAWE/ 03.01.77 PAWELOW D15 = DS 2700-049
Flotation nozzle for sewage treatment - 49983A/28
- *PEPS 02.03.78 PEPSICO INC D13 *US 4186-215
Appts. for producing flavoured carbonated beverage - 11103C/06
- PERU 19.06.76 PERMUTIT GMBH D15 = GB 1560-315
Water softening plant - 00305A/01
- PERU 09.12.76 PERMUTIT GMBH A91 D16 (A13 A14 A97) = DS 2655-765
Anion exchanger for (alcoholic) beverages - 44203A/25
- *PETI- 13.07.78 PETI NITROGEN MUEK D15 E36 J01 *DT 2926-602
Activated carbon prodn. from partially hydrolysed vegetable waste - 09440C/06
- *PFIZ 20.07.78 PFIZER INC B05 D16 *EP ---7-751
Destruction of 2-keto:gluconate in presence of 2 keto:gulonate - 09659C/06
- PHAS 02.07.70 PHARMASCIENCE LABS D23 (D13 D21) = DS 2133-107
Extraction of insaponifiable fraction - from nat fatty material - 81328S/51
- *PIME/ 04.02.77 PIMENOV B I D16 *SU -662-579
Microorganism cultivation control in live vaccine production - 10561C/06
- *POKK 12.06.78 POLA KASEI KOGYO KK A60 D13 E17 H07 (A14 D21) *J5 4163-508
Bis(diglyceryl) ether cpds. - 10264C/06
- *POKK 16.06.78 POLA KASEI KOGYO KK D21 E37 *J5 4163-830
Cosmetic compsns. having good feel and perfume holding properties - 10350C/06
- *POLA 18.07.78 POLAK'S FRUTAL WORKS INC D13 E17 *EP ---7-673
Methylthio-methyl ester cpds. - 09617C/06
- POUP/ 11.10.77 POUPARD M D11 = EP ---7-361
Treating and deep freezing of raised dough prods. - 33315B/17
- PRIN- 10.04.68 PRINCE MFG CO D12 = NL -162-544
Method and apparatus for removing meat - 54342R/31
- PROC 15.11.67 PROCTER & GAMBLE CO B04 D25 (D16) = NL -162-690
Enzyme preparations - 40922F/00
- PROC 27.01.75 PROCTER & GAMBLE CO D21 E19 = CA 1070-244
Conjugated diene-contg. suncream compsn. - 60149X/32
- PROC 14.10.75 PROCTER & GAMBLE CO A97 D25 E19 = CA 1070-211
Conc., low sudsing detergent compsn. - 19461A/10
- PROC 28.11.75 PROCTER & GAMBLE CO A97 D25 = GB 1560-640
Detergent for washing textiles - 40311Y/23
- PROC 24.12.75 PROCTER & GAMBLE CO A25 D25 E17 (A97) = GB 1560-419
Polyethoxylated glyceryl ethers - 49047Y/28
- PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 (A25) = FR 2423-534
Anionic, nonionic and quat. ammonium surfactant contg. liq. detergent - 02338B/02
- PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 (E33) = FR 2423-537
Anionic, nonionic and quat. ammonium surfactant contg. solid detergent - 02339B/02
- PROC 06.07.77 PROCTER & GAMBLE EU D25 E19 = DT 2857-180
Pourable, water dispersable conc. liq. fabric softener - 08406B/05
- *PROC 13.03.78 PROCTER & GAMBLE CO D25 *J5 4163-907
Low phosphate detergent compsn. for washing - C/06
- *PROC 24.07.78 PROCTER & GAMBLE CO D22 F07 *EP ---7-665
Steep sided embossed areas on fabric e.g. diaper - 09612C/06
- *PROS- 17.04.78 PROSPEROL C04 D15 M12 *FR 2423-451
Purification of metal pickling effluent - 09746C/06
- *PROT- 20.03.78 PROTEOR ETABS A14 D21 (A96) *FR 2423-499
Acrylic resin stable in absence of air - 09748C/06
- PROT- 19.07.78 PROTEAN HOLDINGS LT D12 #EP ---7-327
Collecting blood sample from animals - 77156B/42
- *PRVA= 05.01.78 PERM VACCINE SERUM B04 D16 *SU -663-714
Microbiological prepn. - 10630C/06
- PRZE- 19.07.78 PRZED INSTAL D15 #DT 2831-781
Biological sewage treatment tank - 07473C/05
- PURD 08.03.78 PURDUE RESEARCH FOUNDATI D17 E13 F01 = FR 2423-580
Glucose prodn. from cellulosic materials - 70256B/39
- QPPP 16.06.75 Q.P. CORP D14 J04 = J5 1148-819
Device for feeding pasteurised material into high pressure tank - 10486C/06
- *QPPP 16.06.75 Q.P. CORP D14 J04 *J8 0001-090
Device for feeding pasteurised material into high pressure tank - 10486C/06
- QUAK 19.06.78 QUAKER OATS CO C03 D12 = NO 7900-309
Extruded foods esp. meat products for pet foods - 58003B/32
- RALS 30.01.70 RALSTON PURINA CO D13 (D16) = J8 0001-028
Enzyme treatment of soya food proteins - 44637S/26
- RAST/ 08.05.69 RASTORFER H D13 = IT 1036-101
Filled chocolates - 83189R/45
- REDK- 26.11.75 REDKEN LAB INC A96 D21 = US 4186-188
Hair cosmetic compsns. for treating damaged hair - 33589B/18
- REEM 13.02.68 REEMTSMA H F & P F A97 D18 F06 = IT 1036-016
Controlling the amount of plasticiser added to - 32982Q/00
- *REMY/ 26.07.78 REMY R D11 *GB 2026-297
Oven for dough products - 09791C/06
- *RESE 31.08.72 RESEARCH CORP B04 D16 *US 4186-182
Serological test for Neisseria gonorrhoeae antibodies - 11083C/06
- RESE 09.03.76 RESEARCH CORP A87 D22 F06 = CA 1070-444
Imparting water absorbency to cellulosic material - 53827Y/30
- RHKA 18.07.78 RHEINISCHE KALKSTEI GMBH C04 D15 = DT 2831-418
Sewage sludge mixer and granulator - 05742C/04
- RHON 22.08.75 RHONE-POULENC INDUSTRIES A13 B04 D16 (A96) = IL --50-313
Stable latex of styrene polymer with terminal thio-aniline gps. - 12782Y/08
- RHON 24.08.76 RHONE-POULENC INDUSTRIES D16 (D18) = GB 1560-448
Streptomyces caligosus NRRL 8195 - 19910A/11
- RHON 09.06.78 RHONE-POULENC INDUSTRIES A14 D15 = BR 7903-567
Organic, partic. acrylic polymer prepn. - 03914C/03
- RHON 09.06.78 RHONE-POULENC INDUSTRIES A91 D15 (A14) = BR 7903-568
Water soluble polymer prepn. for use as flocculant - 02076C/02
- RHON 09.06.78 RHONE-POULENC INDUSTRIES A91 D15 (A14) = DK 7902-393
Water soluble polymer prepn. for use as flocculant - 02076C/02
- RHON 09.06.78 RHONE-POULENC INDUSTRIES A14 D15 = DK 7902-394
Organic, partic. acrylic polymer prepn. - 03914C/03
- RHON 09.06.78 RHONE-POULENC INDUSTRIES A14 D15 = NO 7901-906
Organic, partic. acrylic polymer prepn. - 03914C/03
- RHON 09.06.78 RHONE-POULENC INDUSTRIES A91 D15 (A14) = NO 7901-907
Water soluble polymer prepn. for use as flocculant - 02076C/02
- *RHON 21.07.78 RHONE-POULENC INDUSTRIES D15 J04 *EP ---7-846
Gas-liquid contacting appts. esp. for treating waste water - 09708C/06
- RHON 24.07.78 RHONE-POULENC INDUSTRIES D23 E17 (D13) = EP ---7-882
Allylic alcohol prepn. from allylic halide(s) - 38933B/20
- RIED 23.06.77 RIEDEL DE HAEN AG D21 E33 G01 L02 = DS 2728-266
Fluorescent pigments for artificial teeth - 00487B/01
- RIES/ 01.06.78 RIESS G A96 D21 = DK 7805-009
Dental surgical implant for securing crowns, bridges etc. - 24021B/13
- *ROAN= 25.01.78 ROST ANTI-PLAGUE B04 D16 *SU -663-716
Strain vibrio eltor 9183 - 10632C/06
- *ROEC- 05.07.78 ROECAR HOLDINGS B01 C03 D13 *EP ---7-474
Steryl glycoside hemi:ester(s) - 09527C/06
- ROHG 25.03.78 ROHM GMBH A11 D18 F01 G03 = J5 4163-895
Collagen extn. from ossein, hides and pelts - 75424B/42
- ROHG 01.07.78 ROHM GMBH A97 D15 M14 (A14) = GB 2026-517
Stable aq. water-hardness stabiliser soln. - 03736C/03
- ROHM 29.10.68 ROHM & HAAS CO D13 = IT 1036-023
Enzyme treatment of fruit and vegetables - 32911R/19
- ROHM 12.07.74 ROHM & HAAS CO A41 D15 E14 J01 = IT 1036-224
Adsorbing dissolved components from liq streams - 08595X/05
- ROHM 31.01.77 ROHM & HAAS CO A91 D15 (A14) = US 4186-167
Particulate flocculating agent, esp. for waste water - 56789A/32
- ROQF 12.07.78 ROQUETTE FRERES SA C03 D13 = BE -877-643
High fat-contg. premix prepn. - 07831C/05

ROQF

- ROQF 12.07.78 ROQUETTE FRERES SA C03 D13 =NL 7905-416
High fat-contg. premix prepn. - 07831C/05
- *ROST= 18.01.77 ROSTPISHCHEPROMAVTO D13 *SU -662-818
Bulk food automatic by weight metering appts. - 10568C/06
- ROTH- 23.11.77 METALLWERK ROTH KG D15 =FR 2423-448
Small size sewage clarification tank - 42509B/23
- *ROTH/ 14.04.78 ROTHEN D12 *US 4186-216
Removing meat scraps from bones - 11104C/06
- *ROVO= 25.01.78 ROSTVODOKANALPROEK D15 *SU -664-930
Consolidated sludge remover for flotation unit - 10880C/06
- RUHR 31.05.74 RUHRCHEMIE AG A60 D15 E19 =NL -162-616
Polymer plasticisers prodn. effluent treatment - 78856W/48
- RUHR 25.05.76 RUHRCHEMIE AG D23 E15 =DS 2623-285
Perfume compsns. contg. isomeric tricyclodecanes - 88397Y/50
- *RUHR 31.07.78 RUHRCHEMIE AG D23 E17 *EP ---7-609
Alpha-methyl alkyl-aldehyde perfumery component prepn. - 09585C/06
- SAFI- 02.07.75 SARL SAFITE D15 J01 =J5 2006-172
Filter for treating animal excreta - 10483C/06
- *SAFI- 02.07.75 SARL SAFITE D15 J01 *J8 0001-085
Filter for treating animal excreta - 10483C/06
- SALZ 09.12.72 SALZGITTER MASCHINE D17 J01 =DS 2260-379
Liq spray-type air deduster - 45584V/25
- SANO 08.06.78 SANDOZ AG B04 C03 D16 (D13) =DK 7902-265
S 54832/A-type antibiotics produced by fermentation - 91346B/51
- *SANR- 13.06.78 SANRITSU SHORI KOGY D15 H07 J01 *J5 4161-746
Treating waste oils and fats - 10046C/06
- *SAOC 12.06.78 SANRAKU OCEAN B03 D16 *J5 4163-588
16-Membered cyclic macrolide derivs. - 10295C/06
- *SAOK 15.06.78 SANYO KOKUSAKU PULP D13 E24 *J5 4163-866
Edible yellow pigment compsn. - 10360C/06
- SCHD 25.01.78 SCHERING AG B01 D16 =J5 4163-564
Pregnane derivs. microbiological 11-beta-hydroxylation - 56512B/31
- SCHI/ 17.04.70 SCHIERJOTT G D15 J04 =DS 2018-514
Continuous flow analyser - 70983S/45
- SCHI/ 03.03.77 SCHIRNEKER H L D23 =US 4185-953
Candle which burns uniformly with flame of constant height - 68199A/38
- SCHM/ 05.10.77 SCHMIDT H H D21 =DS 2744-754
Determining contact points on artificial teeth - 29907B/16
- SCHU 30.11.76 SCHULKE & MAYR GMBH D22 E17 (D25) =GB 1560-525
Aq. per-glutaric acid soln. - 00170A/01
- SCIE 30.11.77 SCIENCE UNION & CIE B04 D16 =J5 4163-893
Depsipeptide extract of *Fusarium equiseti* - 42405B/23
- *SCMZ 13.02.78 SCM CORP D15 E31 J01 *US 4186-088
Sludging waste stream contg. ferrous sulphate - 11052C/06
- SCMZ 17.04.78 SCM CORP D23 =FR 2423-533
Hydrogenating crude glyceride oils using nickel catalyst - 31554B/17
- SCMZ 05.06.78 SCM CORP D13 =DK 7902-326
Compsn. contg. confectionery hard butter - 89838B/50
- SCOL 02.11.77 SCHOLL INC A83 D22 F08 =US 4185-402
Deodorising footwear insole - 01735C/02
- SELW- 29.07.78 SELWIG & LANGE MASC D17 =EP ---7-419
Preliminary liming plant for raw sugar beet juice - 87781B/49
- SELW/ 07.04.76 SELWYN S L B04 D21 E24 =GB 1560-757
Dental compsn. for showing up plaque - 55836Y/32
- SHIM- 12.06.78 SHIMOSE SHOKUHI KK D12 =NO 7803-152
Fish meal prodn. with recovery of all usable constituents - 91320B/51
- *SHIS 16.06.78 SHISEIDO KK D21 *J5 4163-831
Powdery cosmetic compsn. - 10351C/06
- *SHOS 13.06.78 SHOWA SANGYO KK D13 *J5 4163-834
Preventing fall in activity of foodstuff beaching agent - 10352C/06
- *SIEB/ 17.07.78 SIEBLER W B07 D21 *DT 2831-275
Insect repellent tissue - 09321C/06
- SIMP- 21.04.78 SIMPSON J P & CO D16 =FR 2423-538
Mechanised germination plant for malting cereal grain esp. barley - 42444B/23
- *SMIK 12.07.78 SMITH KLINE B04 D16 *EP ---7-467
Anti-influenza live vaccine administered by nasal route or inoculation - 09521C/06
- SNAM 10.07.75 SNAMPROGETTI SPA B05 D16 E19 =CA 1070-254
Converting racemic hydantoins to optically active aminoacids - 04318Y/03
- *SNIR/ 23.12.77 SNIRC J B04 C03 D16 *CS 7708-738
Inactive inoculant against atrophic disease of kidney in pigs - C/06
- SNOE/ 05.06.78 SNOEYENBOS G H B04 C03 D16 =DK 7902-321
Compsn. for protecting poultry against *Salmonella* - 03880C/03
- SPAD- 20.11.69 LAB SPAD D21 =IT 1036-037
Prepn of products for dental use - 37202S/22
- SPEC= 13.07.78 SPEC DES-CONSTR DISINTG C03 D13 =DT 2928-377
Bacterially produced animal feedstuff - 07998C/05
- SPEY- 30.05.78 SPEYWOOD LAB LTD A96 B04 D11 (A97) =DK 7902-219
Oral admin. of large doses of anticholesterolaemi carbohydrate gums - 89808B 50
- SQUI 18.05.78 SQUIBB E R & SONS INC B04 D16 =J5 4163-897
Beta-lactamase inhibitor EM4615 - 86241B/48
- STAM 22.03.78 STAMICARBON BV A41 D15 E13 =J5 4163-892
Melamine removal from waste water - 72146B/40
- *STAR/ 30.11.76 STARK V D15 J08 L03 (J01) *FR 2423-730
Solar energy collector yielding high temps. using lenses - 09761C/06
- STAU 21.03.74 STAUFFER CHEMICAL CO D22 =DS 2511-191
Air-freshening gel free from syneresis - 65899W/40
- *STEM 14.07.78 STEINMULLER L & C GMBH D15 J01 *NL 7905-489
Desalination of solutions by reverse osmosis - 10555C/06
- *STEM 14.07.78 STEINMULLER L & C GMBH D15 J08 *NL 7905-490
Double reservoir for energy recovery in water technology - 10556C/06
- STEN/ 31.05.78 STENGELIN V D15 =GB 2026-462
Sewage denitrification - 89517B/50
- STER 15.07.74 STERLING DRUG INC D22 E13 =CA 1070-240
Sporicidal di- and tetrahydrofuran 2,5-diethers - 34276W/21
- STER 05.06.78 STERLING DRUG INC B05 C01 D22 =DK 7902-235
Arylalkyl and aryloxy-alkyl di-alkyl phosphonate(s) - 87592B/49
- STOP- 21.07.78 STOPPANI L SPA B05 C03 D13 =DT 2855-851
Stable anti-haemorrhagic vitamin/k adducts with other vitamin cpds. - 84211B/47
- *STRA/ 00.00.76 STRAKA L A96 B04 D21 *CS 7601-022
Fluorine-contg. resin for coating teeth - C/06
- STUD 13.02.78 STUDIENGES KOHLE MBH D13 =FR 2423-166
Decaffeination of coffee - 50888B/28
- *SUCR- 18.07.78 SOC SUCRIERE CONSEI D17 *EP ---7-859
Horizontal drum for countercurrent contacting of liq. and solid - 09715C/06
- *SUGA= 26.01.78 SUGAR IND ENTERPRISE D17 *SU -663-725
Sugar beet juice extractor - 10640C/06
- SULZ 03.04.78 GEBRUDER SULZER AG D16 =DS 2815-199
Activated sludge preservation - 73792B/41
- SUMO 11.04.74 SUMITOMO CHEMICAL KK D15 E35 J01 (E36) =DS 2459-615
Reducing nitrogen oxides in waste gases - 72717W/44
- SUMO 14.02.75 SUMITOMO CHEMICAL KK C02 D22 E13 =CA 1070-135
Herbicidal and fungicidal pyridyl triazinones - 58212X/31
- *SUNC 14.06.78 SUN CHEMICAL CORP B04 D16 *J5 4163-575
Tri-deca-peptide - 10292C/06
- SUPE- 07.06.78 SUPER IRIDE SPA D22 J04 =BR 7903-592
Hygienic clothing, e.g. sanitary towel, absorbent wad or undergarment - 71761B/40
- SUPE- 07.06.78 SUPER IRIDE SPA D22 J04 =DK 7902-343
Hygienic clothing, e.g. sanitary towel, absorbent wad or undergarment - 71761B/40
- SUPE- 12.07.78 SUPER IRIDE SPA A96 D22 =NL 7905-383
Absorbent pads or tampons dissipating aq. fluids in core - 80871B/45
- SVFL 19.04.78 SVENSKA FLAKTFAB AB D22 =FR 2423-224
Disinfection of hospital equipment with hot damp air - 64720B/36
- SVME- 25.01.78 SVENSKA MEJER RIKSF D13 =J5 4163-860
Continuous prodn. of buttery prod. spreadable at low temps. - 37197B/20
- *TAHA/ 14.06.78 TAHARA K C03 D13 G02 *J5 4162-733
Coating compsn. providing easily cleaned surface - 10164C/06
- TAKA- 22.08.77 TAKA SHOKUHI KOGYO D13 =J5 4035-080
Maintaining the freshness of eggs - 10477C/06
- *TAKA- 22.08.77 TAKA SHOKUHI KOGYO D13 *J8 0001-019
Maintaining the freshness of eggs - 10477C/06
- TAKE 00.00.72 TAKEDA CHEMICAL IND KK D15 E17 =J8 0001-039
Citric acid prodn. by fermentation - 62038Z/00
- TAKE 30.12.77 TAKEDA CHEMICAL IND KK B04 C03 D16 (D22) =J5 4163-501
Antibiotic G-6302 prepd. by fermenting *Pseudomonas acidophila* - 49005B/27
- TAKE 21.04.78 TAKEDA CHEMICAL IND KK A97 C04 D15 (A14) =FR 2423-450
Removing phosphate(s) from waste water - 79566B/44
- *TALR- 06.06.78 TALRES DEV (NA) NV A11 B04 C03 D16 (D16) *EP ---7-690
Microbiological prodn. of alginate polysaccharide(s) - 09629C/06
- *TARH/ 25.03.77 TARHANIC L D15 *CS 7701-988
Excess anionic flocculant treatment - C/06
- TATL 29.09.67 TATE & LYLE LTD D17 =IT 1036-010
Rining of sugar juice by simultaneous clarification - 28120R/17
- TATL 08.01.76 TATE & LYLE LTD B03 D13 E13 =IL --51-227
Sweetening compsns. contg. chlorinated saccharose derivs. - 32845Y/19
- *TATL 06.06.78 TATE & LYLE LTD A11 B04 C03 D16 (D16) *EP ---7-690
Microbiological prodn. of alginate polysaccharide(s) - 09629C/06
- TATL 06.06.78 TATE AND LYLE LTD A11 B04 C03 D16 (D16) =GB 2026-515
Microbiological prodn. of alginate polysaccharide(s) - 09629C/06
- *TCHA/ 19.05.78 TCHACK E D14 *US 4186-217
Apparatus for low fat cooking - 11105C/06
- TECH- 05.07.78 SOC GEN TECHN NOUV D15 =BE -877-485
Treatment of liq. effluents - 04046C/03
- TEEP 18.04.78 TEE PAK INC A32 D12 (A11 A97) =FR 2423-409
Forming fibrous tube for sausages - 64645B/35
- TEEP 21.04.78 TEE PAK INC A97 D12 (A11) =FR 2423-410
Tough, artificial casings of fibrous structure - 64701B 36

- TFIN- 23.08.76 T & F INDS INC A88 D18 (A17 A97) =GB 1560-588
Conveyor belts of ultra high mol. wt. polyethylene film - 90136Y/51
- TFIN- 23.08.76 T & F INDS INC A88 D18 (A17 A97) =GB 1560-589
Conveyor belts of ultra high mol. wt. polyethylene film - 90136Y/51
- THER- 30.05.68 THERACHEM THERAPEUT D21 E23 =NL -162-558
Dye for human hair based on oxidation dyes - 90999R/49
- TIEF- 14.07.78 TIEFKUHLKOST O GMBH D13 =DT 2830-918
Prepn. of frozen vegetable mixts. for mixing with water - 49054B/27
- TIEF- 14.07.78 DR TIEFKUHLKOST O G D13 =NL 7901-584
Prepn. of frozen vegetable mixts. for mixing with water - 49054B/27
- TOBC 17.06.76 TOBACCO RES & DEV INST D18 (D16) =IL --51-617
Improved tobacco prod. treated with fermentation liquor - 52225Y/30
- *TOXN 20.07.78 TOYO JOZO KK B04 D16 *DT 2929-277
Enzyme l-alpha-glycero:phosphate oxidase prodn. - 09484C/06
- *TOXO 14.06.78 TOYO SEIKAN KAISHA D13 *J5 4163-848
Citrus juice prodn. without forming bitter tasting cpds. - 10357C/06
- TOYJ 20.04.78 TOYO SODA MFG KK D17 (D13 D15 D16) =FR 2423-540
Allose-contg. polysaccharide produced by pseudomonas viscogena - 81095B/45
- *TRIB- 18.04.74 TRIBALLAT LAITERIES D13 *FR 2423-148
Conditioning arrangement for cheese during draining - 09728C/06
- *TSEL/ 27.04.77 TSELISHCHEV V A D13 *SU -664-625
Cooling equipment for dried milk - 10763C/06
- *UCEL= 25.02.72 UKR CELLULOSE PAPER D22 *SU -664-654
Fibrous bactericidal wound dressing material - 10773C/06
- UGIN 06.06.74 UGINE KUHLMANN C03 D13 =IT 1036-121
Urea-urea phosphate nutrient compsn for animals - 74142W/45
- UKAT 25.06.74 UK ATOMIC ENERGY AUTH A96 B04 D16 =IT 1036-359
Insolubilisation of enzymes - 02026X/02
- UNIL 11.10.65 UNILEVER NV D13 E19 =IT 1036-001
Food flavouring composition - 50803Z/00
- UNIL 25.05.67 UNILEVER NV D13 E13 =IT 1036-005
Artificial flavouring compsn. - 61685Z/00
- UNIL 22.09.67 UNILEVER NV D12 E13 =IT 1036-009
Meat flavoured products - 50333Z/00
- UNIL 01.07.68 UNILEVER NV D13 E13 =IT 1036-020
Food flavouring imparting a roast-meat - 02084R/02
- UNIL 28.01.69 UNILEVER NV D21 =IT 1036-028
Toothpaste - 54798R/31
- UNIL 21.02.69 UNILEVER NV D24 E17 =IT 1036-029
Toilet soap (opt super fatted) comprising - 61194R/34
- UNIL 17.07.69 UNILEVER NV D13 J02 (D17) =IT 1036-034
Pyranosidic polyol-contg glucosidic esters - 06380S/03
- UNIL 23.03.70 UNILEVER NV A25 D21 (A96) =IT 1036-040
Anti-perspirant aerosol powder - 65433S/41
- UNIL 15.06.70 UNILEVER NV D12 =IT 1036-043
Reconstitution of meat - by extrusion in the form of irregularly - 81270S/51
- UNIL 14.05.71 UNILEVER NV D12 =IT 1036-044
Fish products - 77799T/49
- UNIL 01.08.73 UNILEVER NV D25 E16 =IT 1036-064
Auto-oxidation of spray-dried detergents prevented - 13062W/08
- UNIL 24.08.73 UNILEVER NV D23 =DS 2440-111
Refining edible glyceride-base oil by contact with adsorbent - 16427W/10
- UNIL 04.12.73 UNILEVER NV D13 =IT 1036-104
Hard butter for coating confectionery - 39224W/24
- UNIL 07.03.74 UNILEVER NV D13 =IT 1036-085
Margarines or other spread emulsions - 62621W/38
- UNIL 16.05.74 UNILEVER NV A97 D23 (D13) =IT 1036-215
Refining crude glyceride oils - 80537W/49
- UNIL 30.05.74 UNILEVER NV A97 D25 E33 (E34) =IT 1036-125
Phosphate-free spray-dried textile cleaning compsn. prodn. - 83531W/51
- UNIL 31.05.74 UNILEVER NV D13 =IT 1036-139
Iced drinks prepn esp coffee - 83192W/51
- UNIL 06.06.74 UNILEVER NV A97 D13 (A11) =IT 1036-252
Stabilising system for ice-cream - 84977W/52
- UNIL 14.06.74 UNILEVER NV D25 E34 (E19) =IT 1036-278
Textile cleaning/bleaching compsn - 00485X/01
- UNIL 02.07.74 UNILEVER NV D13 E13 =IT 1036-410
Flavouring agent for foodstuffs esp. margarine - 06731X/04
- UNIL 28.01.76 UNILEVER LTD A96 D23 (A26) =GB 1560-401
Liquid antiperspirant emulsion opt. applied as spray - 56058Y/32
- *UNIL 24.07.78 UNILEVER LTD D21 E17 *EP ---7-785
Skin treatment compsn. - 09675C/06
- *USNA 13.11.78 US SEC OF NAVY A96 D22 (A14) *US 4186-190
Protective film for burns - 11088C/06
- UTVA- 07.09.76 UT-VASUTTERVEZO VALLALAT D15 =CS 7703-239
Soil drainage filter elements for narrow trenches - 19888A/11
- *UYIR= 01.03.78 IRKUT UNIV A97 D15 E36 *SU -664-683
Sorbent for removal of sulphur-contg. cpds. from aq. waste - 10793C/06
- *UYOD= 13.07.77 ODESS UNIV D17 *SU -664-611
Protecting sugar beet roots stored in mounds against decay - 10758C/06
- *UYTI= 09.01.78 TIFLIS UNIV B04 D12 *SU -664-653
Blood protein sepn. for use in medicine and food - 10772C/06
- VEKE- 15.06.78 VER KESSELWERKE AG D15 =BR 7903-487
Sludge conditioning system - 54644B/30
- VEKE- 15.06.78 VER KESSELWERKE AG D15 =SW 7902-161
Sludge conditioning system - 54644B/30
- VEOS 16.02.76 VER OSTERR EISEN & STAHL D15 M27 =CA 1070-144
Corrosion resistant low alloy steel - 92506X/50
- *VETO/ 28.01.76 VETOSHKIN A G D15 *SU -664-931
Aq. waste purificn. unit - 10881C/06
- *VITA= 11.06.73 VITAMIN FODDER MACH D14 *SU -664-848
Briquetting press for fodder, etc. - 10867C/06
- VOGT- 07.07.78 VOGT-WERKE GMBH D12 =EP ---7-469
Overhead abattoir transport line - 07678C/05
- VOIS/ 18.03.68 VOISIN M A96 D21 =IT 1036-018
Prodn of non-greasy water-impermeable copolymer-based - 36668Q/00
- *VOLZ= 05.10.76 VOLZHSK NITROGEN OX D15 *SU -664-933
Purificn. of weakly contaminated aq. industrial waste - 10883C/06
- *VOTE= 13.04.78 VORON TECHNOL INST D15 E36 *SU -663-719
Restoring activity of carbon used for purification of alcohol - 10635C/06
- VYSO- 02.05.77 VYSOKA SKOLA CHEM T B03 D16 E13 #US 4186-252
Vitamin/B1 prodn. in alcoholic fermentation - 55268A/31
- WEIP- 06.02.75 WEIPERT & CO NACHF B07 D21 E36 (D23) =DS 2504-961
Stabilising mink fat by heating with sulphur iodine - 65147X/35
- WEIS- 17.07.78 GEBRUDER WEISS KG D15 =DT 2831-384
Filtration agent for treating cloudy water and suspensions - 84189B/47
- WELA 29.09.73 WELLA AG D21 =GB 1476-239
Reducing alkalinity of cosmetic preps e.g. hair dyes - 26840W/16
- *WELA 20.07.78 WELLA AG D21 E24 *EP ---7-537
Storage stable oxidn. hair dye compsns. - 09551C/06
- *WELW/ 22.11.76 WELWARD L B02 D16 *CS 7607-495
Cephalosporin C prepn. by fermentation - C/06
- *WESE 21.07.76 WESTINGHOUSE ELEC CORP D15 J03 *GB 1560-732
Electrolytic flocculation of waste water solids - 09789C/06
- *WESS- 19.07.78 WESSEX WATER AUTHOR D15 *GB 2026-461
Sewage treatment by activated sludge process - 09812C/06
- YOSH- 28.08.76 YOSHIHARA SEISAKUSHI D13 =J8 0001-029
Processed defatted soybean prodn. - 32624A/18
- *ZAMO/ 24.11.77 ZAMOCKY J A96 B04 D16 (A26) *CS 7707-768
One-stage prepn. of polyethyleneimine-isothiocyanate - C/06
- *ZARO/ 04.06.75 ZAROL D13 *IT 1036-162
Mould for confectionery products - C/06
- *ZEMA/ 06.10.77 ZEMANS D15 E13 *CS 7706-460
Tetraazacyclooctane deriv. prepn. mother liquor processing - C/06
- ZSCH- 25.06.75 ZSCHEYGE CHEM & MOL A97 D13 =DS 2528-196
Stable sour cream buttermilk prepn. - 05836Y/04

40922-F BD	32911-R D	DL --87-977 T23	IT 1036-040 C06	FR 2113-392 T42	ZA 7206-480 U27	J4 9093-585 V45	13062-W DE
BE -723-873 Q00	NL 6915-945 R19	CH -527-266 T47	GB 1321-905 U27	GB 1323-377 U28	FR 2153-378 U27	J5 0107-185 W42	DT 2436-145 W08
CH -534-702 U22	DT 1805-808 R25	J7 3011-029 U15	67484-S ADE	CH -554-645 V46	DL --99-718 U43	US 3930-946 X03	BE -818-344 W08
NL 6816-356 Q01	FR 2021-772 R46	GB 1321-905 U27	BE -765-548 S42	CA -983-015 X08	DT 2147-498 U50	GB 1427-605 X11	NL 7410-216 W08
DS 1808-834 B33	DL --77-135 S08	SU -399-094 V28	NL 7104-666 S43	J8 0001-025 C06	DT 2231-145 V04	DK 7505-540 X17	SW 7409-888 W13
NL -162-690 C06	GB 1254-950 S46	DK 7403-814 V51	DT 2117-363 S44		CH -544-500 V07+	IT 1036-051 C06	FR 2239-522 W20
	CH -514-993 T03	US 3903-267 W37	J4 6004-636 S49	40494-T BCD	DS 2231-145 V16+		GB 1474-688 Y21
25168-Q ADE	J7 3008-821 U12	CS 7004-556 W39	FR 2089-423 T13	BE -776-317 T25+	DT 2231-144 V08	45584-V DJ	CA 1027-822 A13
NL 6815-223 Q00	DS 1805-808 A44	CA -982-474 X07	GB 1295-789 T45	NL 7116-869 T26	DS 2231-144 V21	DT 2260-379 V25	OE 7406-243 A18
FR 1598-172 R47	IT 1036-023 C06	DS 2031-662 Y35	CH -536-112 U29	J4 7014-389 T34	GB 1403-007 W33+	DS 2260-379 C06	CH -601-472 A33
GB 1253-235 S44		IT 1036-032 C06	US 3893-802 W29	DT 2161-164 T40	CS 7206-415 W34+		US 4155-882 B23+
US 3642-429 T11	33593-R D		SU -440-834 W30	FR 2117-530 T45	OE 7208-069 W44+	51365-V BCDE	IT 1036-064 C06
CH -520-503 T26	DT 1950-741 R19	06380-S DJ	CA -976-961 W46	GB 1370-892 V42+	IL --40-387 W52+	NL 7317-432 V28	
CA -933-094 U38	NL -162-720 C06	BE -753-661 S03	US 3997-546 X52	CH -560-248 W17+	US 3988-804 X46+	DT 2364-129 V31	14740-W DE
DS 1803-709 Y28		NL 7010-688 S04	US 4067-869 A04	J5 0081-874 W35+	SU -520-873 Y14	BE -809-037 V34	DT 2438-206 W09
NL -156-598 A22	54342-R D	DT 2035-381 S10	IT 1036-041 C06	IL --38-272 W41+	CA 1019-781 Y45+	FR 2211-232 V42	FR 2240-288 W21
IT 1036-013 C06	US 3522-738 R31+	FR 2055-309 S32		US 3989-594 X46+	SF 7702-139 Y46+	J4 9094-695 V46	J5 0040-786 W35
	GB 1263-163 T06	ZA 7004-880 T14	69501-S ADJ	J7 6042-033 X50	US 4185-358 C06+	PT --61-089 W04	US 3939-042 X09
32982-Q ADF	GB 1263-162 T06	J7 3020-306 U25	DT 2016-556 S44	CA 1000-629 X51+		HU T010-406 W38	GB 1473-367 Y19
NL 6902-306 Q00	GB 1263-161 T06	GB 1322-706 U28	FR 2086-570 T11	J8 0001-038 C06+	20809-U DE	DK 7502-800 W42	CA 1034-065 A29
GB 1220-203 S03	DT 1918-323 T49	CH -551-454 V36	GB 1298-263 T48		BE -786-710 U15	DK 7502-799 W42	J7 9028-472 B41
CH -530-766 U07	DT 1966-455 U11	IT 1036-034 C06	CA -958-597 V51	42877-T D	NL 7202-509 U17	DK 7502-798 W42	J5 4163-891 C06+
BE -728-337 Q01	DT 1966-456 U15		CA -964-583 W14	DT 2144-245 T27	DT 2240-495 U18	DT 2365-705 X04	
IT 1036-016 C06	CA -932-580 U37	07731-S D	J7 5027-831 W40	J4 7011-988 T30	ZA 7206-659 U27	FR 2289-171 X36	16427-W D
	DT 1966-456 U41	US 3557-798 S04	IT 1036-030 C06+	GB 1314-296 U16	FR 2156-527 U33	NO 7602-440 X38	DT 2440-111 W10
36668-Q AD	NL 7317-152 V14	CA -862-500 S06		US 3729-382 U19	GB 1385-058 W09	NO 7602-441 X38	BE -819-157 W11
DT 1913-569 Q00	US RE27-873 V44	GB 1232-542 S19	70983-S DJ	DT 2167-197 B39	GB 1385-059 W09	GB 1459-392 X52	NL 7411-190 W11
FR 1583-768 R29	NL -146-028 W29	NL -143-412 V45	DT 2018-514 S45	DS 2144-245 C06	SW 7411-674 W12	SW 7611-135 Y13	SW 7410-752 W16
IT 1036-018 C06	NL 7504-830 W37	IT 1036-017 C06	DS 2018-514 C06		US 3884-627 W22	SW 7611-134 Y13	NO 7403-016 W17
	DK 7504-124 X11			77799-T D	US 3970-423 X31	OE 7310-725 Y48	FR 2241-613 W22
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GB 1283-912 T31	CA -915-092 T49	US 3690-810 T39	ZA 7103-806 U06	US 3897-573 W32	NL 7305-828 U46	OE 7805-024 C05	CH -593-619 A02
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US 3904-655 W38	ZA 7001-104 S44		NL 7109-121 T03	DT 2167-135 B07+	J4 9048-891 V39	SW 7402-641 V44	FR 2245-338 W27
NL -150-120 X33	GB 1281-895 T29	36534-S DE	DT 2133-107 T05	DS 2137-770 C06	DS 2321-461 W26+	DK 7401-083 V45	J5 0076-237 W33
NL -150-663 X43	CA -907-455 T35	BE -759-040 S21	J4 7001-984 T06		GB 1430-842 X15+	FR 2220-062 V52	US 3975-515 X35
DS 1932-799 Y06	CH -527-900 T47	NL 7101-383 S40	ZA 7104-245 T19	17591-U D	CH -574-501 X23+	ZA 7400-266 W02	OE 7407-796 X40
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SW 7906-939 B47+	63962-R AD	US 3759-847 U39	DS 2133-107 C06	J7 6021-006 X30	IT 1030-538 B27+	CS 7401-497 X49	27959-W DE
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	GB 1249-478 S40	44637-S D	DT 2140-861 T22	FR 2152-872 U26	US 4186-174 C06+	SW 7402-325 V42	BR 7408-467 X20
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CH -507-368 S27	OE 7106-093 X10	ZA 7008-218 S40	DS 2140-861 Y10	US 3934-595 X06	BE -801-199 V03+	DK 7501-520 W36	SW 7705-871 Y43
GB 1260-418 T03	US 3957-774 X22+	FR 2074-905 T03	NL -162-550 C06	CA -982-746 X07	DT 2331-353 V04+	CH -579-109 X39	CA 1025-881 A08
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US 3827-940 V33	IT 1036-012 C06	GB 1303-374 U03	15471-T D		US 3808-051 V19+	OE 7401-410 Y27	CH -606-354 A48
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SU -469-267 X22	81523-R D	CA -942-992 V11	DT 2141-485 T11	BE -790-303 U13	GB 1438-165 X23+	CA 1022-864 A02	NL -162-559 C06
SU -545-267 Y41	FR 1596-432 R44	NL -151-618 Y03	FR 2103-407 T28	DT 2157-365 U23	CA 1005-736 Y09+	US 4184-986 C05+	
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	NL -162-617 C06		CA -964-919 W15	J4 8062-801 U45	DS 2331-353 C06+	77839-V BDE	NL 7501-730 X05
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GB 1188-484 R15	83189-R D	DT 2103-071 S31	CA -980-167 X02	US 3840-653 V42	21812-V BD	FR 2225-520 W06	NO 7404-725 X11
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CA -875-005 S28	FR 2047-536 S22	BE -761-821 S38	J4 7005-269 T13+	DS 2157-365 C06	J8 0001-271 C06	J4 9125-590 W16	DK 7405-820 X17
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		FR 2076-927 T04	US 3719-499 U12	19069-U D	23349-V ADE	US 3907-641 W40	FR 2281-135 X22
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GB 1486-576 Y38 +	SW 7502-533 W47	GB 1456-350 X48	GB 1513-671 A23 +	J5 1024-607 X15	26726-X D	90502-X D	NL 7607-662 Y05
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FR 2258-350 W45 +	GB 1488-945 Y42	CH -610-915 B23	US 4062-882 Y51	FR 2276-779 X17 +	J5 1086-132 X37	92506-X DM	J5 2009-690 Y10
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	SW 7503-230 W46	DT 2528-202 X05	SW 7506-227 X06 +	IT 1036-421 C06 +	CS 7600-363 B42 +	CA 1070-144 C06	NL 7607-843 Y06 +
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	DK 7501-328 X02	NL 7505-198 W47	IT 1036-125 C06	GB 1495-598 Y51 +	DS 2504-961 C06		CH -599-759 A24
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10568-C D SU -662-818 C06	10881-C D SU -664-931 C06	11125-C AD US 4186-253 C06
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10633-C BDE SU -663-717 C06	10957-C ADF US 4185-626 C06	
10634-C D SU -663-718 C06	10960-C AD US 4185-631 C06	
10635-C DE SU -663-719 C06	10991-C D US 4185-927 C06	
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10637-C D SU -663-722 C06	11020-C ACDF US 4186-025 C06 +	
10638-C D SU -663-723 C06	11035-C DJ US 4186-058 C06 +	
10639-C BD SU -663-724 C06	11037-C DJ US 4186-060 C06 +	
10640-C D SU -663-725 C06	11049-C D US 4186-085 C06	
10758-C D SU -664-611 C06	11052-C DEJ US 4186-088 C06	
10760-C D SU -664-621 C06	11053-C D US 4186-091 C06	
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10767-C CD SU -664-629 C06	11086-C ABCD US 4186-185 C06 +	
10769-C D SU -664-631 C06	11088-C AD US 4186-190 C06	
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 = 160 00327Y D13
 = 161 90900X C03D16
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 = 358 91502B B04C03D13P4
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DS 1907

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DS 2018

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DS 2137

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DS 2144

= 245 42877T D16

DS 2157

= 365 18336U D15H09

DS 2240

= 495 20809U D21E24

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DS 2331

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DS 2337

= 999 12908W D15

DS 2345

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DS 2436

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DS 2459

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DS 2502

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DS 2504

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DS 2602

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